Draft
Environmental Impact Report

SCH# 2025120791

Volume 5

Appendix K1 to L

Euismod Energy Storage Project
by Euismod Project LLC
& Euismod Project I, LLC
(*PP26401)*

ZCC No. 22, Map 233; CUP No. 18, Map 233;
CUP No. 19, Map 233; CUP No. 20, Map 233;
CUP No. 21, Map 233; ZV No. 10, Map 233;
Non-Summary Vacation, Map 233

Kern County
Planning and Natural Resources Department
Bakersfield, California

August 2026

Appendices—Volume 5

NOTE TO REVIEWER OF ELECTRONIC FILES:

To assist you in reviewing this electronic document, "bookmarks" have been provided for easier navigation between sections. When available, bookmarks are located in the panel to the left. Clicking on the bookmarks will take you to the selected item. This document may consist of multiple linked PDF files. If saving this document to your computer, you must save all corresponding files to a directory on your hard drive to maintain the manner in which these PDF documents are linked.

Appendix K1: Transportation Impact Study

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Appendix K3: Construction Level of Service Study

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Appendix K
Transportation Impact Reports

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Appendix K1
Transportation Impact Study

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Fehr & Peers

Memo

Date: April 23, 2026

To: Joseph L. Stenger, P.G.

From: Jolene Hayes, AICP
Logan Aspeitia

Subject: Kern County Battery Storage Facility Transportation Study (OC25-1511)

Executive Summary

Fehr & Peers has completed a Transportation Study for the Battery Storage Facility (Project) in Kern County. The study consists of Level-of-Service (LOS) and Vehicle Miles Traveled (VMT) screening assessment, which determined that the Project does not exceed the County's thresholds. Therefore, further analysis is not required, and the expected trip generation levels would allow the County to make a finding of less-than-significant impact under the California Environmental Quality Act (CEQA) for transportation. Additionally, traffic associated with construction was reviewed and determined to exceed the County's 50 peak hour trip threshold. Therefore, a focused LOS assessment is required to analyze how construction traffic will affect the surrounding transportation network. The methodologies and procedures are consistent with the Kern County Traffic Engineering standards documented in *Division Nine: Standards for Traffic Engineering* (County's guidelines).

Project Description

This Project site is located at the northwest corner of the intersection of 170th Street and Rosamond Boulevard in Rosamond, CA. The site is bounded by the Southern California Whirlwind Substation to the south and undeveloped land to the west, east, and north. The proposed Project site consists of 10 parcels that comprise approximately 120 acres proposed for development of a Battery Energy Storage Facility, plus access roads. The proposed site is in the unincorporated southeastern portion of Kern County. The proposed site is currently undeveloped with a zone classification of E (Estate) as per the Rosamond-Willow Springs Specific Plan. The Project is anticipated to have up to six (6) maintenance employees on-site daily. In addition to the Battery Energy Storage Facility, The Project will include two offsite electric tie-lines and interconnection infrastructure that will be constructed, owned and operated by Southern California Edison for interconnecting the Battery Energy Storage Facility to the adjacent whirlwind substation. Operation of the SCE facilities included in the Project are not expected to result in new trip generation.

Need for LOS Assessment

As previously stated, the Project is anticipated to have minimal staffing on-site daily. Therefore, it is anticipated to generate negligible daily trips.

Per section 902-1.02 of the County's guidelines, the Project is not required to complete a LOS traffic study as it is located in the Rosamond-Willow Springs Specific Plan and is not expected to generate more than 50 peak hour vehicle trips.

VMT Screening

Due to the implementation of California Senate Bill (SB) 743, VMT is utilized as the metric to determine transportation-related impacts. The County's guidelines reference the Caltrans *Vehicle Miles Traveled-Focused Transportation Impact Study Guide (2020)* to identify criteria that may be used to screen projects from project-level VMT assessment. The Caltrans' guidelines state the following six project-types are presumed to screen from VMT assessment:

1. Residential, office, or retail projects within a Transit Priority Area, where a project is within a ½ mile of an existing or planned major transit stop or an existing stop along a high-quality transit corridor.
    a. A major transit stop is defined as a site containing an existing rail transit station, a ferry terminal served by either a bus or rail transit service, or the intersection of two or more major bus routes with a frequency of service interval of 15 minutes or less during the morning and afternoon peak commute periods (Pub. Resources Code, § 21064.3).
    b. A high-quality transit corridor is defined as a corridor with fixed route bus service with service intervals no longer than 15 minutes during peak commute hours (Pub. Resources Code, § 21155).
2. An area pre-screened by an agency as having low residential or office VMT:
    a. An area where existing residential projects exhibit VMT per capita 15 percent or more below city or regional average.
    b. An area where existing office projects exhibit VMT per capita 15 percent or more below regional average.
3. Residential projects composed of 100 percent or near-100 percent affordable housing located in any infill location. Additionally, per OPR's Technical Advisory, "Lead agencies may develop their own presumption of less than significant impact for residential projects (or residential portions of mixed use projects) containing a particular amount of affordable housing, based on local circumstances and evidence. Furthermore, a project which includes VMT-Focused TISG Page 11 any affordable residential units may factor the effect of the affordability on VMT into the assessment of VMT generated by those units."
4. A locally-serving retail project (such a project typically reduces vehicle travel by providing a more proximate shopping destination, i.e., better accessibility)
5. Mixed-use projects composed entirely of the above low-VMT project types.
6. In any area of the state, absent substantial evidence indicating that a project would generate a potentially significant level of VMT, or inconsistency with a Sustainable Communities Strategy (SCS) or general plan, projects that generate or attract fewer than 110 trips per day generally may be assumed to cause a less-than significant transportation impact.

Per the sixth criteria, project-types anticipated to generate less than 110 daily vehicle trips can be screened from further VMT assessment. As previously stated, the Project would have up to six (6) employees on site routinely and thus generate less than 110 daily trips. Therefore, the project screens from further VMT analysis and is assumed to have less-then-significant impact under CEQA.

Construction Traffic Assessment

Although the Project would not generate a noticeable number of trips to/from the site once in operation, the County requires an assessment of construction trips to ensure traffic operations and safety would not be degraded by construction activities, which are anticipated to begin in 2027 and last for up to approximately two years. Construction of the Battery Energy Storage Facility by the Project proponent and construction of the electric tie-line and interconnection by Southern California Edison would overlap. Construction operations will occur on weekdays between 6:00 AM and 5:00 PM. Construction trips were estimated and compared to the County's 50 peak hour trip threshold to determine if further LOS assessment was required.

Construction Trip Generation Estimates

Construction trips for the Project provided by the applicant including estimated trip generation for construction of the tie-lines and interconnection are as follows:

- Peak construction activity:
  - 220 daily workers (200 onsite; 20 SCE)
  - 60 daily deliveries (55 onsite; 5 SCE)
- Average construction activity:
  - 114 daily workers (100 onsite; 14 SCE)
  - 35 daily deliveries (34 onsite; 1 SCE)

These assumptions were used to generate the daily construction trip estimates, which are shown in **Tables 1-3**. AM and PM peak hour trip estimates are shown in **Table 3** and were calculated using the assumption that a typical peak hour represents ten percent (10%) of the daily trips. During the peak construction period for the Project, the maximum anticipated number of peak hour trips is anticipated to be 56, which exceeds the 50-trip threshold.

Table 1: Peak Construction Daily Trip Generation Estimates

Peak Construction Operations – Daily Trip Gen			
Type	In	Out	Total
Workers	220	220	440
Deliveries	60	60	120
Total	**280**	**280**	**560**

Note(s):
1. Estimated workers provided by Project applicant.
2. All workers were assumed to commute alone to the site.

Source: Fehr & Peers, 2026.

Table 2: Average Construction Daily Trip Generation Estimates

Average Construction Operations – Daily Trip Gen			
Type	In	Out	Total
Workers	114	114	228
Deliveries	35	35	70
Total	**149**	**149**	**298**

Note(s):
1. Estimated workers provided by Project applicant.
2. All workers were assumed to commute alone to the site.

Source: Fehr & Peers, 2026.

Table 3: Peak Construction AM and PM Peak Hour Trip Generation Estimates

Peak Hour of Generator (6:00 – 7:00 AM)			
Type	In	Out	Total
Workers	22	22	44
Deliveries	6	6	12
Total	**28**	**28**	**56**

Note: Peak hour trip estimates were developed by multiplying the daily trips shown in Table 1 by 10%.
Source: Fehr & Peers, 2026.

Table 4: Average Construction AM and PM Peak Hour Trip Generation Estimates

Average Hour of Generator (6:00 – 7:00 AM)			
Type	In	Out	Total
Workers	12	12	24
Deliveries	4	4	8
Total	**16**	**16**	**32**

Note: Peak hour trip estimates were developed by multiplying the daily trips shown in Table 1 by 10%.
Source: Fehr & Peers, 2026.

Project Construction Impact Assessment

During peak construction activity, the Project is anticipated to generate 56 peak hour trips, and under average construction activity, the Project is anticipated to generate 32 peak hour trips. The Project is anticipated to generate more than 50 vehicle trips during the AM and PM peak hours under peak construction activity. Therefore, a focused LOS assessment is required to analyze how peak construction activity will affect the surrounding transportation network.

Cumulative Project Construction Traffic

The Project is proposed in an area that is developing with solar and wind energy generation projects and other battery storage facilities. The two closest proposed projects that would likely utilize the same roadway network as the Project are the Keyhole Wind project located adjacent to the Project and the Rosamond Battery Energy Storage located 2.8 miles southeast of the Project on a 38-acre site, which is less than one-third the size of the Project. No trip generation data has been published for the Rosamond Battery Energy Storage, however, assuming similar peak construction activity requirements as the Project, it is assumed to generate 178 daily, 18 AM peak hour, and 18 PM peak hour construction trips. The Keyhole Wind Project EIR Addendum (2022) states the project will generate up to 166 daily, 72 AM peak hour, and 72 PM peak hour construction trips. In a worst-case scenario, the combined peak construction activity traffic from the Project, the Rosamond Energy Storage project, and the Keyhole Wind project would result in 904 daily, 146 AM, and 146 PM peak hour trips. Construction traffic associated with the Rosamond Energy Storage project and the Keyhole Wind project will be accounted for in the Project's focused traffic study.

Although the existing roadway network is anticipated to have sufficient capacity to accommodate the construction traffic, a traffic management plan is recommended to be required for each of these projects to ensure the safe movement of oversized loads, proper notification of construction activities, and overall maintenance of traffic.

Conclusion

The Project plans to develop a Battery Energy Storage Facility on 120 acres of undeveloped land and two electric tie-lines to connect the facility to the existing Whirlwind Substation. The facility may have up to six employees on site routinely and is expected to generate up to 18 trips daily (six trips in the AM, up to six trips midday/lunch, and six in the PM), far below the VMT threshold of 110 trips. Therefore, the Project screens out from additional VMT analysis and the County can make a finding of less-than-significant impact under the California Environmental Quality Act (CEQA) for transportation. Additionally, traffic associated with the peak of construction activity is anticipated to result in 56 peak hour trips, and during average construction activity, 32 peak hour trips. Since the Project's peak construction activity trip generation estimates are anticipated to exceed the 50 peak hour trip threshold, a focused LOS assessment is required to analyze how peak construction activity will affect the surrounding transportation network.

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Appendix K2
Construction Vehicle Miles Traveled Study

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Fehr & Peers

Memo

Date: June 22, 2026

To: Tori Edwards

From: Jolene Hayes, AICP
Logan Aspeitia

Subject: Kern County Battery Storage Facility Construction VMT Study

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Executive Summary

Fehr & Peers completed a Vehicle Miles Traveled (VMT) Study for the Battery Storage Facility (Project) in Kern County. The County's guidelines reference the Caltrans *Vehicle Miles Traveled-Focused Transportation Impact Study Guide (2020)* to identify criteria that may be used to screen projects from project-level VMT analysis. The Project meets the criteria for small project screening during its operation phase and does not require further VMT analysis. However, Project construction activity does not meet the VMT screening criteria, and a VMT analysis is required to determine if it will result in a significant transportation impact under California Environmental Quality Act (CEQA).

This memorandum summarizes the Project construction VMT analysis, which is consistent with the requirements of Senate Bill 743 (SB 743). As determined in the analysis below, **Project construction is anticipated to result in a *less-than significant transportation impact related to VMT***.

Project Description

The Project site is located at the northwest corner of the intersection of 170th Street and Rosamond Boulevard in Rosamond, CA. The site is bounded by the Southern California Whirlwind Substation to the south and undeveloped land to the west, east, and north. The proposed Project site consists of 10 parcels that comprise approximately 120 acres proposed for development of a Battery Energy Storage Facility, plus access roads. The proposed site is in the unincorporated southeastern portion of Kern County. The proposed site is currently undeveloped with a zone classification of E (Estate) as per the Rosamond-Willow Springs Specific Plan. The Project is anticipated to have up to six (6) maintenance employees on-site daily. In addition to the Battery Energy Storage Facility, the Project will include two offsite electric tie-lines and interconnection infrastructure that will be constructed, owned and operated by Southern California Edison (SCE) for interconnecting the Battery Energy Storage Facility to the adjacent whirlwind substation. Operation of the SCE facilities included in the Project are not expected to result in new trip generation.

Construction VMT Analysis

Construction of the Battery Energy Storage Facility by the Project proponent and construction of the electric tie-line and interconnection by Southern California Edison would overlap. Construction activities are anticipated to begin in 2027 and last for up to approximately two years, with peak construction activity occurring in 2028. Construction operations will occur on weekdays between 6:00 AM and 5:00 PM.

VMT Methodology

Per County recommendations, the VMT analysis was conducted by comparing Project-generated VMT to the average VMT per trip in the study area. The average VMT per trip for the study area is 43.2 miles per trip. It is consistent with the rate of VMT documented in the *Keyhole Wind Project EIR Addendum* (2022), which is provided as **Attachment A**. The average VMT per trip referenced in the Keyhole VMT analysis is based on data from the Kern Council of Governments (KernCOG). It is applicable for use in the Project's construction VMT analysis because the Keyhole project is located directly west of the Project and, therefore, is representative of travel patterns in the study area.

Project-generated VMT is estimated by multiplying the trips and trip distances while keeping track of it by specific trip purposes (e.g. home-based-work (HBW), home-based-school (HBS), home-based-other (HBO), non-home-based (NHB), etc.). For the Project construction VMT analysis, Project-generated VMT represents the HBW VMT associated with construction worker commute trips and trip distances. Project-generated VMT was normalized by the number of one-way construction commute trips and compared to the average VMT per trip for the study area (43.2 miles per trip).

Trip generation estimates for the Project construction phase are discussed in a later section of the memorandum and are based on construction worker estimates provided by the applicant. Trip lengths associated with the Project construction worker commute trips were estimated based on the following worker distribution assumptions, which are consistent with assumptions used in the Keyhole VMT analysis:

- 50% of construction workers will be from the local area (Lancaster, Rosamond, and Mojave)
- 30% of construction workers will relocate to the local area for the duration of Project construction activity
- 20% of construction personnel will be from the non-local area (Bakersfield and Tehachapi)

The proportion of construction workers who live in each of the above jurisdictions was assumed to be proportional to the total number of workers who live in each jurisdiction. OnTheMap[1] census data from 2023 is provided in **Attachment B** and was referenced to determine the employed population in each jurisdiction. A summary of the 2023 census data is provided in **Table 1.** Additionally, OnTheMap census data from 2023 was referenced to determine the most densely populated area in each jurisdiction. Average trip lengths from those areas were estimated using google maps and assumed to represent the construction worker commute trip lengths from those jurisdictions. The construction worker commute trip lengths are also summarized in **Table 1**.

[1] OnTheMap is a web-based mapping and data tool created by the U.S Census Bureau and uses federal and state administrative records to show information about where workers live, work, and commute between their homes and places of employment.

Table 1: Construction Worker Distribution and Average Trip Lengths

Land Use Description	Total Employed Population in Jurisdiction	Project Construction Worker Distribution	Average Trip Lengths From Jurisdiction (Miles)
Lancaster	67,061	71.5%	28.1
Rosamond	6,701	7.1%	15.0
Mojave	1,335	1.4%	29.8
Local Area Subtotal	**75,079**	**80%**	**-**
Bakersfield	162,799	19.5%	77.3
Tehachapi	3,842	0.5%	32.6
Non-local Area Subtotal	**166,641**	**20%**	**-**

Notes:
1. Calculated based on the assumption that 80% of Project construction workers live in the local area (Lancaster, Rosamond, and Mojave) and the remaining workers live in the non-local area (Bakersfield and Tehachapi).

Source:
1. *OnTheMap Census Data, 2023.*
2. *Fehr & Peers, 2026.*

Impact Assessment

The number of one-way construction commute trips was referenced from the *Kern County Battery Storage Facility Construction Level-of-Service Study* (2026) [See **Attachment C**]. The one-way commute trip generation estimate is shown in **Table 2** and was multiplied by the construction worker distribution provided in **Table 1** to estimate the number of commute trips originating from each jurisdiction. These commute trips were multiplied by the corresponding average trip lengths in **Table 1** to estimate the total VMT associated with construction workers traveling from each jurisdiction.

Table 2: Project Construction Commute VMT

Land Use Description	One-Way Construction Commute Trips	Commute VMT
Lancaster	157.0	4,411.7
Rosamond	16.0	240.0
Mojave	3.0	89.4
Bakersfield	43.0	3,323.9
Tehachapi	1.0	32.6
Total	**220.0**[1]	**8,097.6**

Source:
1. *Kern County Battery Storage Facility Construction Level-of-Service Study, 2026.*
2. *Fehr & Peers, 2026.*

Project construction commute VMT was summed and normalized by the number of one-way construction commute trips (220). The average VMT per construction commute trip was calculated to be 36.8 miles per trip.

Conclusion

The average VMT per construction commute trip is assumed to represent the average commute VMT per trip for all construction activities associated with the Project including peak construction activity, average construction activity, and construction activity associated with augmentation batteries and equipment, which will be installed during the Project's operation phase when batteries lose storage capacity from usage over time.

Since the Project's average VMT per construction commute trip is lower than the average VMT per trip in the study area (43.2 miles per trip), all construction activities associated with the Project would result in a ***less-than significant transportation impact related to VMT***.

RUETTGERS & SCHULER
CIVIL ENGINEERS
1800 30th Street, Suite 260
Bakersfield, CA 93301
(661) 327-1969

November 1, 2022

257-65
Electronic Mail

Kristin Pittack
QK Inc.
5080 California Ave Suite 220
Bakersfield, CA 93309

RE: Traffic Investigation for Proposed Keyhole Wind Facility in Rosamond, CA

Dear Ms. Pittack:

The purpose of this letter is to evaluate potential traffic impacts resulting from the construction and operation of the Keyhole Wind Project (project) proposed by EDF Renewables (EDFR) in Rosamond, California. This investigation includes an evaluation of the proposed project trip generation for the construction phase, a description of the proposed trip distribution for the anticipated construction traffic, an analysis of roadway and intersection capacities near the project, and an investigation of the average trip length, or average vehicle miles traveled (VMT), for construction traffic accessing the project.

The project site is located generally northwest of the unincorporated community of Willow Springs. The project site is located ½ mile north of Rosamond Boulevard and is bordered by the Tehachapi Mountains to the northwest. Primary access to the proposed project is proposed from Rosamond Boulevard at 170th Street West.

The project will produce up to 100 megawatts (MW) of commercial wind energy generation on approximately 7,000 acres.

The project is expected to commence in 2024 and construction is expected to last 12 – 15 months.

EXISTING AND BUILD YEAR CUMULATIVE TRAFFIC

Existing AM and PM peak hour turning movement volumes were field-measured at the study intersections in May 2022. Counts were compared to pre-COVID turning movement volumes, and it was determined no adjustment was needed due to traffic being generally similar. The following intersections are included in the study area analysis:

1. 170th Street West and Rosamond Boulevard
2. 90th Street West and Rosamond Boulevard
3. State Route 14 Southbound Ramps and Rosamond Boulevard
4. State Route 14 Northbound Ramps and Rosamond Boulevard

In order to analyze traffic for the build year scenario, existing volumes were projected out to the year 2024 using growth rates ranging from 0.72 to 7.41 percent. Growth rates were determined from the KernCOG model.

PROJECT TRIP GENERATION AND DISTRIBUTION

Construction Phase

Traffic generated during the construction phase will include personnel vehicles and heavy trucks. These vehicles will access the project by way of 120th Street W and 90th Street W. Analysis was conducted in order to capture the highest impact the project may have on the adjacent roadway system. For typical operations, it is anticipated that project traffic will use multiple access points. Trip generation estimates for construction traffic utilizing these roadways are presented in Table 1.

Table 1
Construction Phase Project Trip Generation

			AM Peak Hour Trips		PM Peak Hour Trips	
Traffic Type	Variable	ADT	In % Split/ Trips	Out % Split/ Trips	In % Split/ Trips	Out % Split/ Trips
Personnel	120 (per day)	120	100% 60	0% 0	0% 0	100% 60
Heavy Truck	23 (per day)	46	100% 12	0% 0	0% 0	100% 12
	Total Trips	166	72	0	0	72

During the peak of construction operations, it is anticipated that an average of 120 workers will be onsite daily. This equates to a daily peak of 120 worker passenger trips using a carpool ratio of 2:1. It is anticipated that there will be a maximum of 23 heavy trucks in a day, which equates to 46 daily heavy truck trips. The trip estimates were calculated using a comparison between this proposed project and a similar previous project. This assumption results in 166 daily trips (combined inbound and outbound).

Traffic accessing the project is anticipated to come mainly from surrounding population centers such as Rosamond, Tehachapi, Lancaster, and Palmdale, as well as from other nearby population centers. Peak hour traffic under the following scenarios are shown in Figures 2 through 6: project traffic, 2022 traffic, build year (2024) traffic, build year (2024) cumulative plus project traffic, 2026 traffic, and 2026 plus project traffic.

Operation & Maintenance Phase

On completion of the construction and testing phases, the proposed project will have no on-site employees during operation and maintenance with the exception of occasional maintenance workers.

IMPACT ANALYSIS

Construction Phase Intersection LOS

An analysis was done to determine the level of service of the intersections during the construction phase of the project. The guidelines in the Caltrans publication *Guide for the Preparation of Traffic Impact Studies*, dated December 2002, states that a facility is required to be analyzed when a project will generate more than 50 peak hour trips at a facility operating at or below a LOS C. Although the project does create more than 50 peak hour trips at some of the major intersections being studied, the scope also took into account the routes used to access the project, by personnel and heavy trucks, and the intersections where the project traffic had the highest volumes.

Also included in the level of service analysis is the cumulative traffic generated by other projects, as provided by Kern County, within a 6-mile radius of the project. Based on a review of the project's location and the surrounding roadway network it was determined that project traffic generated by other projects farther than 6 miles from the project site would not have a significant impact on the study intersections and roadway segments

Tables 3 and 4 show the results of the analysis for project-related construction traffic at key study area intersections during the AM and PM peak hours, respectively.

Table 2
Intersection Level of Service
AM Peak Hour

#	Intersection	Control Type	2022	2024	2024+ Project	2026	2026+ Project
1	170th St W & Rosamond Blvd	WB	A	A	A	A	A
2	Tehachapi Willow Springs Rd/90th St W & Rosamond Blvd	NB SB	A B	A B	A B	A B	A B
3	SR 14 SB Off-Ramp/Acacia St & Rosamond Blvd	Signal	B	B	B	B	B
4	SR 14 NB On-Ramp/SR 14 NB Off-Ramp & Rosamond Blvd	Signal	B	B	B	B	B

Table 3
Intersection Level of Service
PM Peak Hour

#	Intersection	Control Type	2022	2024	2024+ Project	2026	2026+ Project
1	170th St W & Rosamond Blvd	WB	A	A	A	A	A
2	Tehachapi Willow Springs Rd/90th St W & Rosamond Blvd	NB SB	B B	B B	B B	B B	B B
3	SR 14 SB Off-Ramp/Acacia St & Rosamond Blvd	Signal	A	A	A	B	B
4	SR 14 NB On-Ramp/SR 14 NB Off-Ramp & Rosamond Blvd	Signal	C	C	C	C	C

As can be seen in Tables 2 and 3, all intersections currently operate at acceptable levels of service, and will continue to do so with the addition of project construction traffic.

Roadway Capacity

Table 4 contains roadway Average Daily Traffic (ADT) and analysis results for roadway segments in the vicinity of the project. A volume-to-capacity ratio (v/c) of greater than 0.80 corresponds to a LOS of less than C, as defined in the *Highway Capacity Manual*. The same guidelines used for intersection analysis from the Caltrans guidelines were used to determine the extent of the roadway study area for this analysis. Three road segments were evaluated, as listed in Table 4. The projected volumes, ADTs, and volume to capacity ratios for the four traffic scenarios are also provided in Table 4 and represent construction traffic only.

Table 4
Road Segment Analysis – Construction Traffic

Street	2022[1]	Project ADT	2022+ Project	2024	2024+ Project	2026	2026+ Project	Existing Capacity	v/c 2022	v/c 2022+Proj	v/c 2024	v/c 2024+Proj	v/c 2026	v/c 2026+Proj
Rosamond Blvd: 170th St W to 130th St W	2776	72	2848	3202	3274	3694	3766	15000	0.19	0.19	0.21	0.22	0.25	0.25
Rosamond Blvd: 130th St W to 90th St W	2311	72	2383	2478	2550	2656	2728	15000	0.15	0.16	0.17	0.17	0.18	0.18
Rosamond Blvd: 90th St W - SR 14	5731	72	5803	5975	6047	6230	6302	15000	0.38	0.39	0.40	0.40	0.42	0.42

[1]2022 Data not available, traffic grown out from most recent year available.

All roadway segments within the project study area are projected to operate within acceptable levels of service under existing year conditions (2022) and are projected to continue to do so with the addition of project construction traffic through 2026.

VEHICLE MILES TRAVELED (VMT) EVALUATION

In accordance with the California Environmental Quality Act (CEQA), an evaluation of the average vehicle miles traveled (VMT) for the project's construction traffic was conducted.

VMT data was obtained from the Kern Council of Governments (KernCOG) in order to establish a baseline for daily VMT in the Kern County area. KernCOG's data is estimated based on Select Zone Analyses conducted for the region for establishing traffic models of existing and future land development projects. Based on household and employment populations in the greater Kern County area, as well as travel patterns throughout the region, KernCOG data shows an average VMT per trip of 43.2 miles.

In order to establish the anticipated VMT profile for the project, an investigation into the personnel trips involved in the construction process was conducted. The primary factor involved in this evaluation is the location of the project site in relation to the surrounding population centers and points of origin for equipment, supplies and personnel. Heavy truck trips were screened out of the VMT analysis per Office of Planning and Research guidelines.

Based on the information gathered, 50% of the construction personnel will be from the local population, which is considered to be the cities of Lancaster, Rosamond, and Mojave. It is anticipated that approximately 30% of the remaining construction personnel will temporarily relocate to one of these for the duration of the project. The remaining 20% of the construction personnel will be considered non-local and are anticipated to come from Bakersfield, Tehachapi, and other areas outside of Antelope Valley.

The average trip length for construction personnel traveling to and from the site was determined to be approximately 26.5 miles. It is anticipated that operation and maintenance will be similar due to trips originating from the same population centers.

The average VMT of 26.5 miles per vehicle per day is less than the baseline average VMT of 43.2 miles. Therefore, the project is not expected to result in a significant transportation impact.

Operation & Maintenance Phase VMT Analysis

The California Governor's Office of Planning and Research advisory provides *screening thresholds* for identifying whether a land use project should be expected to result in a less-than-significant transportation impact under CEQA. Projects meeting one or more of these criteria would not be required to undergo a detailed VMT analysis. According to the advisory, projects that generate fewer than 110 trips per day may be assumed to cause a less-than-significant transportation impact.

Therefore, because traffic would be below the 110 average daily trips threshold, the O&M vehicle trips would be screened out of this process. Therefore, no VMT analysis is necessary, and it is assumed that the operation and maintenance traffic will not cause a significant transportation impact.

CONCLUSION

On review of the project and corresponding analysis, it is concluded that the project would not create any operational impacts to any of the intersections or roadway segments anticipated to be used for the project during the construction phase. Additionally, the project will not create a significant VMT impact.

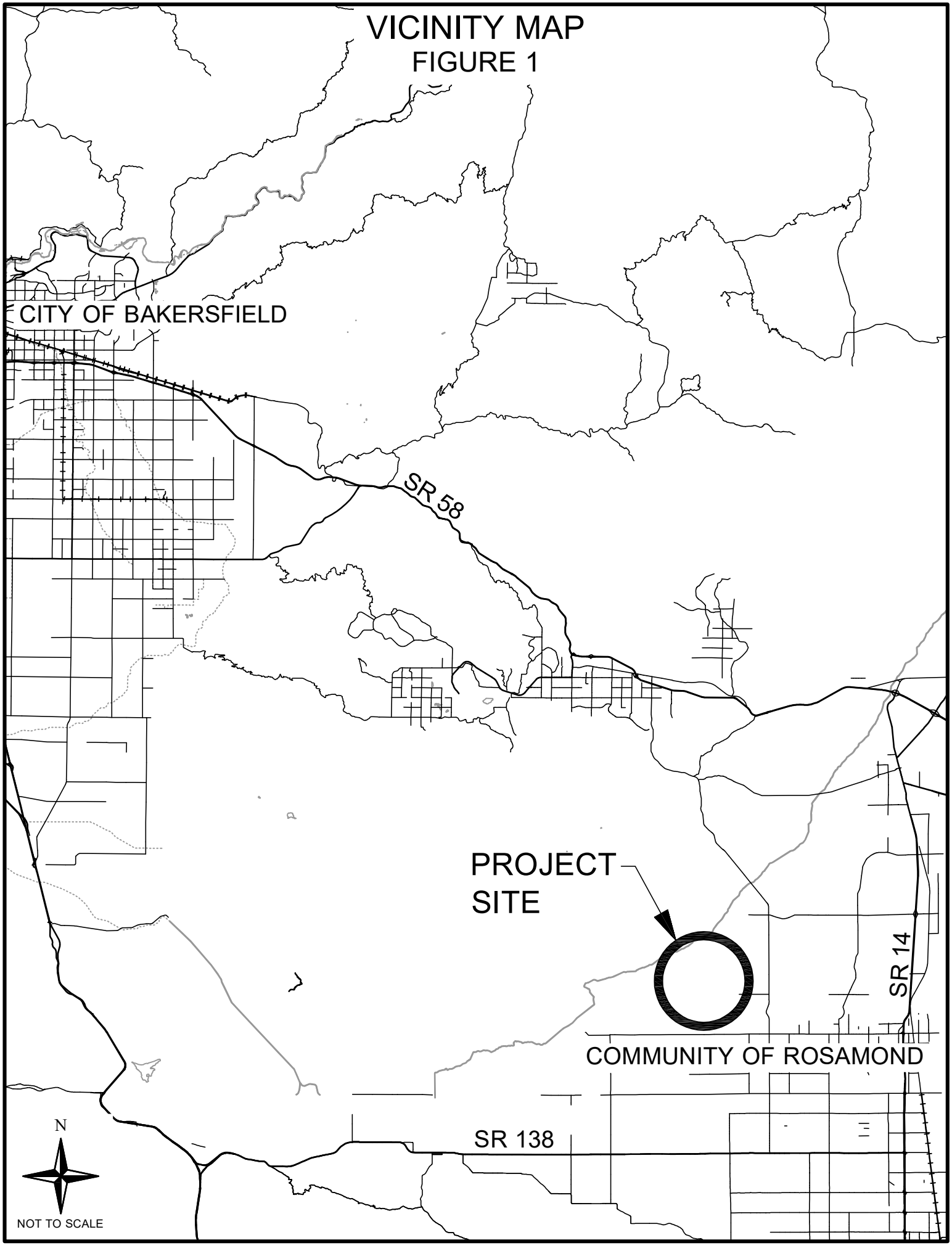
Please contact me should you have any questions.

Very truly yours,

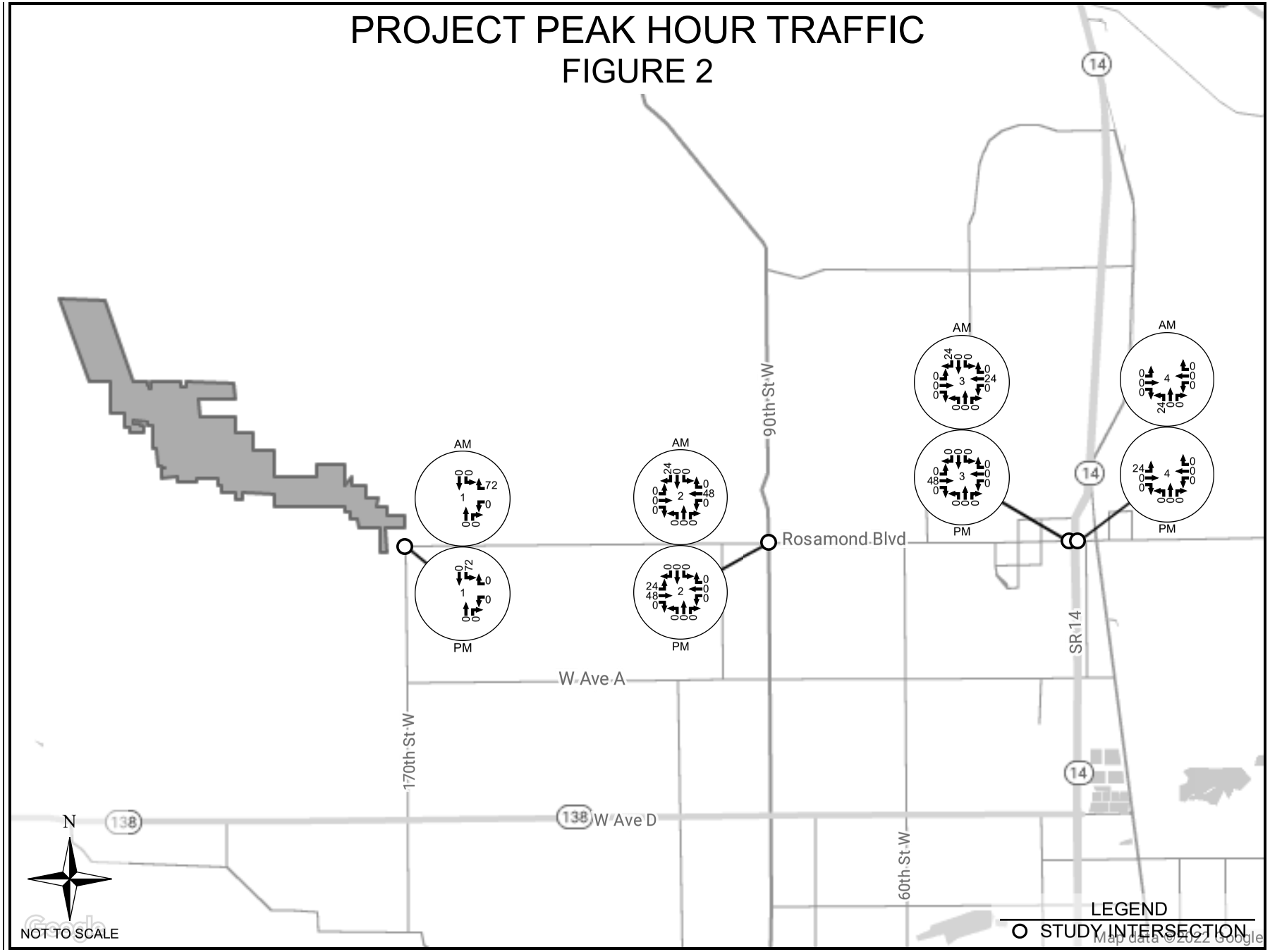


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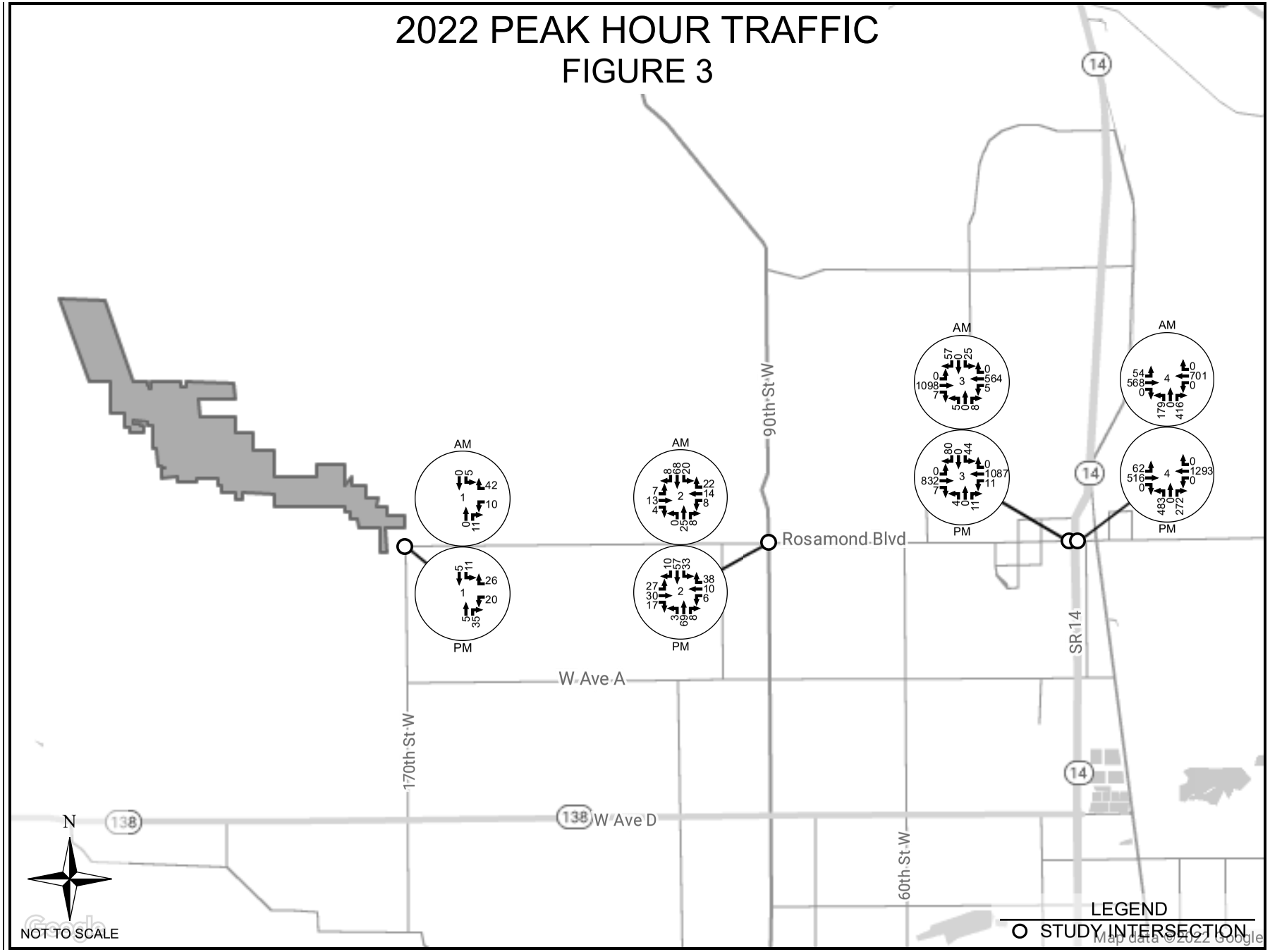
VICINITY MAP
FIGURE 1



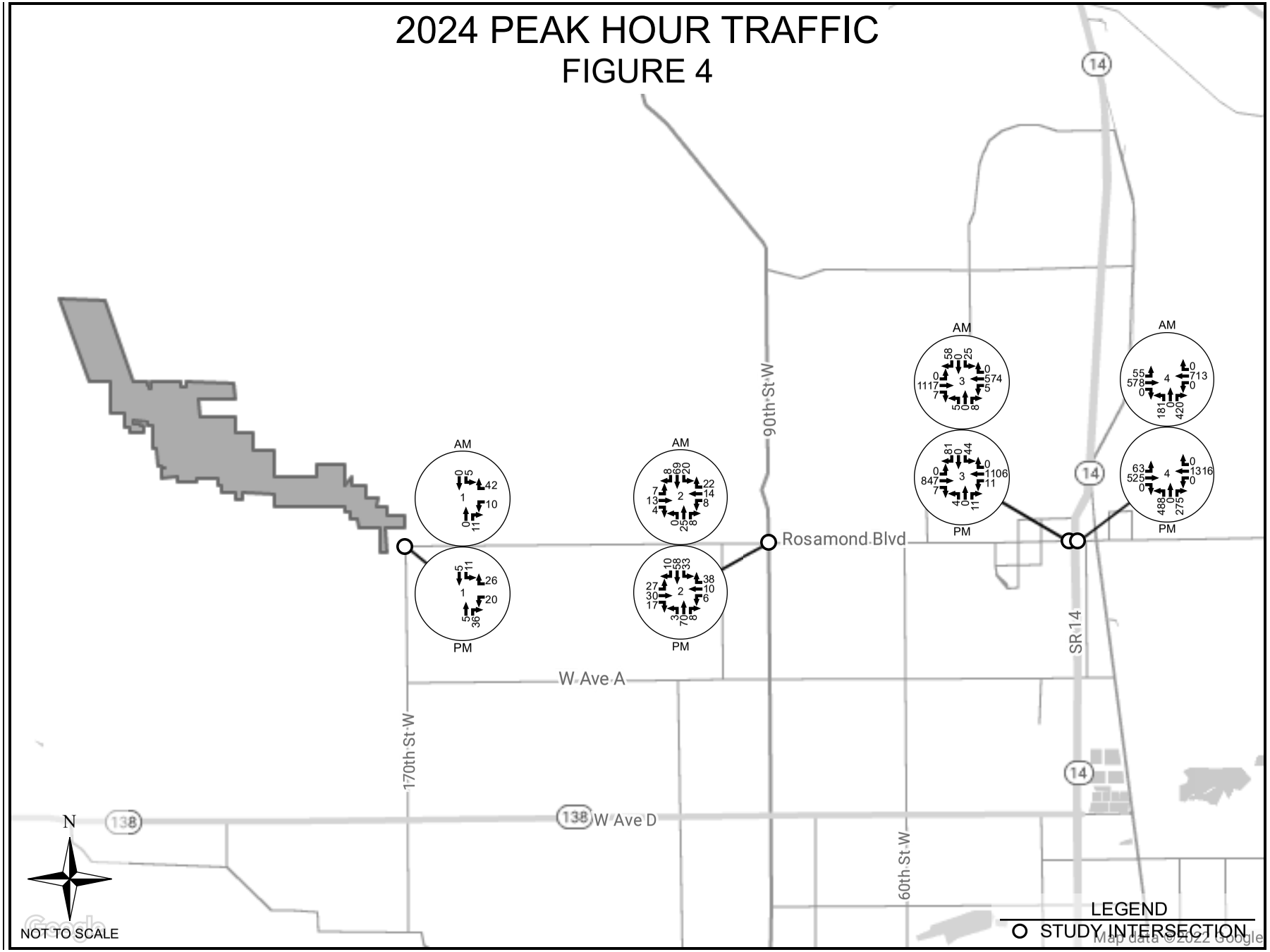
PROJECT PEAK HOUR TRAFFIC
FIGURE 2



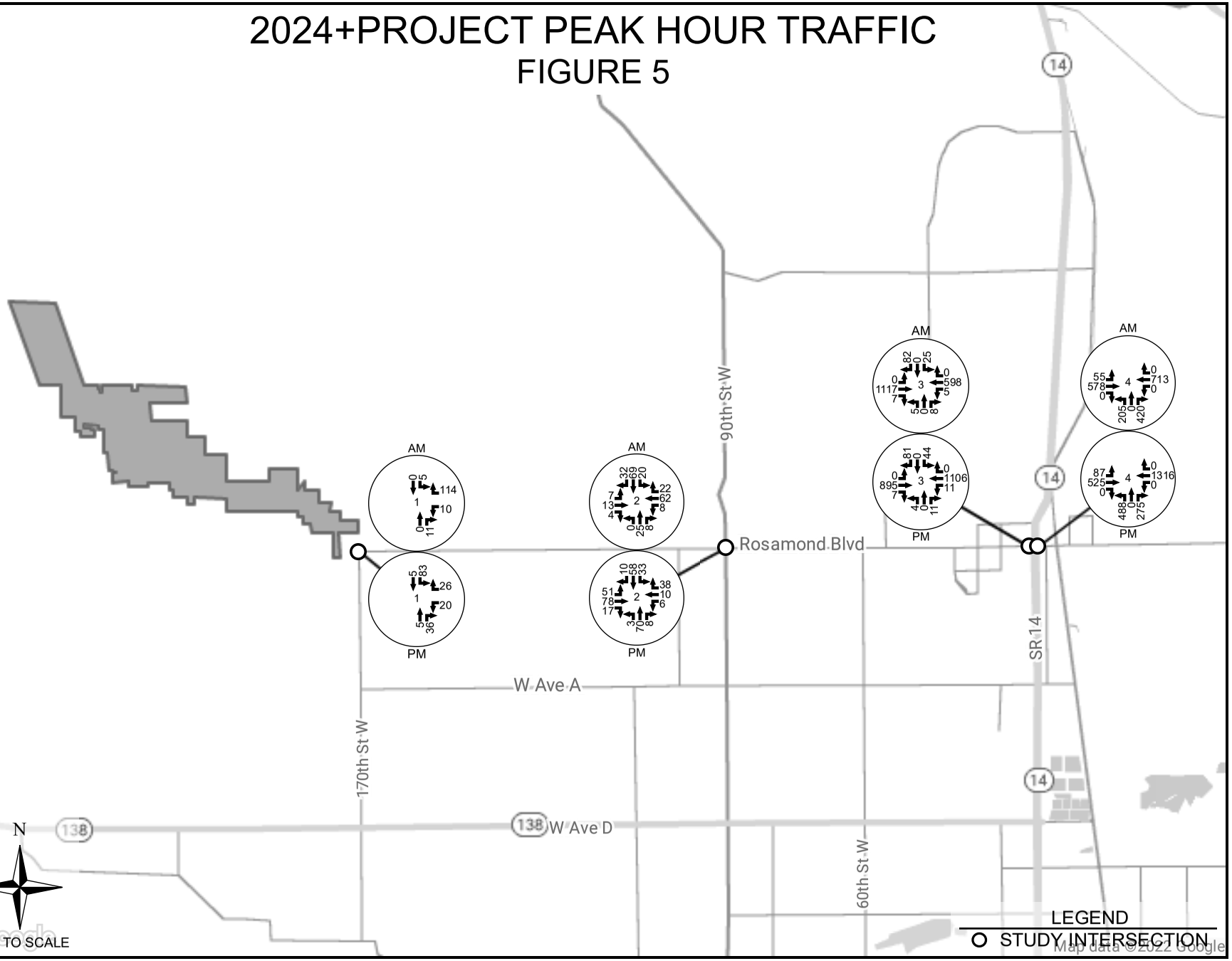
2022 PEAK HOUR TRAFFIC
FIGURE 3



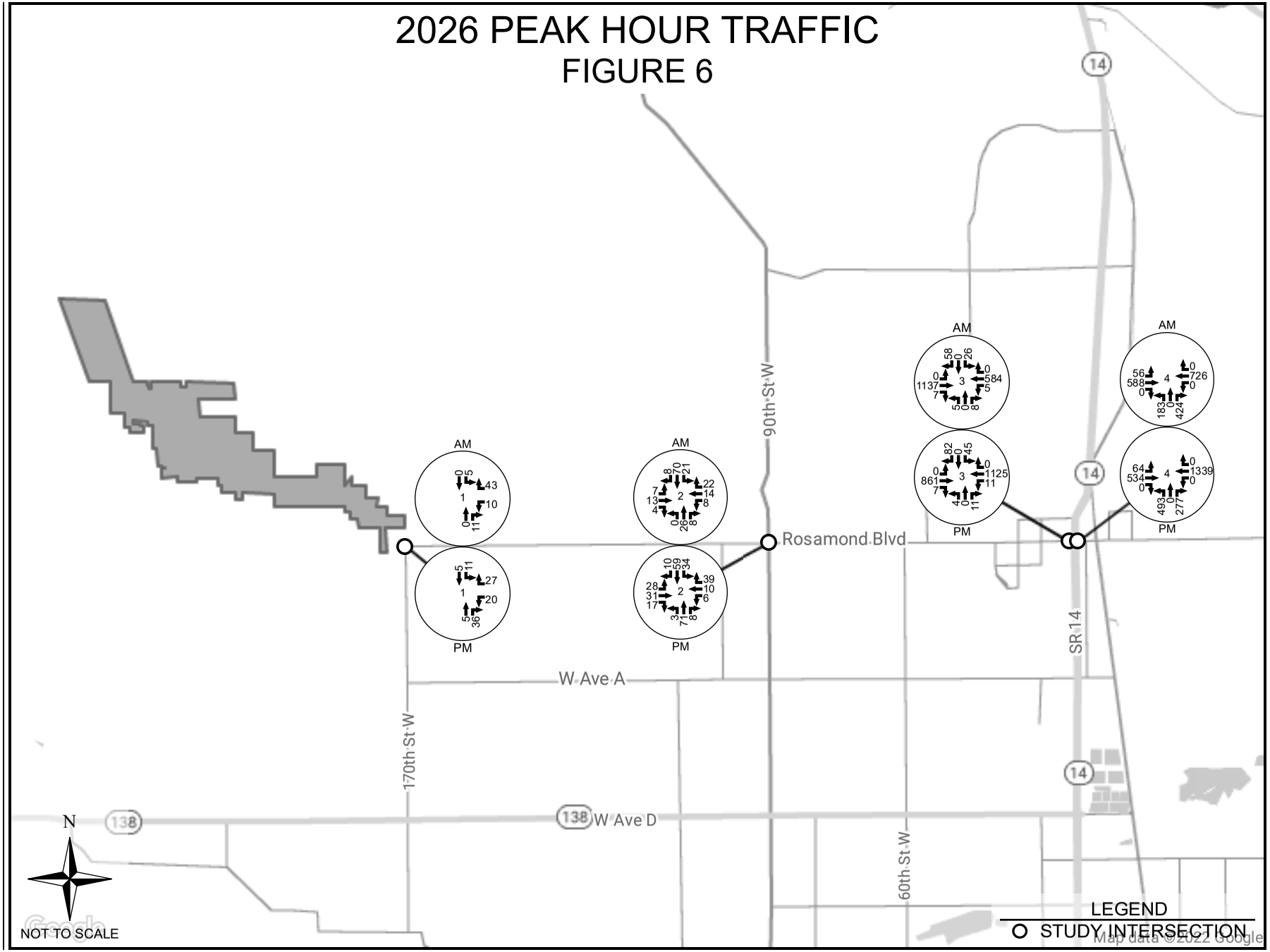
2024 PEAK HOUR TRAFFIC
FIGURE 4



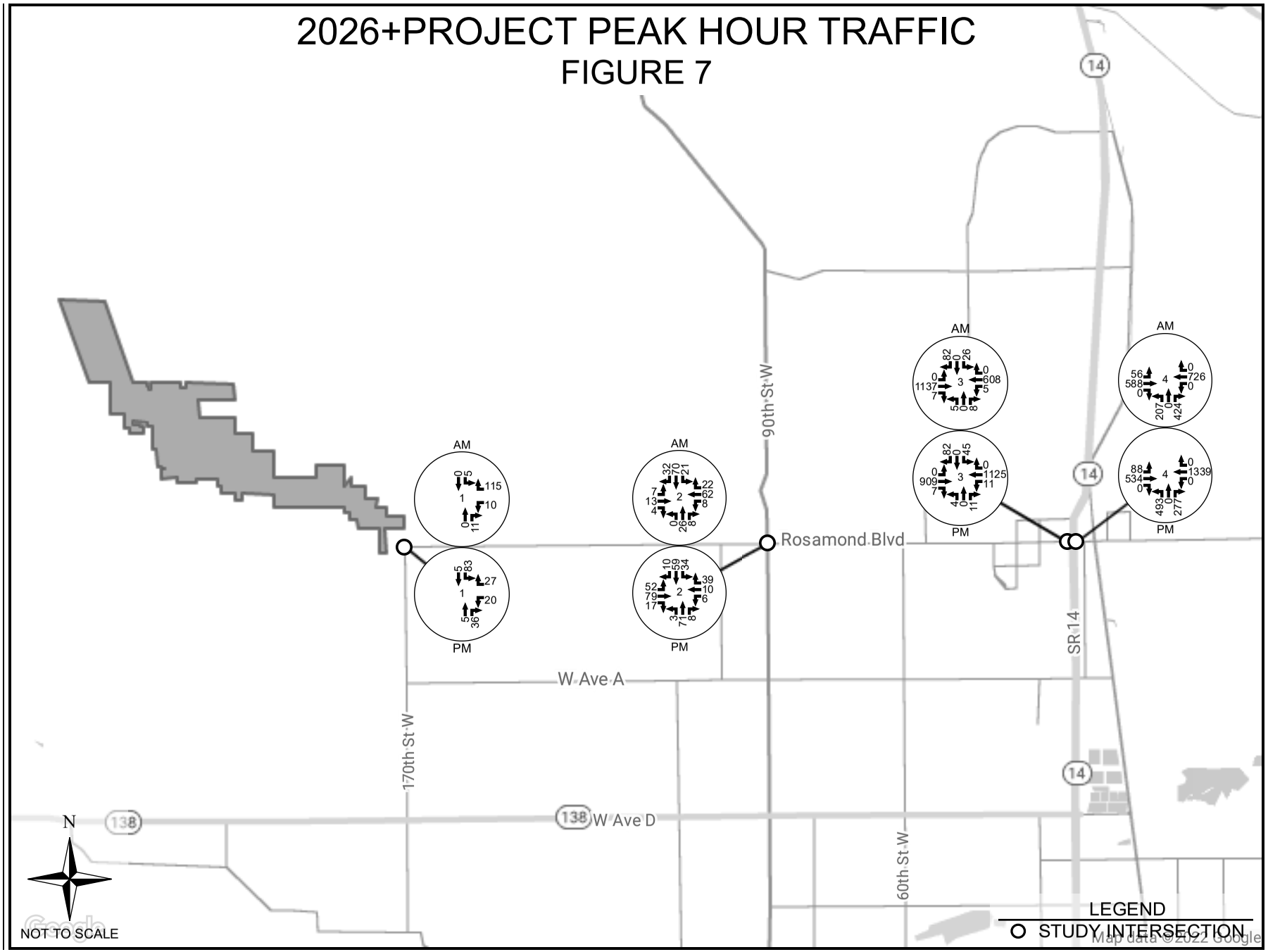
2024+PROJECT PEAK HOUR TRAFFIC
FIGURE 5



2026 PEAK HOUR TRAFFIC
FIGURE 6



2026+PROJECT PEAK HOUR TRAFFIC
FIGURE 7



Intersection 1
170th St W & Rosamond Blvd

Intersection	
Int Delay, s/veh	4.8

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Traffic Vol, veh/h	20	26	5	35	11	5
Future Vol, veh/h	20	26	5	35	11	5
Conflicting Peds, #/hr	4	4	0	4	4	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	22	28	5	38	12	5

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	57	32	0	0	47	0
Stage 1	28	-	-	-	-	-
Stage 2	29	-	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.12	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	2.218	-
Pot Cap-1 Maneuver	950	1042	-	-	1560	-
Stage 1	995	-	-	-	-	-
Stage 2	994	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	936	1035	-	-	1555	-
Mov Cap-2 Maneuver	936	-	-	-	-	-
Stage 1	992	-	-	-	-	-
Stage 2	983	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	8.8	0	5
HCM LOS	A		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	989	1555	-
HCM Lane V/C Ratio	-	-	0.051	0.008	-
HCM Control Delay (s)	-	-	8.8	7.3	0
HCM Lane LOS	-	-	A	A	A
HCM 95th %tile Q(veh)	-	-	0.2	0	-

Intersection	
Int Delay, s/veh	4.7

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Traffic Vol, veh/h	20	26	5	36	11	5
Future Vol, veh/h	20	26	5	36	11	5
Conflicting Peds, #/hr	4	4	0	4	4	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	22	28	5	39	12	5

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	58	33	0	0	49	0
Stage 1	29	-	-	-	-	-
Stage 2	29	-	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.12	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	2.218	-
Pot Cap-1 Maneuver	949	1041	-	-	1558	-
Stage 1	994	-	-	-	-	-
Stage 2	994	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	935	1034	-	-	1553	-
Mov Cap-2 Maneuver	935	-	-	-	-	-
Stage 1	991	-	-	-	-	-
Stage 2	983	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	8.8	0	5
HCM LOS	A		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	988	1553	-
HCM Lane V/C Ratio	-	-	0.051	0.008	-
HCM Control Delay (s)	-	-	8.8	7.3	0
HCM Lane LOS	-	-	A	A	A
HCM 95th %tile Q(veh)	-	-	0.2	0	-

Intersection	
Int Delay, s/veh	6

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Traffic Vol, veh/h	20	26	5	36	83	5
Future Vol, veh/h	20	26	5	36	83	5
Conflicting Peds, #/hr	4	4	0	4	4	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	22	28	5	39	90	5

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	215	33	0	0	49	0
Stage 1	29	-	-	-	-	-
Stage 2	186	-	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.12	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	2.218	-
Pot Cap-1 Maneuver	773	1041	-	-	1558	-
Stage 1	994	-	-	-	-	-
Stage 2	846	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	723	1034	-	-	1553	-
Mov Cap-2 Maneuver	723	-	-	-	-	-
Stage 1	991	-	-	-	-	-
Stage 2	794	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	9.4	0	7
HCM LOS	A		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	871	1553	-
HCM Lane V/C Ratio	-	-	0.057	0.058	-
HCM Control Delay (s)	-	-	9.4	7.5	0
HCM Lane LOS	-	-	A	A	A
HCM 95th %tile Q(veh)	-	-	0.2	0.2	-

Intersection	
Int Delay, s/veh	6

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Traffic Vol, veh/h	20	26	5	36	83	5
Future Vol, veh/h	20	26	5	36	83	5
Conflicting Peds, #/hr	4	4	0	4	4	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	22	28	5	39	90	5

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	215	33	0	0	49	0
Stage 1	29	-	-	-	-	-
Stage 2	186	-	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.12	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	2.218	-
Pot Cap-1 Maneuver	773	1041	-	-	1558	-
Stage 1	994	-	-	-	-	-
Stage 2	846	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	723	1034	-	-	1553	-
Mov Cap-2 Maneuver	723	-	-	-	-	-
Stage 1	991	-	-	-	-	-
Stage 2	794	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	9.4	0	7
HCM LOS	A		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	871	1553	-
HCM Lane V/C Ratio	-	-	0.057	0.058	-
HCM Control Delay (s)	-	-	9.4	7.5	0
HCM Lane LOS	-	-	A	A	A
HCM 95th %tile Q(veh)	-	-	0.2	0.2	-

Intersection	
Int Delay, s/veh	4.7

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Traffic Vol, veh/h	20	27	5	36	11	5
Future Vol, veh/h	20	27	5	36	11	5
Conflicting Peds, #/hr	4	4	0	4	4	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	22	29	5	39	12	5

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	58	33	0	0	49	0
Stage 1	29	-	-	-	-	-
Stage 2	29	-	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.12	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	2.218	-
Pot Cap-1 Maneuver	949	1041	-	-	1558	-
Stage 1	994	-	-	-	-	-
Stage 2	994	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	935	1034	-	-	1553	-
Mov Cap-2 Maneuver	935	-	-	-	-	-
Stage 1	991	-	-	-	-	-
Stage 2	983	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	8.8	0	5
HCM LOS	A		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	989	1553	-
HCM Lane V/C Ratio	-	-	0.052	0.008	-
HCM Control Delay (s)	-	-	8.8	7.3	0
HCM Lane LOS	-	-	A	A	A
HCM 95th %tile Q(veh)	-	-	0.2	0	-

Intersection	
Int Delay, s/veh	6

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Traffic Vol, veh/h	20	27	5	36	83	5
Future Vol, veh/h	20	27	5	36	83	5
Conflicting Peds, #/hr	4	4	0	4	4	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	22	29	5	39	90	5

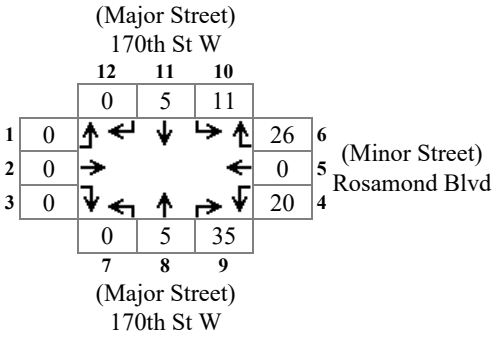
Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	215	33	0	0	49	0
Stage 1	29	-	-	-	-	-
Stage 2	186	-	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.12	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	2.218	-
Pot Cap-1 Maneuver	773	1041	-	-	1558	-
Stage 1	994	-	-	-	-	-
Stage 2	846	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	723	1034	-	-	1553	-
Mov Cap-2 Maneuver	723	-	-	-	-	-
Stage 1	991	-	-	-	-	-
Stage 2	794	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	9.4	0	7
HCM LOS	A		

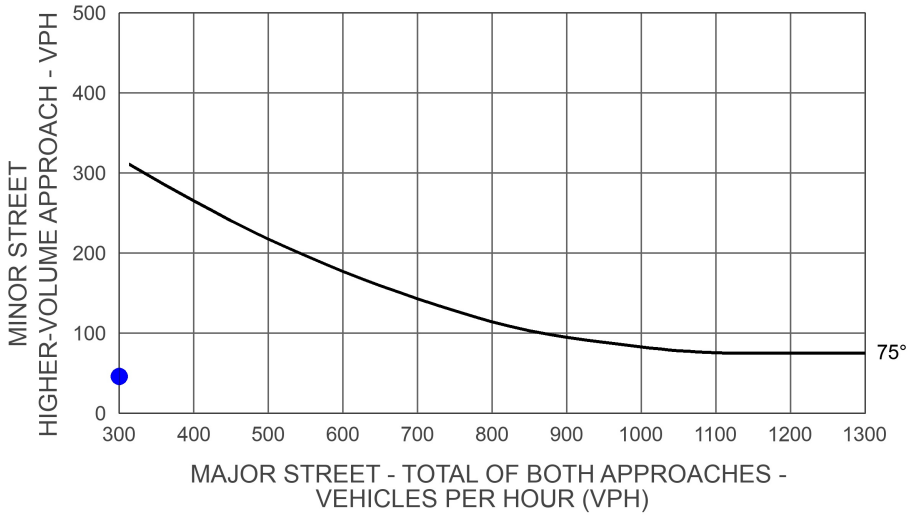
Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	874	1553	-
HCM Lane V/C Ratio	-	-	0.058	0.058	-
HCM Control Delay (s)	-	-	9.4	7.5	0
HCM Lane LOS	-	-	A	A	A
HCM 95th %tile Q(veh)	-	-	0.2	0.2	-

Rural Peak Hour Signal Warrant
Intersection Does Not Meet Signal Warrant

Scenario: PM Existing
Intersection #: 1

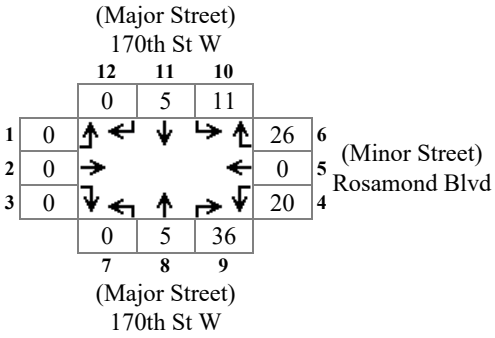


Major Total: 56
Minor High Volume: 46

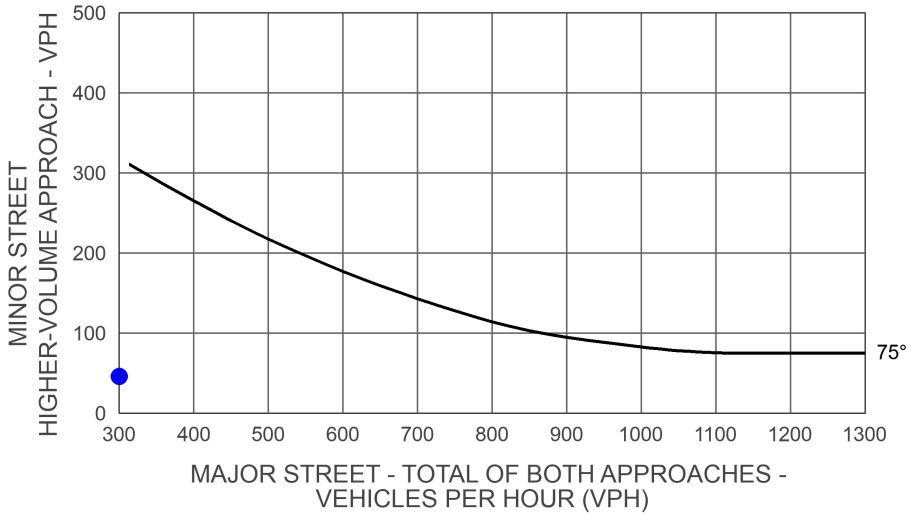


Rural Peak Hour Signal Warrant
Intersection Does Not Meet Signal Warrant

Scenario: PM Future
Intersection #: 1

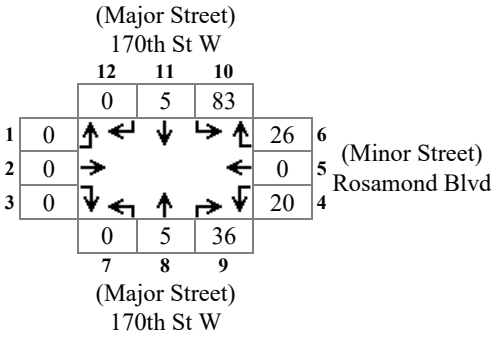


Major Total: 57
Minor High Volume: 46

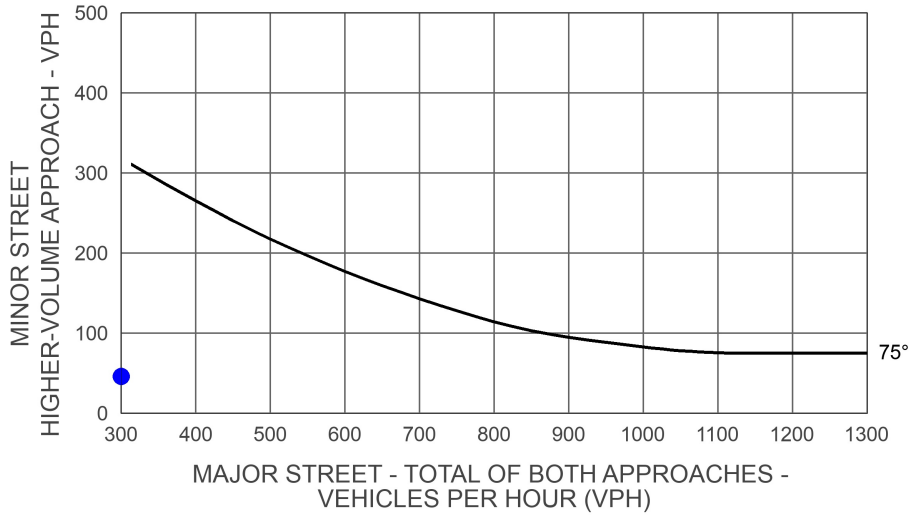


Rural Peak Hour Signal Warrant
Intersection Does Not Meet Signal Warrant

Scenario: PM Future+Project
Intersection #: 1

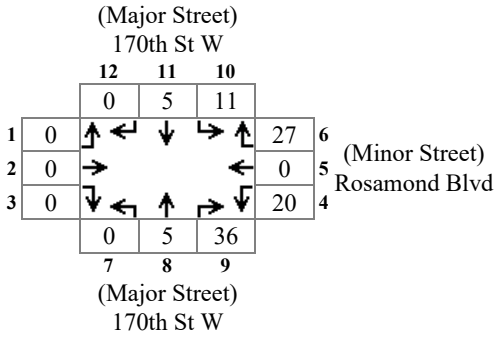


Major Total: 129
Minor High Volume: 46

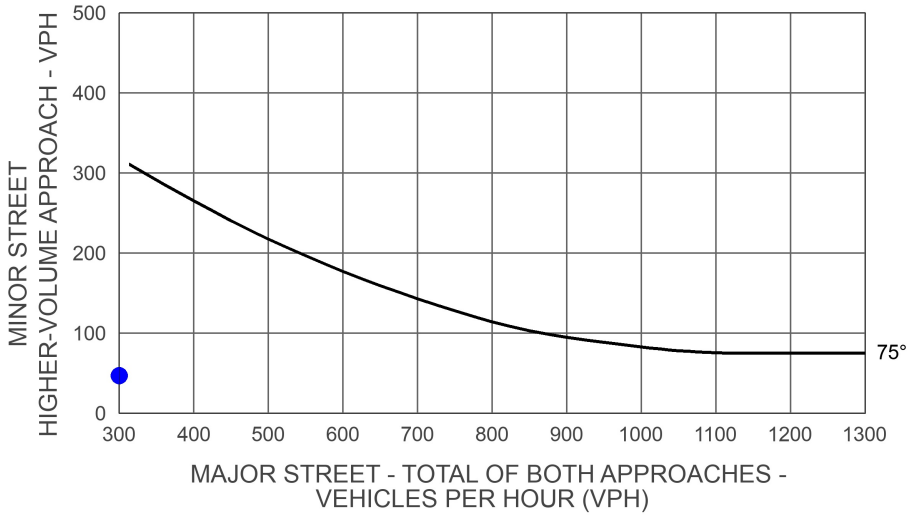


Rural Peak Hour Signal Warrant
Intersection Does Not Meet Signal Warrant

Scenario: PM Future
Intersection #: 1

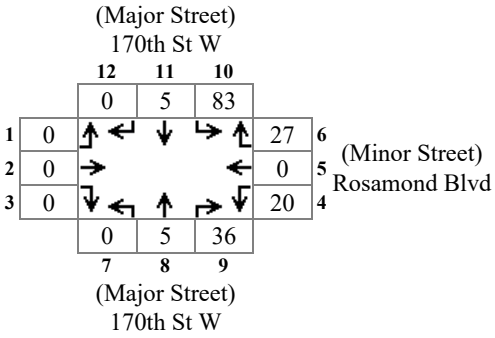


Major Total: 57
Minor High Volume: 47

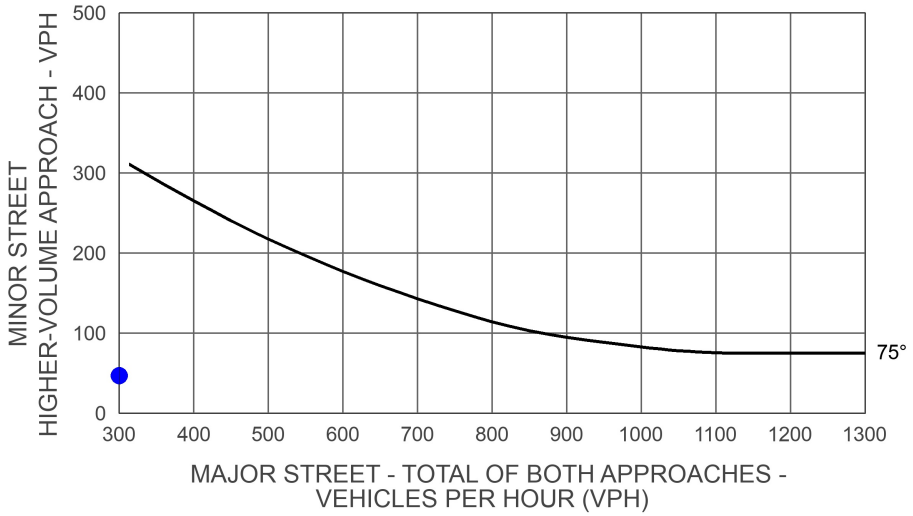


Rural Peak Hour Signal Warrant
Intersection Does Not Meet Signal Warrant

Scenario: PM Future+Project
Intersection #: 1



Major Total: 129
Minor High Volume: 47



Intersection	
Int Delay, s/veh	7.1

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Traffic Vol, veh/h	10	42	0	11	5	0
Future Vol, veh/h	10	42	0	11	5	0
Conflicting Peds, #/hr	4	4	0	4	4	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	11	46	0	12	5	0

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	21	14	0	0	16	0
Stage 1	10	-	-	-	-	-
Stage 2	11	-	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.12	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	2.218	-
Pot Cap-1 Maneuver	996	1066	-	-	1602	-
Stage 1	1013	-	-	-	-	-
Stage 2	1012	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	986	1059	-	-	1597	-
Mov Cap-2 Maneuver	986	-	-	-	-	-
Stage 1	1010	-	-	-	-	-
Stage 2	1006	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	8.6	0	7.3
HCM LOS	A		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	1044	1597	-
HCM Lane V/C Ratio	-	-	0.054	0.003	-
HCM Control Delay (s)	-	-	8.6	7.3	0
HCM Lane LOS	-	-	A	A	A
HCM 95th %tile Q(veh)	-	-	0.2	0	-

Intersection	
Int Delay, s/veh	7.1

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Traffic Vol, veh/h	10	42	0	11	5	0
Future Vol, veh/h	10	42	0	11	5	0
Conflicting Peds, #/hr	4	4	0	4	4	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	11	46	0	12	5	0

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	21	14	0	0	16	0
Stage 1	10	-	-	-	-	-
Stage 2	11	-	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.12	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	2.218	-
Pot Cap-1 Maneuver	996	1066	-	-	1602	-
Stage 1	1013	-	-	-	-	-
Stage 2	1012	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	986	1059	-	-	1597	-
Mov Cap-2 Maneuver	986	-	-	-	-	-
Stage 1	1010	-	-	-	-	-
Stage 2	1006	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	8.6	0	7.3
HCM LOS	A		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	1044	1597	-
HCM Lane V/C Ratio	-	-	0.054	0.003	-
HCM Control Delay (s)	-	-	8.6	7.3	0
HCM Lane LOS	-	-	A	A	A
HCM 95th %tile Q(veh)	-	-	0.2	0	-

Intersection	
Int Delay, s/veh	8.1

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Traffic Vol, veh/h	10	114	0	11	5	0
Future Vol, veh/h	10	114	0	11	5	0
Conflicting Peds, #/hr	4	4	0	4	4	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	11	124	0	12	5	0

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	21	14	0	0	16	0
Stage 1	10	-	-	-	-	-
Stage 2	11	-	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.12	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	2.218	-
Pot Cap-1 Maneuver	996	1066	-	-	1602	-
Stage 1	1013	-	-	-	-	-
Stage 2	1012	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	986	1059	-	-	1597	-
Mov Cap-2 Maneuver	986	-	-	-	-	-
Stage 1	1010	-	-	-	-	-
Stage 2	1006	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	8.9	0	7.3
HCM LOS	A		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	1053	1597	-
HCM Lane V/C Ratio	-	-	0.128	0.003	-
HCM Control Delay (s)	-	-	8.9	7.3	0
HCM Lane LOS	-	-	A	A	A
HCM 95th %tile Q(veh)	-	-	0.4	0	-

Intersection	
Int Delay, s/veh	7.2

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Traffic Vol, veh/h	10	43	0	11	5	0
Future Vol, veh/h	10	43	0	11	5	0
Conflicting Peds, #/hr	4	4	0	4	4	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	11	47	0	12	5	0

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	21	14	0	0	16	0
Stage 1	10	-	-	-	-	-
Stage 2	11	-	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.12	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	2.218	-
Pot Cap-1 Maneuver	996	1066	-	-	1602	-
Stage 1	1013	-	-	-	-	-
Stage 2	1012	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	986	1059	-	-	1597	-
Mov Cap-2 Maneuver	986	-	-	-	-	-
Stage 1	1010	-	-	-	-	-
Stage 2	1006	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	8.7	0	7.3
HCM LOS	A		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	1044	1597	-
HCM Lane V/C Ratio	-	-	0.055	0.003	-
HCM Control Delay (s)	-	-	8.7	7.3	0
HCM Lane LOS	-	-	A	A	A
HCM 95th %tile Q(veh)	-	-	0.2	0	-

Intersection	
Int Delay, s/veh	8.1

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Traffic Vol, veh/h	10	115	0	11	5	0
Future Vol, veh/h	10	115	0	11	5	0
Conflicting Peds, #/hr	4	4	0	4	4	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	11	125	0	12	5	0

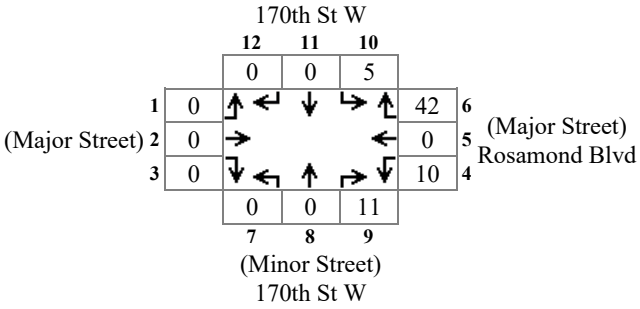
Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	21	14	0	0	16	0
Stage 1	10	-	-	-	-	-
Stage 2	11	-	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.12	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	2.218	-
Pot Cap-1 Maneuver	996	1066	-	-	1602	-
Stage 1	1013	-	-	-	-	-
Stage 2	1012	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	986	1059	-	-	1597	-
Mov Cap-2 Maneuver	986	-	-	-	-	-
Stage 1	1010	-	-	-	-	-
Stage 2	1006	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	8.9	0	7.3
HCM LOS	A		

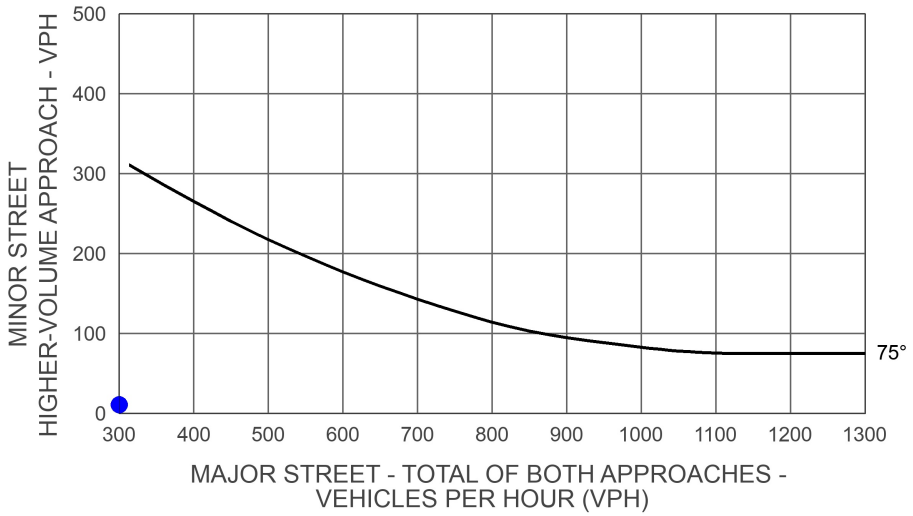
Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	1053	1597	-
HCM Lane V/C Ratio	-	-	0.129	0.003	-
HCM Control Delay (s)	-	-	8.9	7.3	0
HCM Lane LOS	-	-	A	A	A
HCM 95th %tile Q(veh)	-	-	0.4	0	-

Rural Peak Hour Signal Warrant
Intersection Does Not Meet Signal Warrant

Scenario: AM Existing
Intersection #: 1

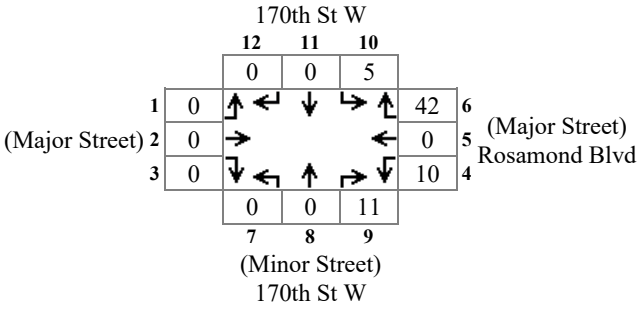


Major Total: 52
Minor High Volume: 11

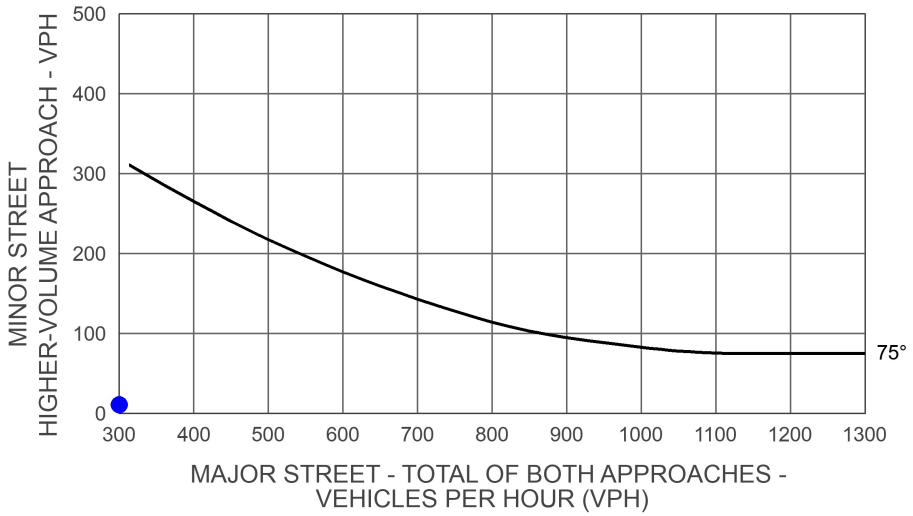


Rural Peak Hour Signal Warrant
Intersection Does Not Meet Signal Warrant

Scenario: AM Future
Intersection #: 1

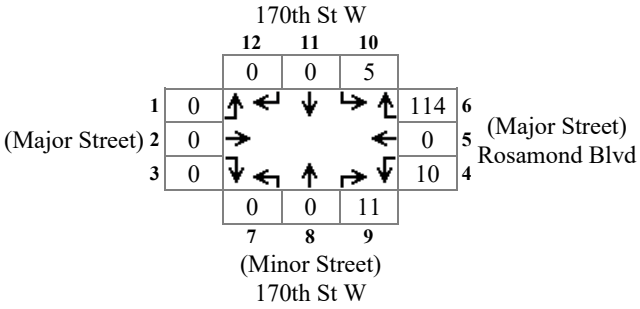


Major Total: 52
Minor High Volume: 11

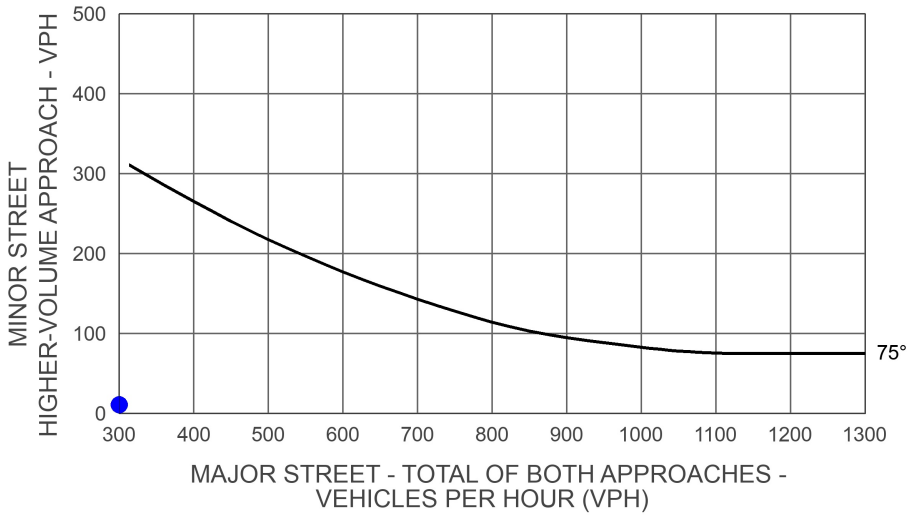


Rural Peak Hour Signal Warrant
Intersection Does Not Meet Signal Warrant

Scenario: AM Future+Project
Intersection #: 1

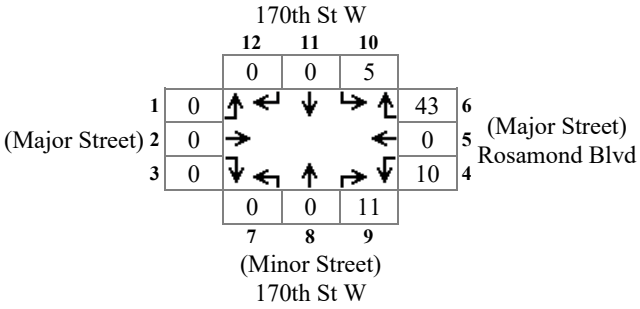


Major Total: 124
Minor High Volume: 11

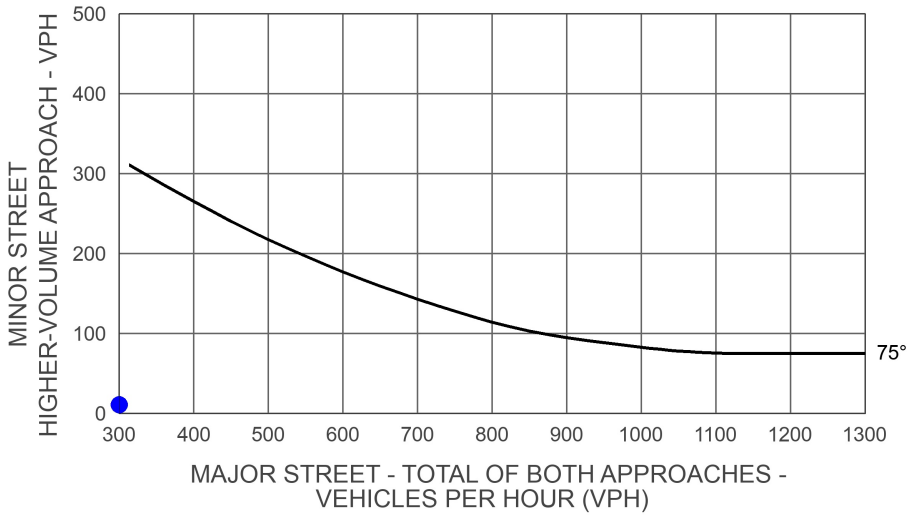


Rural Peak Hour Signal Warrant
Intersection Does Not Meet Signal Warrant

Scenario: AM Future
Intersection #: 1

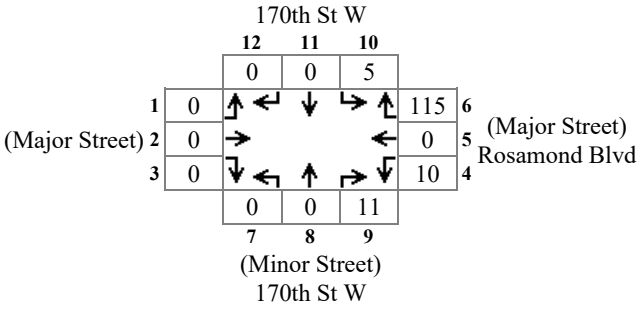


Major Total: 53
Minor High Volume: 11

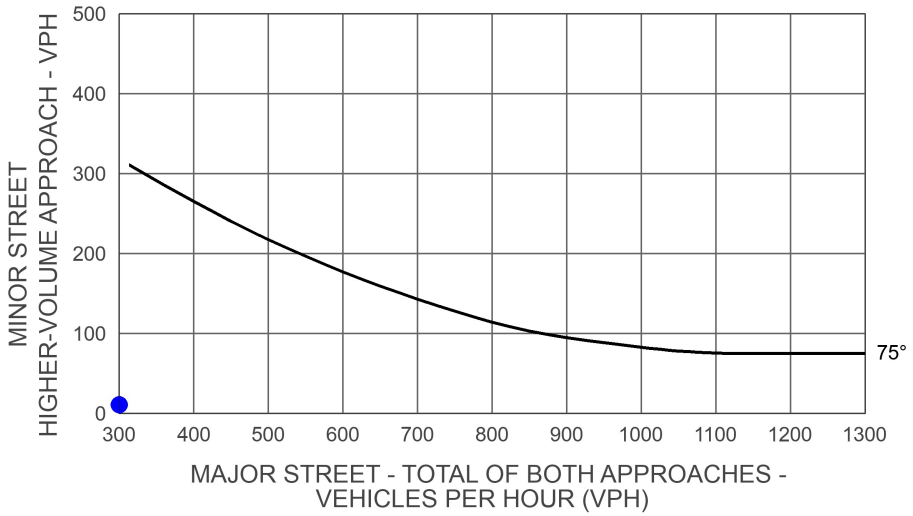


Rural Peak Hour Signal Warrant
Intersection Does Not Meet Signal Warrant

Scenario: AM Future+Project
Intersection #: 1



Major Total: 125
Minor High Volume: 11



Intersection 2
Tehachapi Willow Springs Rd/90th St W & Rosamond Blvd

Intersection	
Int Delay, s/veh	7.1

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Traffic Vol, veh/h	27	30	17	6	10	38	3	69	8	33	57	10
Future Vol, veh/h	27	30	17	6	10	38	3	69	8	33	57	10
Conflicting Peds, #/hr	4	0	4	4	0	4	4	0	4	4	0	4
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	29	33	18	7	11	41	3	75	9	36	62	11

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	56	0	0	55	0	0	190	174	50	195	163	40
Stage 1	-	-	-	-	-	-	105	105	-	49	49	-
Stage 2	-	-	-	-	-	-	85	69	-	146	114	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	1549	-	-	1550	-	-	770	719	1018	764	729	1031
Stage 1	-	-	-	-	-	-	901	808	-	964	854	-
Stage 2	-	-	-	-	-	-	923	837	-	857	801	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1544	-	-	1545	-	-	693	697	1011	678	707	1024
Mov Cap-2 Maneuver	-	-	-	-	-	-	693	697	-	678	707	-
Stage 1	-	-	-	-	-	-	881	790	-	943	847	-
Stage 2	-	-	-	-	-	-	839	830	-	752	783	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	2.7	0.8	10.7	10.9
HCM LOS			B	B

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	719	1544	-	-	1545	-	-	719
HCM Lane V/C Ratio	0.121	0.019	-	-	0.004	-	-	0.151
HCM Control Delay (s)	10.7	7.4	0	-	7.3	0	-	10.9
HCM Lane LOS	B	A	A	-	A	A	-	B
HCM 95th %tile Q(veh)	0.4	0.1	-	-	0	-	-	0.5

Intersection	
Int Delay, s/veh	7.1

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Traffic Vol, veh/h	27	30	17	6	10	38	3	70	8	33	58	10
Future Vol, veh/h	27	30	17	6	10	38	3	70	8	33	58	10
Conflicting Peds, #/hr	4	0	4	4	0	4	4	0	4	4	0	4
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	29	33	18	7	11	41	3	76	9	36	63	11

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	56	0	0	55	0	0	191	174	50	196	163	40
Stage 1	-	-	-	-	-	-	105	105	-	49	49	-
Stage 2	-	-	-	-	-	-	86	69	-	147	114	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	1549	-	-	1550	-	-	769	719	1018	763	729	1031
Stage 1	-	-	-	-	-	-	901	808	-	964	854	-
Stage 2	-	-	-	-	-	-	922	837	-	856	801	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1544	-	-	1545	-	-	692	697	1011	676	707	1024
Mov Cap-2 Maneuver	-	-	-	-	-	-	692	697	-	676	707	-
Stage 1	-	-	-	-	-	-	881	790	-	943	847	-
Stage 2	-	-	-	-	-	-	837	830	-	750	783	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	2.7	0.8	10.7	10.9
HCM LOS			B	B

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	719	1544	-	-	1545	-	-	718
HCM Lane V/C Ratio	0.122	0.019	-	-	0.004	-	-	0.153
HCM Control Delay (s)	10.7	7.4	0	-	7.3	0	-	10.9
HCM Lane LOS	B	A	A	-	A	A	-	B
HCM 95th %tile Q(veh)	0.4	0.1	-	-	0	-	-	0.5

Intersection	
Int Delay, s/veh	6.8

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Traffic Vol, veh/h	51	78	17	6	10	38	3	70	8	33	58	10
Future Vol, veh/h	51	78	17	6	10	38	3	70	8	33	58	10
Conflicting Peds, #/hr	4	0	4	4	0	4	4	0	4	4	0	4
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	55	85	18	7	11	41	3	76	9	36	63	11

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	56	0	0	107	0	0	295	278	102	300	267	40
Stage 1	-	-	-	-	-	-	209	209	-	49	49	-
Stage 2	-	-	-	-	-	-	86	69	-	251	218	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	1549	-	-	1484	-	-	657	630	953	652	639	1031
Stage 1	-	-	-	-	-	-	793	729	-	964	854	-
Stage 2	-	-	-	-	-	-	922	837	-	753	723	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1544	-	-	1479	-	-	575	599	947	561	608	1024
Mov Cap-2 Maneuver	-	-	-	-	-	-	575	599	-	561	608	-
Stage 1	-	-	-	-	-	-	760	699	-	924	847	-
Stage 2	-	-	-	-	-	-	837	830	-	637	693	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	2.6	0.8	11.8	12.1
HCM LOS			B	B

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	621	1544	-	-	1479	-	-	616
HCM Lane V/C Ratio	0.142	0.036	-	-	0.004	-	-	0.178
HCM Control Delay (s)	11.8	7.4	0	-	7.4	0	-	12.1
HCM Lane LOS	B	A	A	-	A	A	-	B
HCM 95th %tile Q(veh)	0.5	0.1	-	-	0	-	-	0.6

Intersection	
Int Delay, s/veh	7.2

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Traffic Vol, veh/h	28	31	17	6	10	39	3	71	8	34	59	10
Future Vol, veh/h	28	31	17	6	10	39	3	71	8	34	59	10
Conflicting Peds, #/hr	4	0	4	4	0	4	4	0	4	4	0	4
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	30	34	18	7	11	42	3	77	9	37	64	11

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	57	0	0	56	0	0	195	178	51	200	166	40
Stage 1	-	-	-	-	-	-	108	108	-	49	49	-
Stage 2	-	-	-	-	-	-	87	70	-	151	117	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	1547	-	-	1549	-	-	764	716	1017	759	727	1031
Stage 1	-	-	-	-	-	-	897	806	-	964	854	-
Stage 2	-	-	-	-	-	-	921	837	-	851	799	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1542	-	-	1544	-	-	685	694	1010	671	704	1024
Mov Cap-2 Maneuver	-	-	-	-	-	-	685	694	-	671	704	-
Stage 1	-	-	-	-	-	-	876	787	-	942	847	-
Stage 2	-	-	-	-	-	-	835	830	-	743	780	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	2.7	0.8	10.8	11
HCM LOS			B	B

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	715	1542	-	-	1544	-	-	714
HCM Lane V/C Ratio	0.125	0.02	-	-	0.004	-	-	0.157
HCM Control Delay (s)	10.8	7.4	0	-	7.3	0	-	11
HCM Lane LOS	B	A	A	-	A	A	-	B
HCM 95th %tile Q(veh)	0.4	0.1	-	-	0	-	-	0.6

Intersection	
Int Delay, s/veh	6.8

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Traffic Vol, veh/h	52	79	17	6	10	39	3	71	8	34	59	10
Future Vol, veh/h	52	79	17	6	10	39	3	71	8	34	59	10
Conflicting Peds, #/hr	4	0	4	4	0	4	4	0	4	4	0	4
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	57	86	18	7	11	42	3	77	9	37	64	11

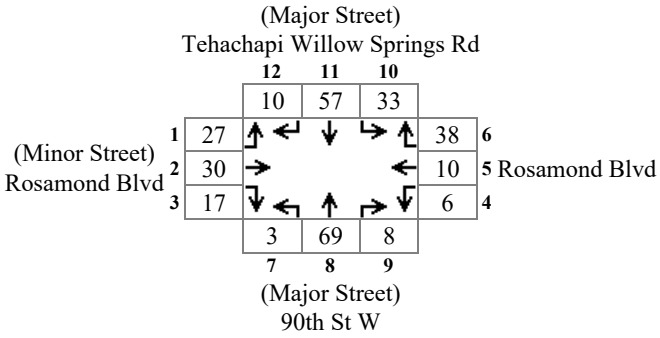
Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	57	0	0	108	0	0	299	282	103	304	270	40
Stage 1	-	-	-	-	-	-	212	212	-	49	49	-
Stage 2	-	-	-	-	-	-	87	70	-	255	221	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	1547	-	-	1483	-	-	653	627	952	648	636	1031
Stage 1	-	-	-	-	-	-	790	727	-	964	854	-
Stage 2	-	-	-	-	-	-	921	837	-	749	720	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1542	-	-	1478	-	-	570	596	946	556	604	1024
Mov Cap-2 Maneuver	-	-	-	-	-	-	570	596	-	556	604	-
Stage 1	-	-	-	-	-	-	757	696	-	923	847	-
Stage 2	-	-	-	-	-	-	835	830	-	632	690	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	2.6	0.8	11.8	12.2
HCM LOS			B	B

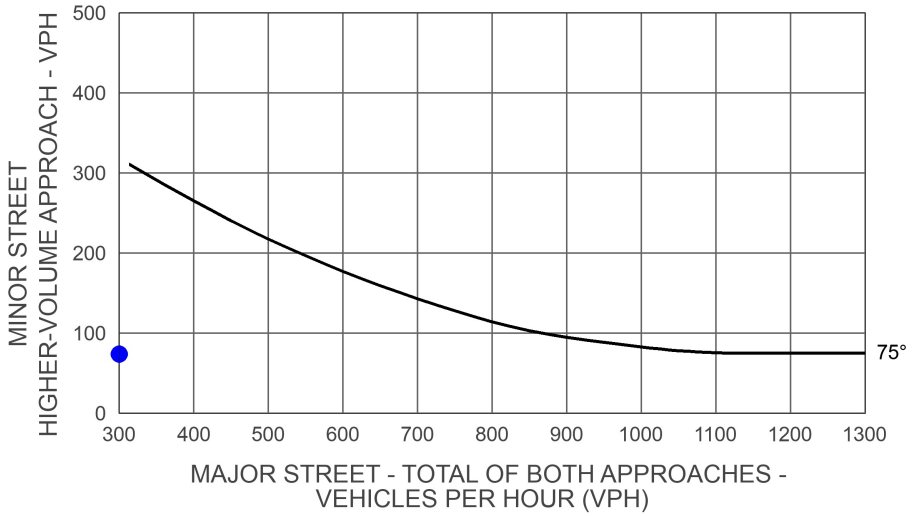
Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	617	1542	-	-	1478	-	-	611
HCM Lane V/C Ratio	0.144	0.037	-	-	0.004	-	-	0.183
HCM Control Delay (s)	11.8	7.4	0	-	7.4	0	-	12.2
HCM Lane LOS	B	A	A	-	A	A	-	B
HCM 95th %tile Q(veh)	0.5	0.1	-	-	0	-	-	0.7

Rural Peak Hour Signal Warrant
Intersection Does Not Meet Signal Warrant

Scenario: PM Existing
Intersection #: 2

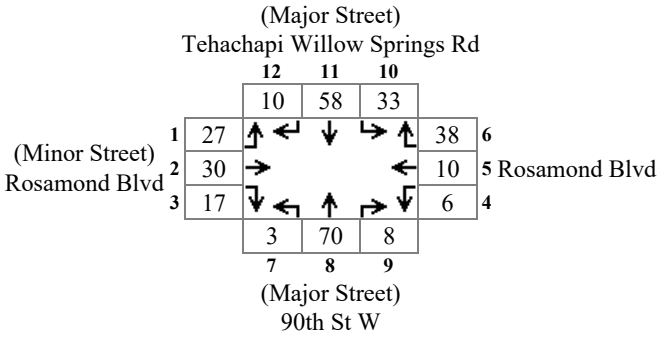


Major Total: 180
Minor High Volume: 74

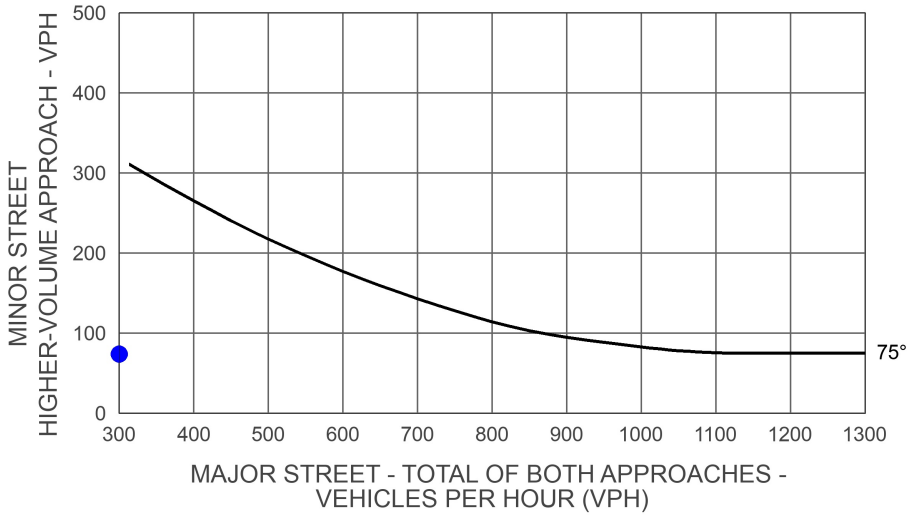


Rural Peak Hour Signal Warrant
Intersection Does Not Meet Signal Warrant

Scenario: PM Future
Intersection #: 2

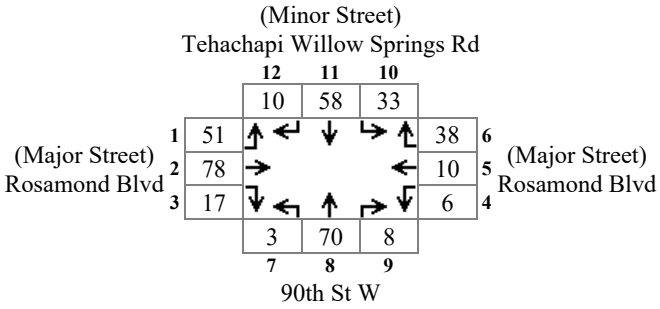


Major Total: 182
Minor High Volume: 74

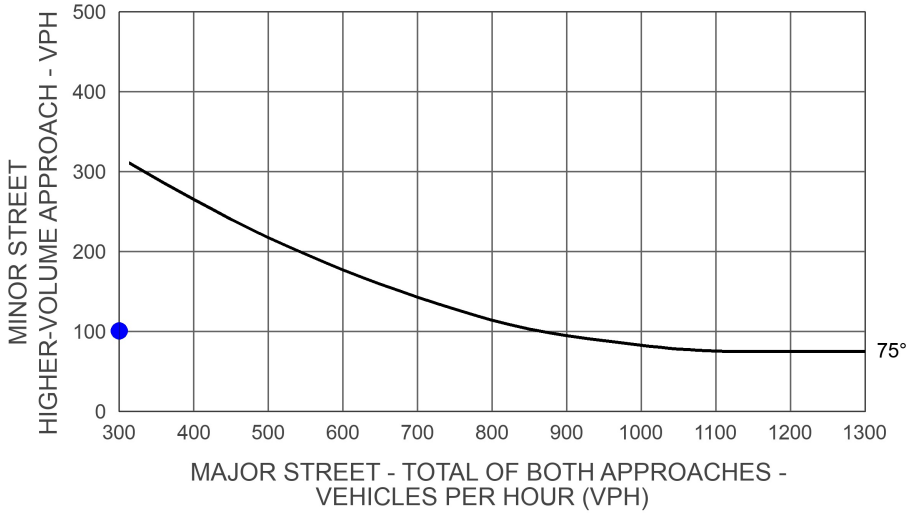


Rural Peak Hour Signal Warrant
Intersection Does Not Meet Signal Warrant

Scenario: PM Future+Project
Intersection #: 2

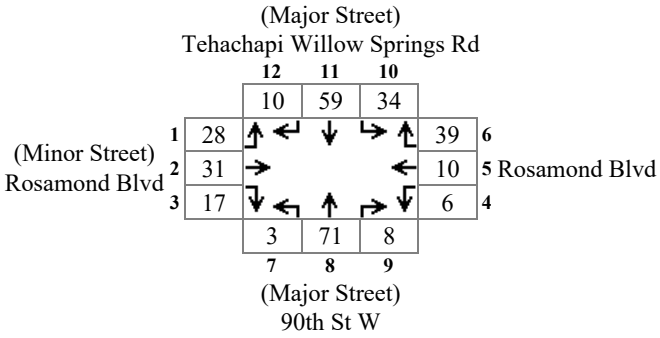


Major Total: 200
Minor High Volume: 101

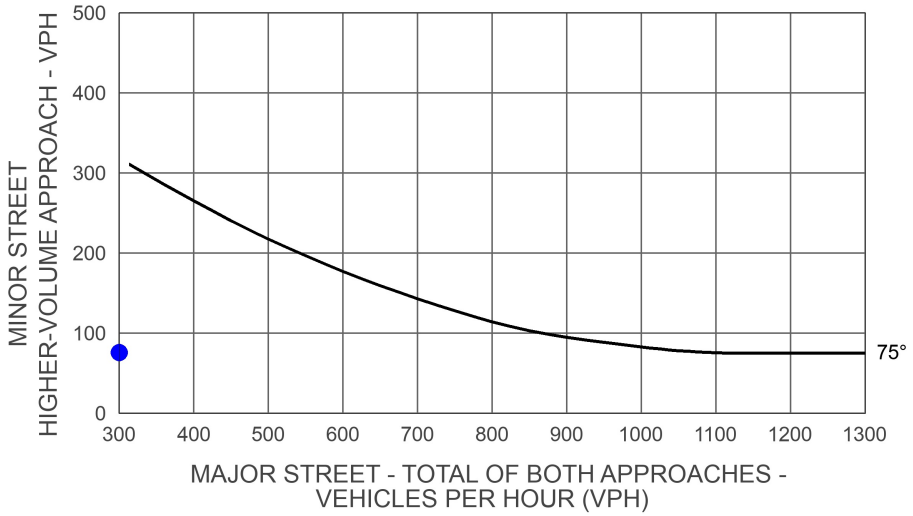


Rural Peak Hour Signal Warrant
Intersection Does Not Meet Signal Warrant

Scenario: PM Future
Intersection #: 2

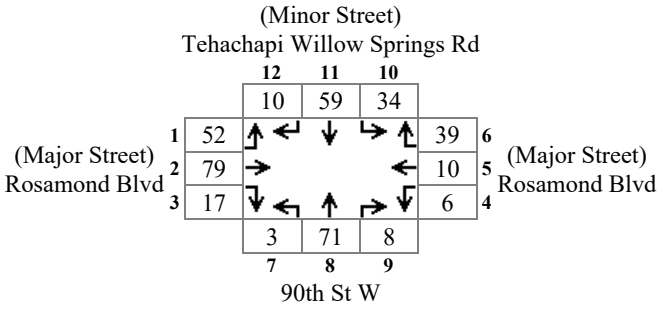


Major Total: 185
Minor High Volume: 76

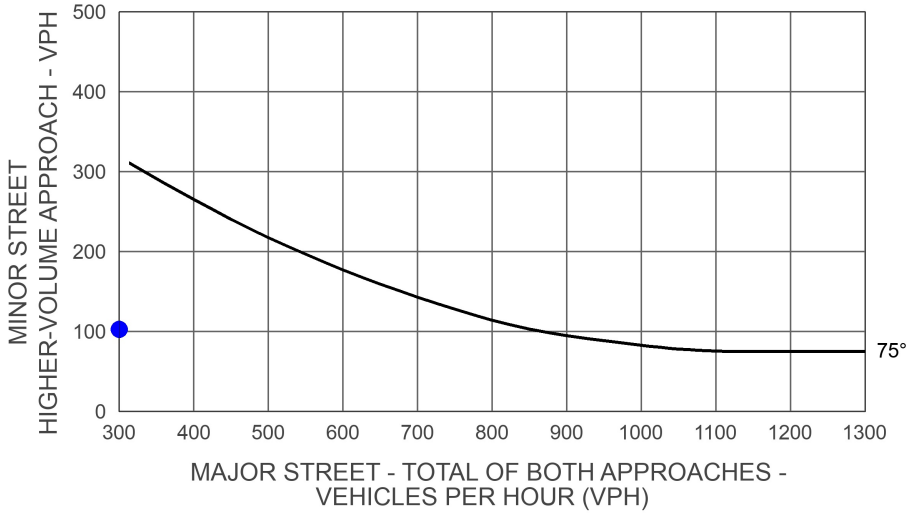


Rural Peak Hour Signal Warrant
Intersection Does Not Meet Signal Warrant

Scenario: PM Future+Project
Intersection #: 2



Major Total: 203
Minor High Volume: 103



Intersection	
Int Delay, s/veh	7.1

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Traffic Vol, veh/h	7	13	4	8	14	22	0	25	8	20	68	8
Future Vol, veh/h	7	13	4	8	14	22	0	25	8	20	68	8
Conflicting Peds, #/hr	4	0	4	4	0	4	4	0	4	4	0	4
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	8	14	4	9	15	24	0	27	9	22	74	9

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	43	0	0	22	0	0	126	97	24	102	87	35
Stage 1	-	-	-	-	-	-	36	36	-	49	49	-
Stage 2	-	-	-	-	-	-	90	61	-	53	38	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	1566	-	-	1593	-	-	848	793	1052	879	803	1038
Stage 1	-	-	-	-	-	-	980	865	-	964	854	-
Stage 2	-	-	-	-	-	-	917	844	-	960	863	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1561	-	-	1588	-	-	769	779	1045	836	789	1031
Mov Cap-2 Maneuver	-	-	-	-	-	-	769	779	-	836	789	-
Stage 1	-	-	-	-	-	-	972	858	-	956	846	-
Stage 2	-	-	-	-	-	-	822	836	-	914	856	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	2.1	1.3	9.5	10.1
HCM LOS			A	B

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	830	1561	-	-	1588	-	-	814
HCM Lane V/C Ratio	0.043	0.005	-	-	0.005	-	-	0.128
HCM Control Delay (s)	9.5	7.3	0	-	7.3	0	-	10.1
HCM Lane LOS	A	A	A	-	A	A	-	B
HCM 95th %tile Q(veh)	0.1	0	-	-	0	-	-	0.4

Intersection	
Int Delay, s/veh	7.1

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Traffic Vol, veh/h	7	13	4	8	14	22	0	25	8	20	69	8
Future Vol, veh/h	7	13	4	8	14	22	0	25	8	20	69	8
Conflicting Peds, #/hr	4	0	4	4	0	4	4	0	4	4	0	4
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	8	14	4	9	15	24	0	27	9	22	75	9

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	43	0	0	22	0	0	126	97	24	102	87	35
Stage 1	-	-	-	-	-	-	36	36	-	49	49	-
Stage 2	-	-	-	-	-	-	90	61	-	53	38	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	1566	-	-	1593	-	-	848	793	1052	879	803	1038
Stage 1	-	-	-	-	-	-	980	865	-	964	854	-
Stage 2	-	-	-	-	-	-	917	844	-	960	863	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1561	-	-	1588	-	-	768	779	1045	836	789	1031
Mov Cap-2 Maneuver	-	-	-	-	-	-	768	779	-	836	789	-
Stage 1	-	-	-	-	-	-	972	858	-	956	846	-
Stage 2	-	-	-	-	-	-	821	836	-	914	856	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	2.1	1.3	9.5	10.1
HCM LOS			A	B

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	830	1561	-	-	1588	-	-	814
HCM Lane V/C Ratio	0.043	0.005	-	-	0.005	-	-	0.13
HCM Control Delay (s)	9.5	7.3	0	-	7.3	0	-	10.1
HCM Lane LOS	A	A	A	-	A	A	-	B
HCM 95th %tile Q(veh)	0.1	0	-	-	0	-	-	0.4

Intersection	
Int Delay, s/veh	6.3

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Traffic Vol, veh/h	7	13	4	8	62	22	0	25	8	20	69	32
Future Vol, veh/h	7	13	4	8	62	22	0	25	8	20	69	32
Conflicting Peds, #/hr	4	0	4	4	0	4	4	0	4	4	0	4
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	8	14	4	9	67	24	0	27	9	22	75	35

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	95	0	0	22	0	0	192	149	24	154	139	87
Stage 1	-	-	-	-	-	-	36	36	-	101	101	-
Stage 2	-	-	-	-	-	-	156	113	-	53	38	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	1499	-	-	1593	-	-	768	743	1052	813	752	971
Stage 1	-	-	-	-	-	-	980	865	-	905	811	-
Stage 2	-	-	-	-	-	-	846	802	-	960	863	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1494	-	-	1588	-	-	673	730	1045	772	739	965
Mov Cap-2 Maneuver	-	-	-	-	-	-	673	730	-	772	739	-
Stage 1	-	-	-	-	-	-	972	858	-	897	803	-
Stage 2	-	-	-	-	-	-	732	795	-	914	856	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	2.2	0.6	9.8	10.4
HCM LOS			A	B

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	788	1494	-	-	1588	-	-	794
HCM Lane V/C Ratio	0.046	0.005	-	-	0.005	-	-	0.166
HCM Control Delay (s)	9.8	7.4	0	-	7.3	0	-	10.4
HCM Lane LOS	A	A	A	-	A	A	-	B
HCM 95th %tile Q(veh)	0.1	0	-	-	0	-	-	0.6

Intersection	
Int Delay, s/veh	7.1

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Traffic Vol, veh/h	7	13	4	8	14	22	0	26	8	21	70	8
Future Vol, veh/h	7	13	4	8	14	22	0	26	8	21	70	8
Conflicting Peds, #/hr	4	0	4	4	0	4	4	0	4	4	0	4
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	8	14	4	9	15	24	0	28	9	23	76	9

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	43	0	0	22	0	0	127	97	24	103	87	35
Stage 1	-	-	-	-	-	-	36	36	-	49	49	-
Stage 2	-	-	-	-	-	-	91	61	-	54	38	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	1566	-	-	1593	-	-	846	793	1052	877	803	1038
Stage 1	-	-	-	-	-	-	980	865	-	964	854	-
Stage 2	-	-	-	-	-	-	916	844	-	958	863	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1561	-	-	1588	-	-	765	779	1045	833	789	1031
Mov Cap-2 Maneuver	-	-	-	-	-	-	765	779	-	833	789	-
Stage 1	-	-	-	-	-	-	972	858	-	956	846	-
Stage 2	-	-	-	-	-	-	819	836	-	911	856	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	2.1	1.3	9.5	10.1
HCM LOS			A	B

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	829	1561	-	-	1588	-	-	814
HCM Lane V/C Ratio	0.045	0.005	-	-	0.005	-	-	0.132
HCM Control Delay (s)	9.5	7.3	0	-	7.3	0	-	10.1
HCM Lane LOS	A	A	A	-	A	A	-	B
HCM 95th %tile Q(veh)	0.1	0	-	-	0	-	-	0.5

Intersection	
Int Delay, s/veh	6.3

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Traffic Vol, veh/h	7	13	4	8	62	22	0	26	8	21	70	32
Future Vol, veh/h	7	13	4	8	62	22	0	26	8	21	70	32
Conflicting Peds, #/hr	4	0	4	4	0	4	4	0	4	4	0	4
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	8	14	4	9	67	24	0	28	9	23	76	35

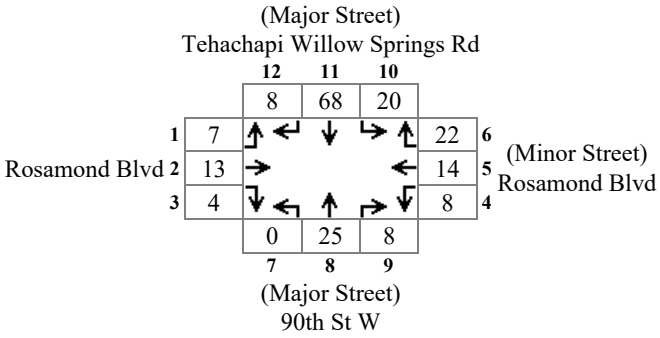
Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	95	0	0	22	0	0	192	149	24	155	139	87
Stage 1	-	-	-	-	-	-	36	36	-	101	101	-
Stage 2	-	-	-	-	-	-	156	113	-	54	38	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	1499	-	-	1593	-	-	768	743	1052	812	752	971
Stage 1	-	-	-	-	-	-	980	865	-	905	811	-
Stage 2	-	-	-	-	-	-	846	802	-	958	863	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1494	-	-	1588	-	-	672	730	1045	770	739	965
Mov Cap-2 Maneuver	-	-	-	-	-	-	672	730	-	770	739	-
Stage 1	-	-	-	-	-	-	972	858	-	897	803	-
Stage 2	-	-	-	-	-	-	731	795	-	911	856	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	2.2	0.6	9.8	10.5
HCM LOS			A	B

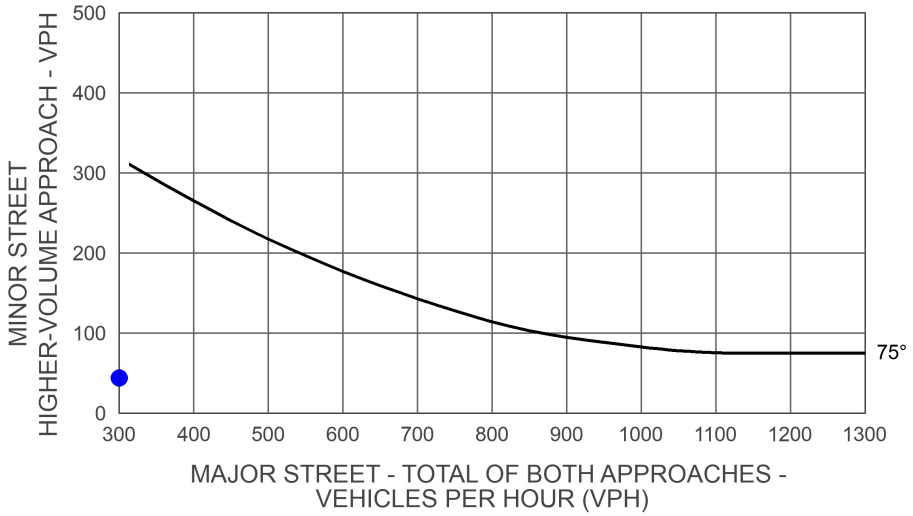
Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	786	1494	-	-	1588	-	-	793
HCM Lane V/C Ratio	0.047	0.005	-	-	0.005	-	-	0.169
HCM Control Delay (s)	9.8	7.4	0	-	7.3	0	-	10.5
HCM Lane LOS	A	A	A	-	A	A	-	B
HCM 95th %tile Q(veh)	0.1	0	-	-	0	-	-	0.6

Rural Peak Hour Signal Warrant
Intersection Does Not Meet Signal Warrant

Scenario: AM Existing
Intersection #: 2

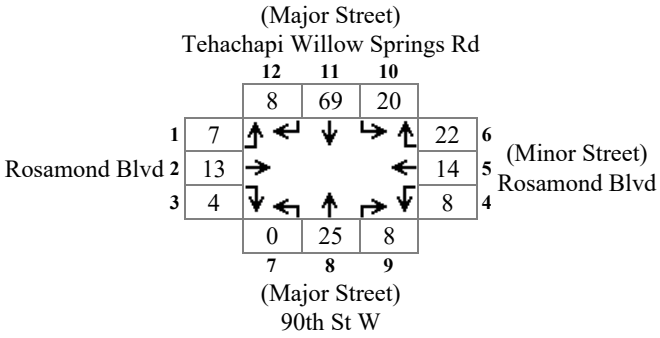


Major Total: 129
Minor High Volume: 44

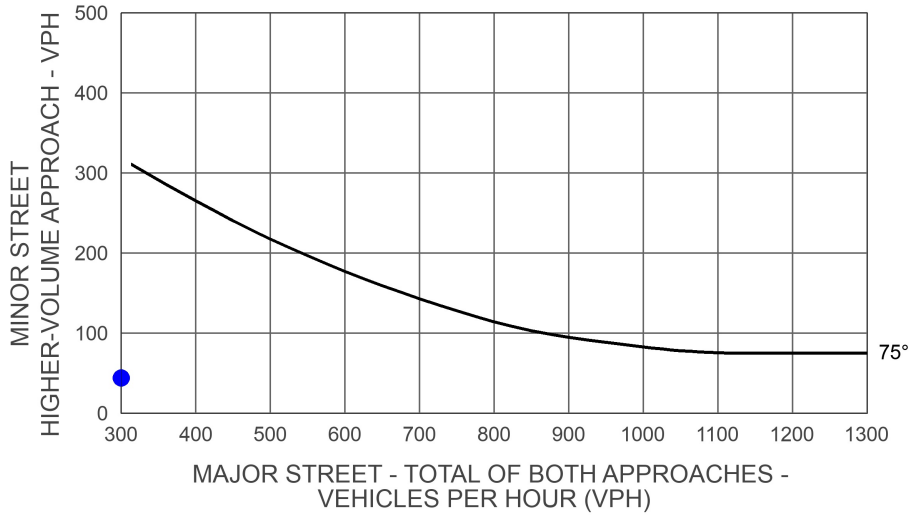


Rural Peak Hour Signal Warrant
Intersection Does Not Meet Signal Warrant

Scenario: AM Future
Intersection #: 2

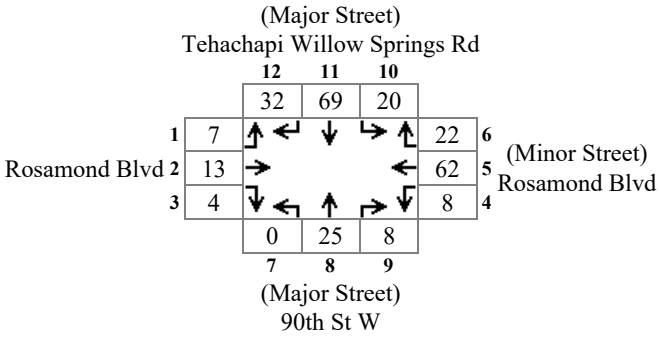


Major Total: 130
Minor High Volume: 44

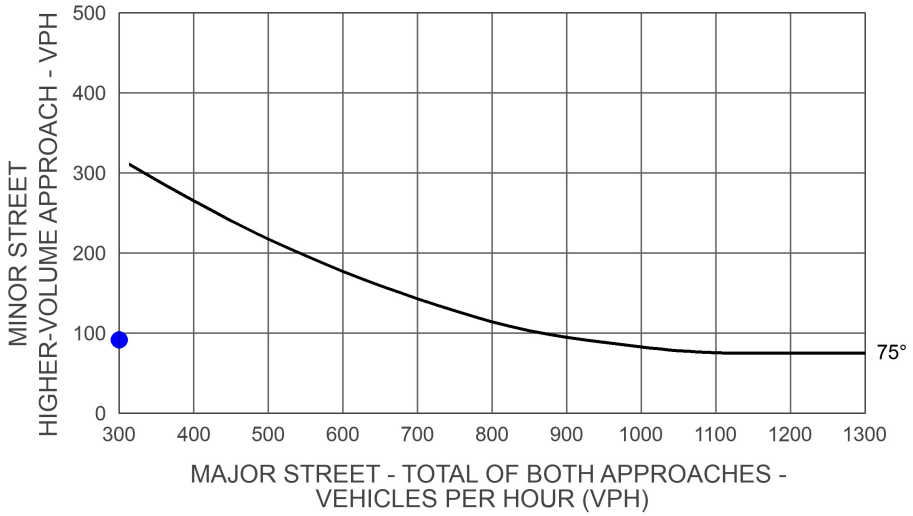


Rural Peak Hour Signal Warrant
Intersection Does Not Meet Signal Warrant

Scenario: AM Future+Project
Intersection #: 2

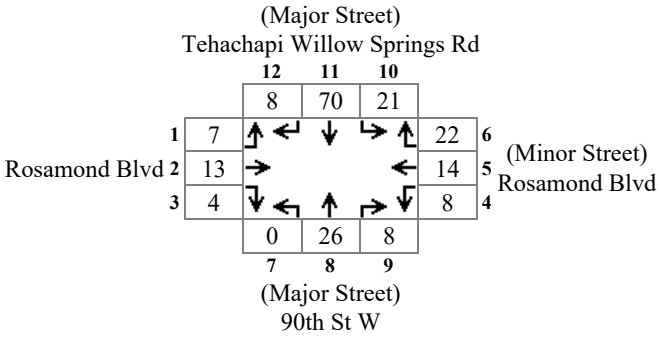


Major Total: 154
Minor High Volume: 92

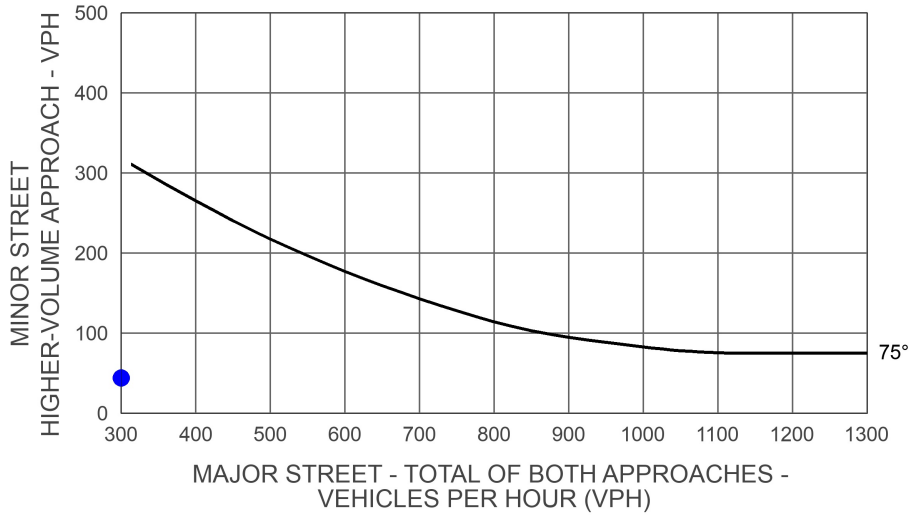


Rural Peak Hour Signal Warrant
Intersection Does Not Meet Signal Warrant

Scenario: AM Future
Intersection #: 2

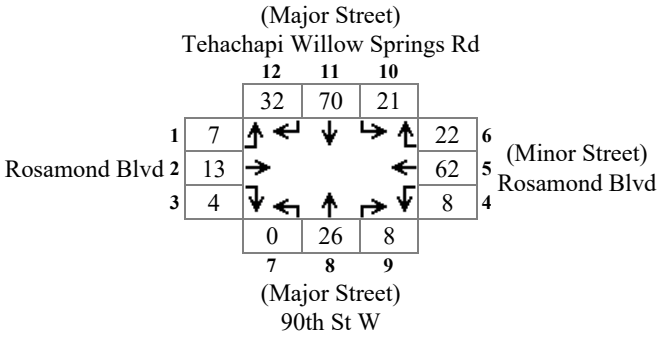


Major Total: 133
Minor High Volume: 44

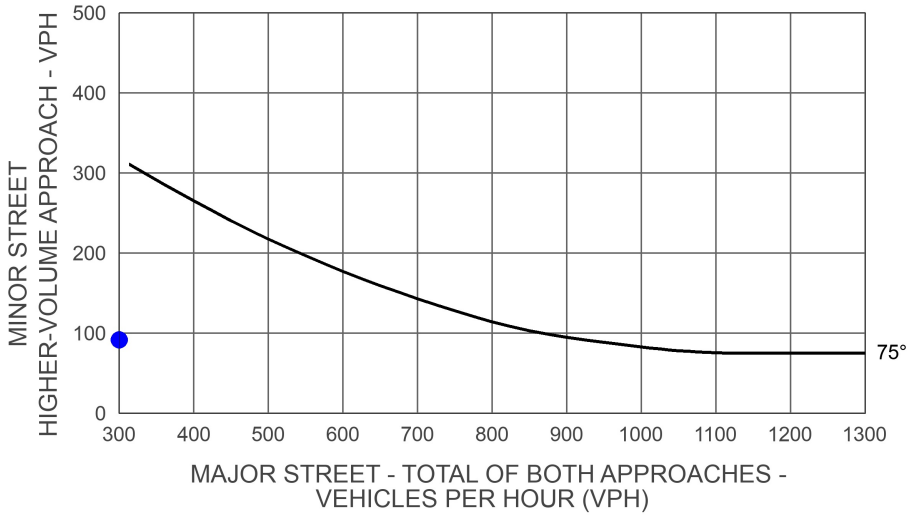


Rural Peak Hour Signal Warrant
Intersection Does Not Meet Signal Warrant

Scenario: AM Future+Project
Intersection #: 2



Major Total: 157
Minor High Volume: 92



Intersection 3
SR 14 SB Off-Ramp/Acacia St & Rosamond Blvd



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	832	7	11	1087	0	4	0	11	44	0	80
Future Volume (veh/h)	0	832	7	11	1087	0	4	0	11	44	0	80
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		1.00	0.97		0.93	0.97		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	0	1863	1750	1716	1863	0	1716	1863	1716	1716	1863	1716
Adj Flow Rate, veh/h	0	904	8	12	1182	0	4	0	12	48	0	0
Adj No. of Lanes	0	2	0	1	2	0	1	1	1	1	1	1
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	0	2	2	2	2	0	2	2	2	2	2	2
Cap, veh/h	0	2787	25	46	2999	0	161	131	87	160	120	102
Arrive On Green	0.00	0.78	0.76	0.04	1.00	0.00	0.06	0.00	0.06	0.06	0.00	0.00
Sat Flow, veh/h	0	3687	32	1634	3632	0	1260	1863	1353	1247	1863	1458
Grp Volume(v), veh/h	0	445	467	12	1182	0	4	0	12	48	0	0
Grp Sat Flow(s),veh/h/ln	0	1770	1856	1634	1770	0	1260	1863	1353	1247	1863	1458
Q Serve(g_s), s	0.0	6.9	6.9	0.6	0.0	0.0	0.3	0.0	0.8	3.4	0.0	0.0
Cycle Q Clear(g_c), s	0.0	6.9	6.9	0.6	0.0	0.0	0.3	0.0	0.8	3.4	0.0	0.0
Prop In Lane	0.00		0.02	1.00		0.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	0	1372	1439	46	2999	0	161	131	87	160	120	102
V/C Ratio(X)	0.00	0.32	0.32	0.26	0.39	0.00	0.02	0.00	0.14	0.30	0.00	0.00
Avail Cap(c_a), veh/h	0	1372	1439	126	2999	0	481	604	431	477	594	473
HCM Platoon Ratio	1.00	1.00	1.00	1.33	1.33	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.00	1.00	1.00	0.63	0.63	0.00	1.00	0.00	1.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	0.0	3.1	3.1	42.9	0.0	0.0	39.9	0.0	40.2	41.4	0.0	0.0
Incr Delay (d2), s/veh	0.0	0.6	0.6	1.9	0.2	0.0	0.1	0.0	0.7	1.0	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	3.6	3.7	0.3	0.1	0.0	0.1	0.0	0.3	1.2	0.0	0.0
LnGrp Delay(d),s/veh	0.0	3.7	3.7	44.8	0.2	0.0	40.0	0.0	40.9	42.4	0.0	0.0
LnGrp LOS		A	A	D	A		D		D	D		
Approach Vol, veh/h		912			1194			16			48	
Approach Delay, s/veh		3.7			0.7			40.6			42.4	
Approach LOS		A			A			D			D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2	3	4		6		8
Phs Duration (G+Y+Rc), s		9.9	6.5	74.6		9.9		81.1
Change Period (Y+Rc), s		3.5	5.5	5.5		3.5		5.5
Max Green Setting (Gmax), s		29.5	5.5	41.5		29.5		52.5
Max Q Clear Time (g_c+I1), s		2.8	2.6	8.9		5.4		2.0
Green Ext Time (p_c), s		0.2	0.0	16.8		0.2		20.1

Intersection Summary	
HCM 2010 Ctrl Delay	3.2
HCM 2010 LOS	A



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	847	7	11	1106	0	4	0	11	44	0	81
Future Volume (veh/h)	0	847	7	11	1106	0	4	0	11	44	0	81
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.97	1.00		1.00	0.97		0.93	0.97		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	0	1863	1750	1716	1863	0	1716	1863	1716	1716	1863	1716
Adj Flow Rate, veh/h	0	921	8	12	1202	0	4	0	12	48	0	0
Adj No. of Lanes	0	2	0	1	2	0	1	1	1	1	1	1
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	0	2	2	2	2	0	2	2	2	2	2	2
Cap, veh/h	0	1699	15	541	2999	0	161	131	87	160	120	102
Arrive On Green	0.00	0.47	0.46	0.66	1.00	0.00	0.06	0.00	0.06	0.06	0.00	0.00
Sat Flow, veh/h	0	3688	31	1634	3632	0	1260	1863	1353	1247	1863	1458
Grp Volume(v), veh/h	0	453	476	12	1202	0	4	0	12	48	0	0
Grp Sat Flow(s),veh/h/ln	0	1770	1856	1634	1770	0	1260	1863	1353	1247	1863	1458
Q Serve(g_s), s	0.0	16.5	16.5	0.2	0.0	0.0	0.3	0.0	0.8	3.4	0.0	0.0
Cycle Q Clear(g_c), s	0.0	16.5	16.5	0.2	0.0	0.0	0.3	0.0	0.8	3.4	0.0	0.0
Prop In Lane	0.00		0.02	1.00		0.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	0	836	877	541	2999	0	161	131	87	160	120	102
V/C Ratio(X)	0.00	0.54	0.54	0.02	0.40	0.00	0.02	0.00	0.14	0.30	0.00	0.00
Avail Cap(c_a), veh/h	0	836	877	541	2999	0	481	604	431	477	594	473
HCM Platoon Ratio	1.00	1.00	1.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.00	1.00	1.00	0.62	0.62	0.00	1.00	0.00	1.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	0.0	17.0	17.0	10.3	0.0	0.0	39.9	0.0	40.2	41.4	0.0	0.0
Incr Delay (d2), s/veh	0.0	2.5	2.4	0.0	0.2	0.0	0.1	0.0	0.7	1.0	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	8.6	9.0	0.1	0.1	0.0	0.1	0.0	0.3	1.2	0.0	0.0
LnGrp Delay(d),s/veh	0.0	19.5	19.4	10.3	0.2	0.0	40.0	0.0	40.9	42.4	0.0	0.0
LnGrp LOS		B	B	B	A		D		D	D		
Approach Vol, veh/h		929			1214			16			48	
Approach Delay, s/veh		19.5			0.3			40.6			42.4	
Approach LOS		B			A			D			D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2	3	4		6		8
Phs Duration (G+Y+Rc), s		9.9	34.1	47.0		9.9		81.1
Change Period (Y+Rc), s		3.5	5.5	5.5		3.5		5.5
Max Green Setting (Gmax), s		29.5	5.5	41.5		29.5		52.5
Max Q Clear Time (g_c+I1), s		2.8	2.2	18.5		5.4		2.0
Green Ext Time (p_c), s		0.2	2.1	5.1		0.2		9.9

Intersection Summary	
HCM 2010 Ctrl Delay	9.6
HCM 2010 LOS	A



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	895	7	11	1106	0	4	0	11	44	0	81
Future Volume (veh/h)	0	895	7	11	1106	0	4	0	11	44	0	81
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		1.00	0.97		0.93	0.97		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	0	1863	1750	1716	1863	0	1716	1863	1716	1716	1863	1716
Adj Flow Rate, veh/h	0	973	8	12	1202	0	4	0	12	48	0	0
Adj No. of Lanes	0	2	0	1	2	0	1	1	1	1	1	1
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	0	2	2	2	2	0	2	2	2	2	2	2
Cap, veh/h	0	2815	23	44	3016	0	156	129	86	155	119	101
Arrive On Green	0.00	0.78	0.77	0.03	0.85	0.00	0.06	0.00	0.06	0.06	0.00	0.00
Sat Flow, veh/h	0	3690	30	1634	3632	0	1260	1863	1351	1247	1863	1458
Grp Volume(v), veh/h	0	479	502	12	1202	0	4	0	12	48	0	0
Grp Sat Flow(s),veh/h/ln	0	1770	1857	1634	1770	0	1260	1863	1351	1247	1863	1458
Q Serve(g_s), s	0.0	7.7	7.7	0.7	7.2	0.0	0.3	0.0	0.8	3.6	0.0	0.0
Cycle Q Clear(g_c), s	0.0	7.7	7.7	0.7	7.2	0.0	0.3	0.0	0.8	3.6	0.0	0.0
Prop In Lane	0.00		0.02	1.00		0.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	0	1385	1453	44	3016	0	156	129	86	155	119	101
V/C Ratio(X)	0.00	0.35	0.35	0.27	0.40	0.00	0.03	0.00	0.14	0.31	0.00	0.00
Avail Cap(c_a), veh/h	0	1385	1453	120	3016	0	447	559	398	443	549	437
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.00	1.00	1.00	0.61	0.61	0.00	1.00	0.00	1.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	0.0	3.1	3.1	45.3	1.6	0.0	41.8	0.0	42.0	43.3	0.0	0.0
Incr Delay (d2), s/veh	0.0	0.7	0.7	2.0	0.2	0.0	0.1	0.0	0.7	1.1	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	4.0	4.2	0.3	3.4	0.0	0.1	0.0	0.3	1.3	0.0	0.0
LnGrp Delay(d),s/veh	0.0	3.8	3.7	47.2	1.8	0.0	41.8	0.0	42.7	44.4	0.0	0.0
LnGrp LOS		A	A	D	A		D		D	D		
Approach Vol, veh/h		981			1214			16			48	
Approach Delay, s/veh		3.7			2.3			42.5			44.4	
Approach LOS		A			A			D			D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2	3	4		6		8
Phs Duration (G+Y+Rc), s		10.1	6.6	78.4		10.1		84.9
Change Period (Y+Rc), s		3.5	5.5	5.5		3.5		5.5
Max Green Setting (Gmax), s		28.5	5.5	46.5		28.5		57.5
Max Q Clear Time (g_c+I1), s		2.8	2.7	9.7		5.6		9.2
Green Ext Time (p_c), s		0.2	0.0	18.8		0.1		21.1

Intersection Summary	
HCM 2010 Ctrl Delay	4.1
HCM 2010 LOS	A



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	861	7	11	1125	0	4	0	11	45	0	82
Future Volume (veh/h)	0	861	7	11	1125	0	4	0	11	45	0	82
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.97	1.00		1.00	0.97		0.93	0.97		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	0	1863	1750	1716	1863	0	1716	1863	1716	1716	1863	1716
Adj Flow Rate, veh/h	0	936	8	12	1223	0	4	0	12	49	0	0
Adj No. of Lanes	0	2	0	1	2	0	1	1	1	1	1	1
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	0	2	2	2	2	0	2	2	2	2	2	2
Cap, veh/h	0	1719	15	533	3001	0	160	132	88	160	121	103
Arrive On Green	0.00	0.48	0.46	0.22	0.57	0.00	0.07	0.00	0.07	0.07	0.00	0.00
Sat Flow, veh/h	0	3688	31	1634	3632	0	1260	1863	1353	1247	1863	1458
Grp Volume(v), veh/h	0	461	483	12	1223	0	4	0	12	49	0	0
Grp Sat Flow(s),veh/h/ln	0	1770	1856	1634	1770	0	1260	1863	1353	1247	1863	1458
Q Serve(g_s), s	0.0	16.9	16.9	0.5	17.9	0.0	0.3	0.0	0.8	3.5	0.0	0.0
Cycle Q Clear(g_c), s	0.0	16.9	16.9	0.5	17.9	0.0	0.3	0.0	0.8	3.5	0.0	0.0
Prop In Lane	0.00		0.02	1.00		0.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	0	846	888	533	3001	0	160	132	88	160	121	103
V/C Ratio(X)	0.00	0.54	0.54	0.02	0.41	0.00	0.02	0.00	0.14	0.31	0.00	0.00
Avail Cap(c_a), veh/h	0	846	888	533	3001	0	476	597	427	471	587	468
HCM Platoon Ratio	1.00	1.00	1.00	0.67	0.67	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.00	1.00	1.00	0.61	0.61	0.00	1.00	0.00	1.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	0.0	16.9	16.9	24.4	6.9	0.0	40.3	0.0	40.6	41.8	0.0	0.0
Incr Delay (d2), s/veh	0.0	2.5	2.4	0.0	0.3	0.0	0.1	0.0	0.7	1.1	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	8.8	9.2	0.2	8.8	0.0	0.1	0.0	0.3	1.3	0.0	0.0
LnGrp Delay(d),s/veh	0.0	19.4	19.3	24.4	7.1	0.0	40.4	0.0	41.3	42.9	0.0	0.0
LnGrp LOS		B	B	C	A		D		D	D		
Approach Vol, veh/h		944			1235			16			49	
Approach Delay, s/veh		19.4			7.3			41.0			42.9	
Approach LOS		B			A			D			D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2	3	4		6		8
Phs Duration (G+Y+Rc), s		10.0	34.0	48.0		10.0		82.0
Change Period (Y+Rc), s		3.5	5.5	5.5		3.5		5.5
Max Green Setting (Gmax), s		29.5	5.5	42.5		29.5		53.5
Max Q Clear Time (g_c+I1), s		2.8	2.5	18.9		5.5		19.9
Green Ext Time (p_c), s		0.2	2.0	5.3		0.2		9.5

Intersection Summary	
HCM 2010 Ctrl Delay	13.4
HCM 2010 LOS	B



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	909	7	11	1125	0	4	0	11	45	0	82
Future Volume (veh/h)	0	909	7	11	1125	0	4	0	11	45	0	82
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.97	1.00		1.00	0.97		0.93	0.97		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	0	1863	1750	1716	1863	0	1716	1863	1716	1716	1863	1716
Adj Flow Rate, veh/h	0	988	8	12	1223	0	4	0	12	49	0	0
Adj No. of Lanes	0	2	0	1	2	0	1	1	1	1	1	1
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	0	2	2	2	2	0	2	2	2	2	2	2
Cap, veh/h	0	1719	14	528	2992	0	163	133	89	162	122	104
Arrive On Green	0.00	0.48	0.46	0.22	0.57	0.00	0.07	0.00	0.07	0.07	0.00	0.00
Sat Flow, veh/h	0	3690	29	1634	3632	0	1261	1863	1354	1248	1863	1458
Grp Volume(v), veh/h	0	486	510	12	1223	0	4	0	12	49	0	0
Grp Sat Flow(s),veh/h/ln	0	1770	1857	1634	1770	0	1261	1863	1354	1248	1863	1458
Q Serve(g_s), s	0.0	17.8	17.8	0.5	17.5	0.0	0.3	0.0	0.8	3.4	0.0	0.0
Cycle Q Clear(g_c), s	0.0	17.8	17.8	0.5	17.5	0.0	0.3	0.0	0.8	3.4	0.0	0.0
Prop In Lane	0.00		0.02	1.00		0.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	0	845	887	528	2992	0	163	133	89	162	122	104
V/C Ratio(X)	0.00	0.57	0.57	0.02	0.41	0.00	0.02	0.00	0.14	0.30	0.00	0.00
Avail Cap(c_a), veh/h	0	845	887	528	2992	0	486	611	436	482	600	478
HCM Platoon Ratio	1.00	1.00	1.00	0.67	0.67	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.00	1.00	1.00	0.59	0.59	0.00	1.00	0.00	1.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	0.0	16.9	16.9	24.1	6.8	0.0	39.4	0.0	39.6	40.9	0.0	0.0
Incr Delay (d2), s/veh	0.0	2.8	2.7	0.0	0.2	0.0	0.1	0.0	0.7	1.0	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	9.3	9.7	0.2	8.7	0.0	0.1	0.0	0.3	1.2	0.0	0.0
LnGrp Delay(d),s/veh	0.0	19.8	19.6	24.1	7.1	0.0	39.5	0.0	40.3	41.9	0.0	0.0
LnGrp LOS		B	B	C	A		D		D	D		
Approach Vol, veh/h		996			1235			16			49	
Approach Delay, s/veh		19.7			7.2			40.1			41.9	
Approach LOS		B			A			D			D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2	3	4		6		8
Phs Duration (G+Y+Rc), s		9.9	33.1	47.0		9.9		80.1
Change Period (Y+Rc), s		3.5	5.5	5.5		3.5		5.5
Max Green Setting (Gmax), s		29.5	4.5	41.5		29.5		51.5
Max Q Clear Time (g_c+I1), s		2.8	2.5	19.8		5.4		19.5
Green Ext Time (p_c), s		0.2	1.4	5.5		0.2		9.3

Intersection Summary	
HCM 2010 Ctrl Delay	13.6
HCM 2010 LOS	B



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	1098	7	5	564	0	5	0	8	25	0	57
Future Volume (veh/h)	0	1098	7	5	564	0	5	0	8	25	0	57
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.97	1.00		1.00	0.96		0.92	0.96		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	0	1863	1750	1716	1863	0	1716	1863	1716	1716	1863	1716
Adj Flow Rate, veh/h	0	1193	8	5	613	0	5	0	9	27	0	0
Adj No. of Lanes	0	2	0	1	2	0	1	1	1	1	1	1
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	0	2	2	2	2	0	2	2	2	2	2	2
Cap, veh/h	0	1762	12	526	3026	0	150	115	75	150	105	90
Arrive On Green	0.00	0.49	0.47	0.32	0.85	0.00	0.06	0.00	0.06	0.06	0.00	0.00
Sat Flow, veh/h	0	3696	24	1634	3632	0	1254	1863	1341	1244	1863	1458
Grp Volume(v), veh/h	0	586	615	5	613	0	5	0	9	27	0	0
Grp Sat Flow(s),veh/h/ln	0	1770	1858	1634	1770	0	1254	1863	1341	1244	1863	1458
Q Serve(g_s), s	0.0	22.8	22.8	0.2	2.7	0.0	0.3	0.0	0.6	1.9	0.0	0.0
Cycle Q Clear(g_c), s	0.0	22.8	22.8	0.2	2.7	0.0	0.3	0.0	0.6	1.9	0.0	0.0
Prop In Lane	0.00		0.01	1.00		0.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	0	865	908	526	3026	0	150	115	75	150	105	90
V/C Ratio(X)	0.00	0.68	0.68	0.01	0.20	0.00	0.03	0.00	0.12	0.18	0.00	0.00
Avail Cap(c_a), veh/h	0	865	908	526	3026	0	470	590	417	467	580	462
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.00	1.00	1.00	0.93	0.93	0.00	1.00	0.00	1.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	0.0	17.6	17.6	20.8	1.1	0.0	40.3	0.0	40.4	41.0	0.0	0.0
Incr Delay (d2), s/veh	0.0	4.2	4.0	0.0	0.1	0.0	0.1	0.0	0.7	0.6	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	12.1	12.6	0.1	1.3	0.0	0.1	0.0	0.2	0.7	0.0	0.0
LnGrp Delay(d),s/veh	0.0	21.8	21.6	20.8	1.3	0.0	40.3	0.0	41.1	41.5	0.0	0.0
LnGrp LOS		C	C	C	A		D		D	D		
Approach Vol, veh/h		1201			618			14			27	
Approach Delay, s/veh		21.7			1.4			40.8			41.5	
Approach LOS		C			A			D			D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2	3	4		6		8
Phs Duration (G+Y+Rc), s		9.1	32.9	48.0		9.1		80.9
Change Period (Y+Rc), s		3.5	5.5	5.5		3.5		5.5
Max Green Setting (Gmax), s		28.5	4.5	42.5		28.5		52.5
Max Q Clear Time (g_c+I1), s		2.6	2.2	24.8		3.9		4.7
Green Ext Time (p_c), s		0.1	0.8	6.5		0.1		3.9

Intersection Summary	
HCM 2010 Ctrl Delay	15.4
HCM 2010 LOS	B



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	1117	7	5	574	0	5	0	8	25	0	58
Future Volume (veh/h)	0	1117	7	5	574	0	5	0	8	25	0	58
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.97	1.00		1.00	0.96		0.92	0.96		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	0	1863	1750	1716	1863	0	1716	1863	1716	1716	1863	1716
Adj Flow Rate, veh/h	0	1214	8	5	624	0	5	0	9	27	0	0
Adj No. of Lanes	0	2	0	1	2	0	1	1	1	1	1	1
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	0	2	2	2	2	0	2	2	2	2	2	2
Cap, veh/h	0	1762	12	526	3026	0	150	115	75	150	105	90
Arrive On Green	0.00	0.49	0.47	0.32	0.85	0.00	0.06	0.00	0.06	0.06	0.00	0.00
Sat Flow, veh/h	0	3697	24	1634	3632	0	1254	1863	1341	1244	1863	1458
Grp Volume(v), veh/h	0	596	626	5	624	0	5	0	9	27	0	0
Grp Sat Flow(s),veh/h/ln	0	1770	1858	1634	1770	0	1254	1863	1341	1244	1863	1458
Q Serve(g_s), s	0.0	23.4	23.4	0.2	2.8	0.0	0.3	0.0	0.6	1.9	0.0	0.0
Cycle Q Clear(g_c), s	0.0	23.4	23.4	0.2	2.8	0.0	0.3	0.0	0.6	1.9	0.0	0.0
Prop In Lane	0.00		0.01	1.00		0.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	0	865	908	526	3026	0	150	115	75	150	105	90
V/C Ratio(X)	0.00	0.69	0.69	0.01	0.21	0.00	0.03	0.00	0.12	0.18	0.00	0.00
Avail Cap(c_a), veh/h	0	865	908	526	3026	0	470	590	417	467	580	462
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.00	1.00	1.00	0.93	0.93	0.00	1.00	0.00	1.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	0.0	17.7	17.7	20.8	1.1	0.0	40.3	0.0	40.4	41.0	0.0	0.0
Incr Delay (d2), s/veh	0.0	4.5	4.3	0.0	0.1	0.0	0.1	0.0	0.7	0.6	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	12.3	12.9	0.1	1.4	0.0	0.1	0.0	0.2	0.7	0.0	0.0
LnGrp Delay(d),s/veh	0.0	22.2	22.0	20.8	1.3	0.0	40.3	0.0	41.1	41.5	0.0	0.0
LnGrp LOS		C	C	C	A		D		D	D		
Approach Vol, veh/h		1222			629			14			27	
Approach Delay, s/veh		22.1			1.4			40.8			41.5	
Approach LOS		C			A			D			D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2	3	4		6		8
Phs Duration (G+Y+Rc), s		9.1	32.9	48.0		9.1		80.9
Change Period (Y+Rc), s		3.5	5.5	5.5		3.5		5.5
Max Green Setting (Gmax), s		28.5	4.5	42.5		28.5		52.5
Max Q Clear Time (g_c+I1), s		2.6	2.2	25.4		3.9		4.8
Green Ext Time (p_c), s		0.1	0.8	6.6		0.1		4.0

Intersection Summary	
HCM 2010 Ctrl Delay	15.6
HCM 2010 LOS	B



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	1117	7	5	598	0	5	0	8	25	0	82
Future Volume (veh/h)	0	1117	7	5	598	0	5	0	8	25	0	82
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.97	1.00		1.00	0.96		0.92	0.96		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	0	1863	1750	1716	1863	0	1716	1863	1716	1716	1863	1716
Adj Flow Rate, veh/h	0	1214	8	5	650	0	5	0	9	27	0	0
Adj No. of Lanes	0	2	0	1	2	0	1	1	1	1	1	1
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	0	2	2	2	2	0	2	2	2	2	2	2
Cap, veh/h	0	1762	12	526	3026	0	150	115	75	150	105	90
Arrive On Green	0.00	0.49	0.47	0.43	1.00	0.00	0.06	0.00	0.06	0.06	0.00	0.00
Sat Flow, veh/h	0	3697	24	1634	3632	0	1254	1863	1341	1244	1863	1458
Grp Volume(v), veh/h	0	596	626	5	650	0	5	0	9	27	0	0
Grp Sat Flow(s),veh/h/ln	0	1770	1858	1634	1770	0	1254	1863	1341	1244	1863	1458
Q Serve(g_s), s	0.0	23.4	23.4	0.2	0.0	0.0	0.3	0.0	0.6	1.9	0.0	0.0
Cycle Q Clear(g_c), s	0.0	23.4	23.4	0.2	0.0	0.0	0.3	0.0	0.6	1.9	0.0	0.0
Prop In Lane	0.00		0.01	1.00		0.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	0	865	908	526	3026	0	150	115	75	150	105	90
V/C Ratio(X)	0.00	0.69	0.69	0.01	0.21	0.00	0.03	0.00	0.12	0.18	0.00	0.00
Avail Cap(c_a), veh/h	0	865	908	526	3026	0	470	590	417	467	580	462
HCM Platoon Ratio	1.00	1.00	1.00	1.33	1.33	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.00	1.00	1.00	0.92	0.92	0.00	1.00	0.00	1.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	0.0	17.7	17.7	17.5	0.0	0.0	40.3	0.0	40.4	41.0	0.0	0.0
Incr Delay (d2), s/veh	0.0	4.5	4.3	0.0	0.1	0.0	0.1	0.0	0.7	0.6	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	12.3	12.9	0.1	0.1	0.0	0.1	0.0	0.2	0.7	0.0	0.0
LnGrp Delay(d),s/veh	0.0	22.2	22.0	17.5	0.1	0.0	40.3	0.0	41.1	41.5	0.0	0.0
LnGrp LOS		C	C	B	A		D		D	D		
Approach Vol, veh/h		1222			655			14			27	
Approach Delay, s/veh		22.1			0.3			40.8			41.5	
Approach LOS		C			A			D			D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2	3	4		6		8
Phs Duration (G+Y+Rc), s		9.1	32.9	48.0		9.1		80.9
Change Period (Y+Rc), s		3.5	5.5	5.5		3.5		5.5
Max Green Setting (Gmax), s		28.5	4.5	42.5		28.5		52.5
Max Q Clear Time (g_c+I1), s		2.6	2.2	25.4		3.9		2.0
Green Ext Time (p_c), s		0.1	0.9	6.6		0.1		4.2

Intersection Summary	
HCM 2010 Ctrl Delay	15.1
HCM 2010 LOS	B



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	1137	7	5	584	0	5	0	8	26	0	58
Future Volume (veh/h)	0	1137	7	5	584	0	5	0	8	26	0	58
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.97	1.00		1.00	1.00		0.97	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	0	1863	1750	1716	1863	0	1716	1863	1716	1716	1863	1716
Adj Flow Rate, veh/h	0	1236	8	5	635	0	5	0	9	28	0	0
Adj No. of Lanes	0	2	0	1	2	0	1	1	1	1	1	1
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	0	2	2	2	2	0	2	2	2	2	2	2
Cap, veh/h	0	1480	10	36	1688	0	642	819	615	637	809	641
Arrive On Green	0.00	0.41	0.39	0.01	0.16	0.00	0.43	0.00	0.43	0.43	0.00	0.00
Sat Flow, veh/h	0	3697	23	1634	3632	0	1294	1863	1418	1284	1863	1458
Grp Volume(v), veh/h	0	607	637	5	635	0	5	0	9	28	0	0
Grp Sat Flow(s),veh/h/ln	0	1770	1858	1634	1770	0	1294	1863	1418	1284	1863	1458
Q Serve(g_s), s	0.0	27.7	27.7	0.3	14.5	0.0	0.2	0.0	0.3	1.1	0.0	0.0
Cycle Q Clear(g_c), s	0.0	27.7	27.7	0.3	14.5	0.0	0.2	0.0	0.3	1.1	0.0	0.0
Prop In Lane	0.00		0.01	1.00		0.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	0	727	763	36	1688	0	642	819	615	637	809	641
V/C Ratio(X)	0.00	0.83	0.84	0.14	0.38	0.00	0.01	0.00	0.01	0.04	0.00	0.00
Avail Cap(c_a), veh/h	0	865	908	109	2124	0	642	819	615	637	809	641
HCM Platoon Ratio	1.00	1.00	1.00	0.33	0.33	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.00	1.00	1.00	0.93	0.93	0.00	1.00	0.00	1.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	0.0	23.8	23.8	43.8	25.9	0.0	14.5	0.0	14.5	14.7	0.0	0.0
Incr Delay (d2), s/veh	0.0	6.2	5.9	1.6	0.1	0.0	0.0	0.0	0.0	0.1	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	14.7	15.4	0.1	7.1	0.0	0.1	0.0	0.1	0.4	0.0	0.0
LnGrp Delay(d),s/veh	0.0	29.9	29.7	45.5	26.1	0.0	14.5	0.0	14.5	14.9	0.0	0.0
LnGrp LOS		C	C	D	C		B		B	B		
Approach Vol, veh/h		1244			640			14			28	
Approach Delay, s/veh		29.8			26.2			14.5			14.9	
Approach LOS		C			C			B			B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2	3	4		6		8
Phs Duration (G+Y+Rc), s		43.1	6.0	41.0		43.1		46.9
Change Period (Y+Rc), s		3.5	5.5	5.5		3.5		5.5
Max Green Setting (Gmax), s		28.5	4.5	42.5		28.5		52.5
Max Q Clear Time (g_c+I1), s		2.3	2.3	29.7		3.1		16.5
Green Ext Time (p_c), s		0.1	0.8	5.8		0.1		4.0

Intersection Summary	
HCM 2010 Ctrl Delay	28.3
HCM 2010 LOS	C



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	1137	7	5	608	0	5	0	8	26	0	82
Future Volume (veh/h)	0	1137	7	5	608	0	5	0	8	26	0	82
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.97	1.00		1.00	0.96		0.92	0.96		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	0	1863	1750	1716	1863	0	1716	1863	1716	1716	1863	1716
Adj Flow Rate, veh/h	0	1236	8	5	661	0	5	0	9	28	0	0
Adj No. of Lanes	0	2	0	1	2	0	1	1	1	1	1	1
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	0	2	2	2	2	0	2	2	2	2	2	2
Cap, veh/h	0	1762	11	526	3026	0	150	115	75	150	105	90
Arrive On Green	0.00	0.49	0.47	0.43	1.00	0.00	0.06	0.00	0.06	0.06	0.00	0.00
Sat Flow, veh/h	0	3697	23	1634	3632	0	1254	1863	1341	1244	1863	1458
Grp Volume(v), veh/h	0	607	637	5	661	0	5	0	9	28	0	0
Grp Sat Flow(s),veh/h/ln	0	1770	1858	1634	1770	0	1254	1863	1341	1244	1863	1458
Q Serve(g_s), s	0.0	24.0	24.0	0.2	0.0	0.0	0.3	0.0	0.6	2.0	0.0	0.0
Cycle Q Clear(g_c), s	0.0	24.0	24.0	0.2	0.0	0.0	0.3	0.0	0.6	2.0	0.0	0.0
Prop In Lane	0.00		0.01	1.00		0.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	0	865	908	526	3026	0	150	115	75	150	105	90
V/C Ratio(X)	0.00	0.70	0.70	0.01	0.22	0.00	0.03	0.00	0.12	0.19	0.00	0.00
Avail Cap(c_a), veh/h	0	865	908	526	3026	0	470	590	417	467	580	462
HCM Platoon Ratio	1.00	1.00	1.00	1.33	1.33	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.00	1.00	1.00	0.92	0.92	0.00	1.00	0.00	1.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	0.0	17.9	17.9	17.5	0.0	0.0	40.3	0.0	40.4	41.0	0.0	0.0
Incr Delay (d2), s/veh	0.0	4.7	4.5	0.0	0.2	0.0	0.1	0.0	0.7	0.6	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	12.8	13.4	0.1	0.1	0.0	0.1	0.0	0.2	0.7	0.0	0.0
LnGrp Delay(d),s/veh	0.0	22.6	22.4	17.5	0.2	0.0	40.3	0.0	41.1	41.6	0.0	0.0
LnGrp LOS		C	C	B	A		D		D	D		
Approach Vol, veh/h		1244			666			14			28	
Approach Delay, s/veh		22.5			0.3			40.8			41.6	
Approach LOS		C			A			D			D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2	3	4		6		8
Phs Duration (G+Y+Rc), s		9.1	32.9	48.0		9.1		80.9
Change Period (Y+Rc), s		3.5	5.5	5.5		3.5		5.5
Max Green Setting (Gmax), s		28.5	4.5	42.5		28.5		52.5
Max Q Clear Time (g_c+I1), s		2.6	2.2	26.0		4.0		2.0
Green Ext Time (p_c), s		0.1	0.9	6.6		0.1		4.3

Intersection Summary	
HCM 2010 Ctrl Delay	15.3
HCM 2010 LOS	B

Intersection 4
SR 14 NB On-Ramp/SR 14 NB Off-Ramp & Rosamond Blvd



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	62	516	0	0	1293	0	483	0	272	0	0	0
Future Volume (veh/h)	62	516	0	0	1293	0	483	0	272	0	0	0
Number	7	4	14	3	8	18	5	2	12			
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0			
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00			
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Adj Sat Flow, veh/h/ln	1716	1863	0	0	1863	1750	1716	0	1716			
Adj Flow Rate, veh/h	67	561	0	0	1405	0	525	0	0			
Adj No. of Lanes	1	1	0	0	2	0	2	0	1			
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92			
Percent Heavy Veh, %	2	2	0	0	2	2	2	0	2			
Cap, veh/h	261	1348	0	0	1840	0	598	0	283			
Arrive On Green	0.32	1.00	0.00	0.00	0.52	0.00	0.19	0.00	0.00			
Sat Flow, veh/h	1634	1863	0	0	3725	0	3170	0	1458			
Grp Volume(v), veh/h	67	561	0	0	1405	0	525	0	0			
Grp Sat Flow(s),veh/h/ln	1634	1863	0	0	1770	0	1585	0	1458			
Q Serve(g_s), s	2.8	0.0	0.0	0.0	28.8	0.0	14.7	0.0	0.0			
Cycle Q Clear(g_c), s	2.8	0.0	0.0	0.0	28.8	0.0	14.7	0.0	0.0			
Prop In Lane	1.00		0.00	0.00		0.00	1.00		1.00			
Lane Grp Cap(c), veh/h	261	1348	0	0	1840	0	598	0	283			
V/C Ratio(X)	0.26	0.42	0.00	0.00	0.76	0.00	0.88	0.00	0.00			
Avail Cap(c_a), veh/h	261	1348	0	0	1840	0	766	0	361			
HCM Platoon Ratio	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Upstream Filter(I)	0.95	0.95	0.00	0.00	1.00	0.00	1.00	0.00	0.00			
Uniform Delay (d), s/veh	26.9	0.0	0.0	0.0	17.4	0.0	35.9	0.0	0.0			
Incr Delay (d2), s/veh	0.5	0.9	0.0	0.0	3.1	0.0	9.4	0.0	0.0			
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			
%ile BackOfQ(50%),veh/ln	1.3	0.3	0.0	0.0	14.6	0.0	7.2	0.0	0.0			
LnGrp Delay(d),s/veh	27.4	0.9	0.0	0.0	20.5	0.0	45.3	0.0	0.0			
LnGrp LOS	C	A			C		D					
Approach Vol, veh/h		628			1405			525				
Approach Delay, s/veh		3.7			20.5			45.3				
Approach LOS		A			C			D				

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4			7	8
Phs Duration (G+Y+Rc), s		21.2		69.8			18.5	51.3
Change Period (Y+Rc), s		3.5		5.5			5.5	5.5
Max Green Setting (Gmax), s		22.5		59.5			8.2	45.8
Max Q Clear Time (g_c+I1), s		16.7		2.0			4.8	30.8
Green Ext Time (p_c), s		1.0		3.5			1.1	7.9

Intersection Summary	
HCM 2010 Ctrl Delay	21.5
HCM 2010 LOS	C



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	63	525	0	0	1316	0	488	0	275	0	0	0
Future Volume (veh/h)	63	525	0	0	1316	0	488	0	275	0	0	0
Number	7	4	14	3	8	18	5	2	12			
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0			
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00			
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Adj Sat Flow, veh/h/ln	1716	1863	0	0	1863	1750	1716	0	1716			
Adj Flow Rate, veh/h	68	571	0	0	1430	0	530	0	0			
Adj No. of Lanes	1	1	0	0	2	0	2	0	1			
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92			
Percent Heavy Veh, %	2	2	0	0	2	2	2	0	2			
Cap, veh/h	244	1347	0	0	1875	0	599	0	283			
Arrive On Green	0.30	1.00	0.00	0.00	0.53	0.00	0.19	0.00	0.00			
Sat Flow, veh/h	1634	1863	0	0	3725	0	3170	0	1458			
Grp Volume(v), veh/h	68	571	0	0	1430	0	530	0	0			
Grp Sat Flow(s),veh/h/ln	1634	1863	0	0	1770	0	1585	0	1458			
Q Serve(g_s), s	2.9	0.0	0.0	0.0	29.0	0.0	14.8	0.0	0.0			
Cycle Q Clear(g_c), s	2.9	0.0	0.0	0.0	29.0	0.0	14.8	0.0	0.0			
Prop In Lane	1.00		0.00	0.00		0.00	1.00		1.00			
Lane Grp Cap(c), veh/h	244	1347	0	0	1875	0	599	0	283			
V/C Ratio(X)	0.28	0.42	0.00	0.00	0.76	0.00	0.89	0.00	0.00			
Avail Cap(c_a), veh/h	244	1347	0	0	1875	0	732	0	345			
HCM Platoon Ratio	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Upstream Filter(I)	0.95	0.95	0.00	0.00	1.00	0.00	1.00	0.00	0.00			
Uniform Delay (d), s/veh	28.1	0.0	0.0	0.0	16.9	0.0	35.9	0.0	0.0			
Incr Delay (d2), s/veh	0.6	0.9	0.0	0.0	3.0	0.0	10.9	0.0	0.0			
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			
%ile BackOfQ(50%),veh/ln	1.3	0.3	0.0	0.0	14.9	0.0	7.4	0.0	0.0			
LnGrp Delay(d),s/veh	28.7	0.9	0.0	0.0	19.9	0.0	46.8	0.0	0.0			
LnGrp LOS	C	A			B		D					
Approach Vol, veh/h		639			1430			530				
Approach Delay, s/veh		3.9			19.9			46.8				
Approach LOS		A			B			D				

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4			7	8
Phs Duration (G+Y+Rc), s		21.2		69.8			17.6	52.2
Change Period (Y+Rc), s		3.5		5.5			5.5	5.5
Max Green Setting (Gmax), s		21.5		60.5			8.3	46.7
Max Q Clear Time (g_c+I1), s		16.8		2.0			4.9	31.0
Green Ext Time (p_c), s		0.9		3.6			1.1	8.3

Intersection Summary	
HCM 2010 Ctrl Delay	21.5
HCM 2010 LOS	C



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	87	525	0	0	1316	0	488	0	275	0	0	0
Future Volume (veh/h)	87	525	0	0	1316	0	488	0	275	0	0	0
Number	7	4	14	3	8	18	5	2	12			
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0			
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00			
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Adj Sat Flow, veh/h/ln	1716	1863	0	0	1863	1750	1716	0	1716			
Adj Flow Rate, veh/h	95	571	0	0	1430	0	530	0	0			
Adj No. of Lanes	1	1	0	0	2	0	2	0	1			
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92			
Percent Heavy Veh, %	2	2	0	0	2	2	2	0	2			
Cap, veh/h	238	1347	0	0	1888	0	596	0	282			
Arrive On Green	0.15	0.72	0.00	0.00	0.53	0.00	0.19	0.00	0.00			
Sat Flow, veh/h	1634	1863	0	0	3725	0	3170	0	1458			
Grp Volume(v), veh/h	95	571	0	0	1430	0	530	0	0			
Grp Sat Flow(s),veh/h/ln	1634	1863	0	0	1770	0	1585	0	1458			
Q Serve(g_s), s	4.7	11.0	0.0	0.0	28.5	0.0	14.7	0.0	0.0			
Cycle Q Clear(g_c), s	4.7	11.0	0.0	0.0	28.5	0.0	14.7	0.0	0.0			
Prop In Lane	1.00		0.00	0.00		0.00	1.00		1.00			
Lane Grp Cap(c), veh/h	238	1347	0	0	1888	0	596	0	282			
V/C Ratio(X)	0.40	0.42	0.00	0.00	0.76	0.00	0.89	0.00	0.00			
Avail Cap(c_a), veh/h	238	1347	0	0	1888	0	704	0	332			
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Upstream Filter(I)	0.95	0.95	0.00	0.00	1.00	0.00	1.00	0.00	0.00			
Uniform Delay (d), s/veh	34.9	5.0	0.0	0.0	16.4	0.0	35.6	0.0	0.0			
Incr Delay (d2), s/veh	1.0	0.9	0.0	0.0	2.9	0.0	12.0	0.0	0.0			
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			
%ile BackOfQ(50%),veh/ln	2.2	5.9	0.0	0.0	14.5	0.0	7.4	0.0	0.0			
LnGrp Delay(d),s/veh	35.9	5.9	0.0	0.0	19.3	0.0	47.6	0.0	0.0			
LnGrp LOS	D	A			B		D					
Approach Vol, veh/h		666			1430			530				
Approach Delay, s/veh		10.2			19.3			47.6				
Approach LOS		B			B			D				

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4			7	8
Phs Duration (G+Y+Rc), s		20.9		69.1			17.1	52.0
Change Period (Y+Rc), s		3.5		5.5			5.5	5.5
Max Green Setting (Gmax), s		20.5		60.5			8.5	46.5
Max Q Clear Time (g_c+I1), s		16.7		13.0			6.7	30.5
Green Ext Time (p_c), s		0.7		3.7			0.6	8.4

Intersection Summary	
HCM 2010 Ctrl Delay	22.7
HCM 2010 LOS	C



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	64	534	0	0	1339	0	493	0	277	0	0	0
Future Volume (veh/h)	64	534	0	0	1339	0	493	0	277	0	0	0
Number	7	4	14	3	8	18	5	2	12			
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0			
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00			
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Adj Sat Flow, veh/h/ln	1716	1863	0	0	1863	1750	1716	0	1716			
Adj Flow Rate, veh/h	70	580	0	0	1455	0	536	0	0			
Adj No. of Lanes	1	1	0	0	2	0	2	0	1			
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92			
Percent Heavy Veh, %	2	2	0	0	2	2	2	0	2			
Cap, veh/h	222	1347	0	0	1923	0	603	0	285			
Arrive On Green	0.18	0.96	0.00	0.00	0.54	0.00	0.19	0.00	0.00			
Sat Flow, veh/h	1634	1863	0	0	3725	0	3170	0	1458			
Grp Volume(v), veh/h	70	580	0	0	1455	0	536	0	0			
Grp Sat Flow(s),veh/h/ln	1634	1863	0	0	1770	0	1585	0	1458			
Q Serve(g_s), s	3.4	1.9	0.0	0.0	29.3	0.0	15.2	0.0	0.0			
Cycle Q Clear(g_c), s	3.4	1.9	0.0	0.0	29.3	0.0	15.2	0.0	0.0			
Prop In Lane	1.00		0.00	0.00		0.00	1.00		1.00			
Lane Grp Cap(c), veh/h	222	1347	0	0	1923	0	603	0	285			
V/C Ratio(X)	0.32	0.43	0.00	0.00	0.76	0.00	0.89	0.00	0.00			
Avail Cap(c_a), veh/h	222	1347	0	0	1923	0	724	0	341			
HCM Platoon Ratio	1.33	1.33	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Upstream Filter(I)	0.95	0.95	0.00	0.00	1.00	0.00	1.00	0.00	0.00			
Uniform Delay (d), s/veh	34.0	0.5	0.0	0.0	16.3	0.0	36.3	0.0	0.0			
Incr Delay (d2), s/veh	0.8	1.0	0.0	0.0	2.8	0.0	11.6	0.0	0.0			
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			
%ile BackOfQ(50%),veh/ln	1.6	1.0	0.0	0.0	14.9	0.0	7.6	0.0	0.0			
LnGrp Delay(d),s/veh	34.7	1.5	0.0	0.0	19.1	0.0	47.9	0.0	0.0			
LnGrp LOS	C	A			B		D					
Approach Vol, veh/h		650			1455			536				
Approach Delay, s/veh		5.1			19.1			47.9				
Approach LOS		A			B			D				

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4			7	8
Phs Duration (G+Y+Rc), s		21.5		70.5			16.5	54.0
Change Period (Y+Rc), s		3.5		5.5			5.5	5.5
Max Green Setting (Gmax), s		21.5		61.5			7.5	48.5
Max Q Clear Time (g_c+I1), s		17.2		3.9			5.4	31.3
Green Ext Time (p_c), s		0.8		3.7			0.7	8.9

Intersection Summary	
HCM 2010 Ctrl Delay	21.5
HCM 2010 LOS	C



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	88	534	0	0	1339	0	493	0	277	0	0	0
Future Volume (veh/h)	88	534	0	0	1339	0	493	0	277	0	0	0
Number	7	4	14	3	8	18	5	2	12			
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0			
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00			
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Adj Sat Flow, veh/h/ln	1716	1863	0	0	1863	1750	1716	0	1716			
Adj Flow Rate, veh/h	96	580	0	0	1455	0	536	0	0			
Adj No. of Lanes	1	1	0	0	2	0	2	0	1			
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92			
Percent Heavy Veh, %	2	2	0	0	2	2	2	0	2			
Cap, veh/h	235	1344	0	0	1888	0	601	0	285			
Arrive On Green	0.19	0.96	0.00	0.00	0.53	0.00	0.19	0.00	0.00			
Sat Flow, veh/h	1634	1863	0	0	3725	0	3170	0	1458			
Grp Volume(v), veh/h	96	580	0	0	1455	0	536	0	0			
Grp Sat Flow(s),veh/h/ln	1634	1863	0	0	1770	0	1585	0	1458			
Q Serve(g_s), s	4.6	1.9	0.0	0.0	29.3	0.0	14.8	0.0	0.0			
Cycle Q Clear(g_c), s	4.6	1.9	0.0	0.0	29.3	0.0	14.8	0.0	0.0			
Prop In Lane	1.00		0.00	0.00		0.00	1.00		1.00			
Lane Grp Cap(c), veh/h	235	1344	0	0	1888	0	601	0	285			
V/C Ratio(X)	0.41	0.43	0.00	0.00	0.77	0.00	0.89	0.00	0.00			
Avail Cap(c_a), veh/h	235	1344	0	0	1888	0	704	0	332			
HCM Platoon Ratio	1.33	1.33	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Upstream Filter(I)	0.94	0.94	0.00	0.00	1.00	0.00	1.00	0.00	0.00			
Uniform Delay (d), s/veh	33.1	0.5	0.0	0.0	16.6	0.0	35.6	0.0	0.0			
Incr Delay (d2), s/veh	1.1	1.0	0.0	0.0	3.1	0.0	12.3	0.0	0.0			
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			
%ile BackOfQ(50%),veh/ln	2.2	1.1	0.0	0.0	15.0	0.0	7.5	0.0	0.0			
LnGrp Delay(d),s/veh	34.1	1.5	0.0	0.0	19.8	0.0	47.8	0.0	0.0			
LnGrp LOS	C	A			B		D					
Approach Vol, veh/h		676			1455			536				
Approach Delay, s/veh		6.1			19.8			47.8				
Approach LOS		A			B			D				

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4			7	8
Phs Duration (G+Y+Rc), s		21.1		68.9			16.9	52.0
Change Period (Y+Rc), s		3.5		5.5			5.5	5.5
Max Green Setting (Gmax), s		20.5		60.5			8.5	46.5
Max Q Clear Time (g_c+I1), s		16.8		3.9			6.6	31.3
Green Ext Time (p_c), s		0.7		3.8			0.7	8.3

Intersection Summary	
HCM 2010 Ctrl Delay	21.9
HCM 2010 LOS	C



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	54	568	0	0	701	0	179	0	416	0	0	0
Future Volume (veh/h)	54	568	0	0	701	0	179	0	416	0	0	0
Number	7	4	14	3	8	18	5	2	12			
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0			
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00			
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Adj Sat Flow, veh/h/ln	1716	1863	0	0	1863	1750	1716	0	1716			
Adj Flow Rate, veh/h	59	617	0	0	762	0	195	0	0			
Adj No. of Lanes	1	1	0	0	2	0	2	0	1			
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92			
Percent Heavy Veh, %	2	2	0	0	2	2	2	0	2			
Cap, veh/h	395	1547	0	0	1927	0	255	0	125			
Arrive On Green	0.48	1.00	0.00	0.00	0.54	0.00	0.08	0.00	0.00			
Sat Flow, veh/h	1634	1863	0	0	3725	0	3170	0	1458			
Grp Volume(v), veh/h	59	617	0	0	762	0	195	0	0			
Grp Sat Flow(s),veh/h/ln	1634	1863	0	0	1770	0	1585	0	1458			
Q Serve(g_s), s	1.8	0.0	0.0	0.0	11.2	0.0	5.4	0.0	0.0			
Cycle Q Clear(g_c), s	1.8	0.0	0.0	0.0	11.2	0.0	5.4	0.0	0.0			
Prop In Lane	1.00		0.00	0.00		0.00	1.00		1.00			
Lane Grp Cap(c), veh/h	395	1547	0	0	1927	0	255	0	125			
V/C Ratio(X)	0.15	0.40	0.00	0.00	0.40	0.00	0.76	0.00	0.00			
Avail Cap(c_a), veh/h	395	1547	0	0	1927	0	564	0	267			
HCM Platoon Ratio	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Upstream Filter(I)	0.91	0.91	0.00	0.00	1.00	0.00	1.00	0.00	0.00			
Uniform Delay (d), s/veh	18.1	0.0	0.0	0.0	11.9	0.0	40.5	0.0	0.0			
Incr Delay (d2), s/veh	0.2	0.7	0.0	0.0	0.6	0.0	4.7	0.0	0.0			
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			
%ile BackOfQ(50%),veh/ln	0.8	0.3	0.0	0.0	5.6	0.0	2.6	0.0	0.0			
LnGrp Delay(d),s/veh	18.2	0.7	0.0	0.0	12.5	0.0	45.3	0.0	0.0			
LnGrp LOS	B	A			B		D					
Approach Vol, veh/h		676			762			195				
Approach Delay, s/veh		2.2			12.5			45.3				
Approach LOS		A			B			D				

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4			7	8
Phs Duration (G+Y+Rc), s		11.2		78.8			25.8	53.0
Change Period (Y+Rc), s		3.5		5.5			5.5	5.5
Max Green Setting (Gmax), s		16.5		64.5			11.5	47.5
Max Q Clear Time (g_c+I1), s		7.4		2.0			3.8	13.2
Green Ext Time (p_c), s		0.4		4.0			2.2	5.0

Intersection Summary	
HCM 2010 Ctrl Delay	12.2
HCM 2010 LOS	B



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	55	578	0	0	713	0	181	0	420	0	0	0
Future Volume (veh/h)	55	578	0	0	713	0	181	0	420	0	0	0
Number	7	4	14	3	8	18	5	2	12			
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0			
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00			
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Adj Sat Flow, veh/h/ln	1716	1863	0	0	1863	1750	1716	0	1716			
Adj Flow Rate, veh/h	60	628	0	0	775	0	197	0	0			
Adj No. of Lanes	1	1	0	0	2	0	2	0	1			
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92			
Percent Heavy Veh, %	2	2	0	0	2	2	2	0	2			
Cap, veh/h	430	1546	0	0	1848	0	257	0	126			
Arrive On Green	0.53	1.00	0.00	0.00	0.52	0.00	0.08	0.00	0.00			
Sat Flow, veh/h	1634	1863	0	0	3725	0	3170	0	1458			
Grp Volume(v), veh/h	60	628	0	0	775	0	197	0	0			
Grp Sat Flow(s),veh/h/ln	1634	1863	0	0	1770	0	1585	0	1458			
Q Serve(g_s), s	1.7	0.0	0.0	0.0	12.1	0.0	5.5	0.0	0.0			
Cycle Q Clear(g_c), s	1.7	0.0	0.0	0.0	12.1	0.0	5.5	0.0	0.0			
Prop In Lane	1.00		0.00	0.00		0.00	1.00		1.00			
Lane Grp Cap(c), veh/h	430	1546	0	0	1848	0	257	0	126			
V/C Ratio(X)	0.14	0.41	0.00	0.00	0.42	0.00	0.77	0.00	0.00			
Avail Cap(c_a), veh/h	430	1546	0	0	1848	0	564	0	267			
HCM Platoon Ratio	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Upstream Filter(I)	0.91	0.91	0.00	0.00	1.00	0.00	1.00	0.00	0.00			
Uniform Delay (d), s/veh	16.1	0.0	0.0	0.0	13.2	0.0	40.5	0.0	0.0			
Incr Delay (d2), s/veh	0.1	0.7	0.0	0.0	0.7	0.0	4.7	0.0	0.0			
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			
%ile BackOfQ(50%),veh/ln	0.8	0.3	0.0	0.0	6.0	0.0	2.6	0.0	0.0			
LnGrp Delay(d),s/veh	16.2	0.7	0.0	0.0	13.9	0.0	45.3	0.0	0.0			
LnGrp LOS	B	A			B		D					
Approach Vol, veh/h		688			775			197				
Approach Delay, s/veh		2.1			13.9			45.3				
Approach LOS		A			B			D				

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4			7	8
Phs Duration (G+Y+Rc), s		11.3		78.7			27.7	51.0
Change Period (Y+Rc), s		3.5		5.5			5.5	5.5
Max Green Setting (Gmax), s		16.5		64.5			13.5	45.5
Max Q Clear Time (g_c+I1), s		7.5		2.0			3.7	14.1
Green Ext Time (p_c), s		0.4		4.1			2.6	5.0

Intersection Summary	
HCM 2010 Ctrl Delay	12.7
HCM 2010 LOS	B



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	55	578	0	0	713	0	205	0	420	0	0	0
Future Volume (veh/h)	55	578	0	0	713	0	205	0	420	0	0	0
Number	7	4	14	3	8	18	5	2	12			
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0			
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00			
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Adj Sat Flow, veh/h/ln	1716	1863	0	0	1863	1750	1716	0	1716			
Adj Flow Rate, veh/h	60	628	0	0	775	0	223	0	0			
Adj No. of Lanes	1	1	0	0	2	0	2	0	1			
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92			
Percent Heavy Veh, %	2	2	0	0	2	2	2	0	2			
Cap, veh/h	434	1529	0	0	1809	0	286	0	140			
Arrive On Green	0.53	1.00	0.00	0.00	0.51	0.00	0.09	0.00	0.00			
Sat Flow, veh/h	1634	1863	0	0	3725	0	3170	0	1458			
Grp Volume(v), veh/h	60	628	0	0	775	0	223	0	0			
Grp Sat Flow(s),veh/h/ln	1634	1863	0	0	1770	0	1585	0	1458			
Q Serve(g_s), s	1.7	0.0	0.0	0.0	12.3	0.0	6.2	0.0	0.0			
Cycle Q Clear(g_c), s	1.7	0.0	0.0	0.0	12.3	0.0	6.2	0.0	0.0			
Prop In Lane	1.00		0.00	0.00		0.00	1.00		1.00			
Lane Grp Cap(c), veh/h	434	1529	0	0	1809	0	286	0	140			
V/C Ratio(X)	0.14	0.41	0.00	0.00	0.43	0.00	0.78	0.00	0.00			
Avail Cap(c_a), veh/h	434	1529	0	0	1809	0	599	0	284			
HCM Platoon Ratio	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Upstream Filter(I)	0.91	0.91	0.00	0.00	1.00	0.00	1.00	0.00	0.00			
Uniform Delay (d), s/veh	15.9	0.0	0.0	0.0	13.8	0.0	40.1	0.0	0.0			
Incr Delay (d2), s/veh	0.1	0.7	0.0	0.0	0.7	0.0	4.6	0.0	0.0			
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			
%ile BackOfQ(50%),veh/ln	0.7	0.3	0.0	0.0	6.2	0.0	2.9	0.0	0.0			
LnGrp Delay(d),s/veh	16.0	0.7	0.0	0.0	14.5	0.0	44.7	0.0	0.0			
LnGrp LOS	B	A			B		D					
Approach Vol, veh/h		688			775			223				
Approach Delay, s/veh		2.1			14.5			44.7				
Approach LOS		A			B			D				

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4			7	8
Phs Duration (G+Y+Rc), s		12.1		77.9			27.9	50.0
Change Period (Y+Rc), s		3.5		5.5			5.5	5.5
Max Green Setting (Gmax), s		17.5		63.5			13.5	44.5
Max Q Clear Time (g_c+I1), s		8.2		2.0			3.7	14.3
Green Ext Time (p_c), s		0.5		4.1			2.7	5.0

Intersection Summary	
HCM 2010 Ctrl Delay	13.4
HCM 2010 LOS	B



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	56	588	0	0	726	0	183	0	424	0	0	0
Future Volume (veh/h)	56	588	0	0	726	0	183	0	424	0	0	0
Number	7	4	14	3	8	18	5	2	12			
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0			
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00			
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Adj Sat Flow, veh/h/ln	1716	1863	0	0	1863	1750	1716	0	1716			
Adj Flow Rate, veh/h	61	639	0	0	789	0	199	0	0			
Adj No. of Lanes	1	1	0	0	2	0	2	0	1			
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92			
Percent Heavy Veh, %	2	2	0	0	2	2	2	0	2			
Cap, veh/h	429	1545	0	0	1848	0	259	0	127			
Arrive On Green	0.53	1.00	0.00	0.00	0.52	0.00	0.08	0.00	0.00			
Sat Flow, veh/h	1634	1863	0	0	3725	0	3170	0	1458			
Grp Volume(v), veh/h	61	639	0	0	789	0	199	0	0			
Grp Sat Flow(s),veh/h/ln	1634	1863	0	0	1770	0	1585	0	1458			
Q Serve(g_s), s	1.7	0.0	0.0	0.0	12.3	0.0	5.5	0.0	0.0			
Cycle Q Clear(g_c), s	1.7	0.0	0.0	0.0	12.3	0.0	5.5	0.0	0.0			
Prop In Lane	1.00		0.00	0.00		0.00	1.00		1.00			
Lane Grp Cap(c), veh/h	429	1545	0	0	1848	0	259	0	127			
V/C Ratio(X)	0.14	0.41	0.00	0.00	0.43	0.00	0.77	0.00	0.00			
Avail Cap(c_a), veh/h	429	1545	0	0	1848	0	564	0	267			
HCM Platoon Ratio	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Upstream Filter(I)	0.56	0.56	0.00	0.00	1.00	0.00	1.00	0.00	0.00			
Uniform Delay (d), s/veh	16.2	0.0	0.0	0.0	13.2	0.0	40.5	0.0	0.0			
Incr Delay (d2), s/veh	0.1	0.5	0.0	0.0	0.7	0.0	4.7	0.0	0.0			
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			
%ile BackOfQ(50%),veh/ln	0.8	0.2	0.0	0.0	6.2	0.0	2.6	0.0	0.0			
LnGrp Delay(d),s/veh	16.2	0.5	0.0	0.0	13.9	0.0	45.2	0.0	0.0			
LnGrp LOS	B	A			B		D					
Approach Vol, veh/h		700			789			199				
Approach Delay, s/veh		1.8			13.9			45.2				
Approach LOS		A			B			D				

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4			7	8
Phs Duration (G+Y+Rc), s		11.4		78.6			27.6	51.0
Change Period (Y+Rc), s		3.5		5.5			5.5	5.5
Max Green Setting (Gmax), s		16.5		64.5			13.5	45.5
Max Q Clear Time (g_c+I1), s		7.5		2.0			3.7	14.3
Green Ext Time (p_c), s		0.4		4.2			2.7	5.1

Intersection Summary	
HCM 2010 Ctrl Delay	12.6
HCM 2010 LOS	B



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	56	588	0	0	726	0	207	0	424	0	0	0
Future Volume (veh/h)	56	588	0	0	726	0	207	0	424	0	0	0
Number	7	4	14	3	8	18	5	2	12			
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0			
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00			
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Adj Sat Flow, veh/h/ln	1716	1863	0	0	1863	1750	1716	0	1716			
Adj Flow Rate, veh/h	61	639	0	0	789	0	225	0	0			
Adj No. of Lanes	1	1	0	0	2	0	2	0	1			
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92			
Percent Heavy Veh, %	2	2	0	0	2	2	2	0	2			
Cap, veh/h	414	1528	0	0	1848	0	288	0	141			
Arrive On Green	0.51	1.00	0.00	0.00	0.52	0.00	0.09	0.00	0.00			
Sat Flow, veh/h	1634	1863	0	0	3725	0	3170	0	1458			
Grp Volume(v), veh/h	61	639	0	0	789	0	225	0	0			
Grp Sat Flow(s),veh/h/ln	1634	1863	0	0	1770	0	1585	0	1458			
Q Serve(g_s), s	1.8	0.0	0.0	0.0	12.3	0.0	6.3	0.0	0.0			
Cycle Q Clear(g_c), s	1.8	0.0	0.0	0.0	12.3	0.0	6.3	0.0	0.0			
Prop In Lane	1.00		0.00	0.00		0.00	1.00		1.00			
Lane Grp Cap(c), veh/h	414	1528	0	0	1848	0	288	0	141			
V/C Ratio(X)	0.15	0.42	0.00	0.00	0.43	0.00	0.78	0.00	0.00			
Avail Cap(c_a), veh/h	414	1528	0	0	1848	0	599	0	284			
HCM Platoon Ratio	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Upstream Filter(I)	0.91	0.91	0.00	0.00	1.00	0.00	1.00	0.00	0.00			
Uniform Delay (d), s/veh	17.0	0.0	0.0	0.0	13.2	0.0	40.0	0.0	0.0			
Incr Delay (d2), s/veh	0.1	0.8	0.0	0.0	0.7	0.0	4.6	0.0	0.0			
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			
%ile BackOfQ(50%),veh/ln	0.8	0.3	0.0	0.0	6.2	0.0	2.9	0.0	0.0			
LnGrp Delay(d),s/veh	17.1	0.8	0.0	0.0	13.9	0.0	44.6	0.0	0.0			
LnGrp LOS	B	A			B		D					
Approach Vol, veh/h		700			789			225				
Approach Delay, s/veh		2.2			13.9			44.6				
Approach LOS		A			B			D				

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4			7	8
Phs Duration (G+Y+Rc), s		12.2		77.8			26.8	51.0
Change Period (Y+Rc), s		3.5		5.5			5.5	5.5
Max Green Setting (Gmax), s		17.5		63.5			12.5	45.5
Max Q Clear Time (g_c+I1), s		8.3		2.0			3.8	14.3
Green Ext Time (p_c), s		0.5		4.2			2.5	5.1

Intersection Summary	
HCM 2010 Ctrl Delay	13.2
HCM 2010 LOS	B

Turning Movement Count Report AM

Location ID: 1
North/South: 170th St W
East/West: Rosamond Boulevard

Date: 12/05/18
City: Rosamond, CA

	Southbound			*Westbound*			*Northbound*			*Eastbound*			
	1	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**11**	**12**	Totals:
Movements:	R	T	L	R	T	L	R	T	L	R	T	L	
7:00	0	0	0	1	0	1	1	0	0	0	0	0	3
7:15	0	0	0	2	0	0	1	0	0	0	0	0	3
7:30	0	0	1	4	0	1	0	0	0	0	0	0	6
7:45	0	0	0	1	0	0	0	0	0	0	0	0	1
8:00													
8:15													
8:30													
8:45													

Total Volume:	0	0	1	8	0	2	2	0	0	0	0	0	13
Approach %	0%	0%	100%	80%	0%	20%	100%	0%	0%	0%	0%	0%	

Peak Hr Begin:	7:00												
PHV	0	0	1	8	0	2	2	0	0	0	0	0	13
PHF	0.250			0.500			0.500			0.000			0.542

Turning Movement Count Report PM

Location ID: 1
North/South: 170th St W
East/West: Rosamond Boulevard

Date: 12/05/18
City: Rosamond, CA

	Southbound			*Westbound*			*Northbound*			*Eastbound*			
	1	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**11**	**12**	Totals:
Movements:	R	T	L	R	T	L	R	T	L	R	T	L	
16:00													
16:15													
16:30	0	0	1	0	0	2	1	0	0	0	0	0	4
16:45	0	0	0	2	0	0	3	1	0	0	0	0	6
17:00	0	1	1	1	0	2	1	0	0	0	0	0	6
17:15	0	0	0	2	0	0	2	0	0	0	0	0	4
17:30													
17:45													

Total Volume:	0	1	2	5	0	4	7	1	0	0	0	0	20
Approach %	0%	33%	67%	56%	0%	44%	88%	13%	0%	0%	0%	0%	

Peak Hr Begin:	16:30												
PHV	0	1	2	5	0	4	7	1	0	0	0	0	20
PHF	0.375			0.750			0.500			0.000			0.833

Location ID: 5
North/South: SR 14 SB Off Ramp / Acacia St
East/West: Rosamond Blvd

Date: 1/18/2022
City: Rosamond, CA

	Southbound			*Westbound*			*Northbound*			*Eastbound*			
	1	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**11**	**12**	Totals:
Lanes:	R	T	L	R	T	L	R	T	L	R	T	L	
7:00	12	0	6	0	110	1	1	0	1	0	279	0	410
7:15	21	0	8	0	166	0	5	0	1	5	311	0	517
7:30	12	0	4	0	140	2	0	0	0	1	308	0	467
7:45	12	0	7	0	148	2	2	0	3	1	200	0	375
8:00	13	0	4	0	151	1	5	0	0	1	178	0	353
8:15	11	0	3	0	134	0	4	0	1	1	178	0	332
8:30	11	0	8	0	129	3	1	0	2	1	222	0	377
8:45	6	0	5	0	104	3	1	0	0	1	167	0	287
Total Volume:	98	0	45	0	1082	12	19	0	8	11	1843	0	3118
Approach %	69%	0%	31%	0%	99%	1%	70%	0%	30%	1%	99%	0%	
Peak Hr Begin:	7:00												
PHV	57	0	25	0	564	5	8	0	5	7	1098	0	1769
PHF	0.707			0.857			0.542			0.874			0.855

	Southbound			*Westbound*			*Northbound*			*Eastbound*			
	1	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**11**	**12**	Totals:
Lanes:	R	T	L	R	T	L	R	T	L	R	T	L	
16:00	21	0	10	0	291	0	2	0	0	1	184	0	509
16:15	16	0	17	0	262	5	3	0	1	0	206	0	510
16:30	12	0	10	0	279	1	2	0	2	5	245	0	556
16:45	31	0	7	0	255	5	4	0	1	1	197	0	501
17:00	20	0	10	0	265	1	0	0	2	4	198	0	500
17:15	18	0	11	0	305	3	1	0	2	1	212	0	553
17:30	11	0	6	0	247	1	5	0	1	2	193	0	466
17:45	13	0	8	0	250	1	0	0	0	1	173	0	446
Total Volume:	142	0	79	0	2154	17	17	0	9	15	1608	0	4041
Approach %	64%	0%	36%	0%	99%	1%	65%	0%	35%	1%	99%	0%	
Peak Hr Begin:	16:30												
PHV	81	0	38	0	1104	10	7	0	7	11	852	0	2110
PHF	0.783			0.904			0.700			0.863			0.949

Location ID: 6
North/South: SR 14 NB Ramps
East/West: Rosamond Blvd

Date: 1/18/2022
City: Rosamond, CA

	Southbound			*Westbound*			*Northbound*			*Eastbound*			
	1	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**11**	**12**	Totals:
Lanes:	R	T	L	R	T	L	R	T	L	R	T	L	
7:00	0	0	0	0	141	0	138	0	37	0	149	10	475
7:15	0	0	0	0	203	0	112	0	44	0	182	23	564
7:30	0	0	0	0	176	0	102	0	45	0	119	17	459
7:45	0	0	0	0	181	0	64	0	53	0	118	4	420
8:00	0	0	0	0	169	0	62	0	49	0	86	16	382
8:15	0	0	0	0	141	0	51	0	46	0	79	8	325
8:30	0	0	0	0	154	0	60	0	49	0	119	8	390
8:45	0	0	0	0	110	0	52	0	41	0	101	12	316
Total Volume:	0	0	0	0	1275	0	641	0	364	0	953	98	3331
Approach %	0%	0%	0%	5%	95%	0%	64%	0%	36%	0%	91%	9%	
Peak Hr Begin:	7:00												
PHV	0	0	0	36	665	0	416	0	179	0	568	54	1918
PHF	0.000			0.863			0.850			0.759			0.850

	Southbound			*Westbound*			*Northbound*			*Eastbound*			
	1	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**11**	**12**	Totals:
Lanes:	R	T	L	R	T	L	R	T	L	R	T	L	
16:00	0	0	0	0	317	0	67	0	121	0	119	7	631
16:15	0	0	0	0	339	0	76	0	124	0	147	19	705
16:30	0	0	0	0	355	0	62	0	110	0	131	19	677
16:45	0	0	0	0	282	0	67	0	128	0	119	17	613
17:00	0	0	0	0	280	0	61	0	118	0	125	20	604
17:15	0	0	0	0	277	0	69	0	160	0	134	12	652
17:30	0	0	0	0	246	0	70	0	130	0	129	19	594
17:45	0	0	0	0	204	0	75	0	140	0	120	9	548
Total Volume:	0	0	0	79	2300	0	547	0	1031	0	1024	122	5024
Approach %	0%	0%	0%	3%	97%	0%	35%	0%	65%	0%	89%	11%	
Peak Hr Begin:	16:00												
PHV	0	0	0	42	1251	0	272	0	483	0	516	62	2626
PHF	0.000			0.911			0.944			0.870			0.931

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OnTheMap

Start | Base Map | Selection | Results

Destination Analysis

Workers: *Living in Lancaster city, CA*
Showing: *Employment locations grouped by Places (Cities, CDPs, etc.)*

Display Settings

Labor Market Segment Filter: All Workers
Number of Results: Top 10
Year: 2023

Map Controls

Color Key
Thematic Overlay
Spoke Overlay
Selection Outline
~~Identify~~ Zoom to Selection
Clear Overlays Animate Overlays

Report/Map Outputs

Detailed Report
Export Geography
Print Chart/Map

Legends

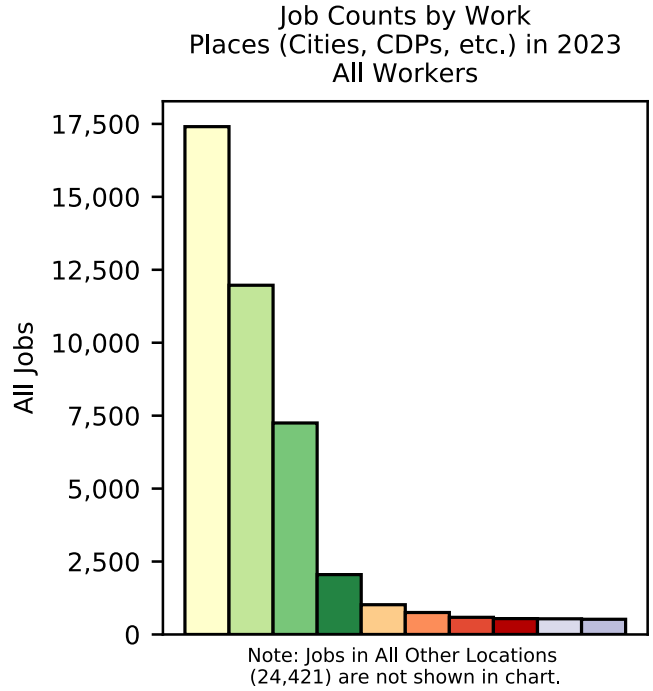
- 17,406 Jobs
- 11,970 Jobs
- 7,249 Jobs
- 2,052 Jobs
- 1,020 Jobs
- 753 Jobs
- 588 Jobs
- 544 Jobs
- 537 Jobs
- 521 Jobs

Change Settings

H







View as Bar Chart

Job Counts by Pla CDPs, etc.)
Where Workers are Employed - All Jobs

	2023 Count	Share
All Places (Cities, CDPs, etc.)	67,061	100.0%
☐ Lancaster city, CA	17,406	26.0%
☐ Los Angeles city, CA	11,970	17.8%
☐ Palmdale city, CA	7,249	10.8%
☐ Santa Clarita city, CA	2,052	3.1%
☐ Burbank city, CA	1,020	1.5%
☐ San Diego city, CA	753	1.1%
☐ Quartz Hill CDP, CA	588	0.9%
☐ El Segundo city, CA	544	0.8%
☐ Irvine city, CA	537	0.8%
☐ Long Beach city, CA	521	0.8%
All Other Locations	24,421	36.4%

Note: The U.S. Census Bureau reviewed this data product for unauthorized disclosure of confidential information and approved the disclosure avoidance practices applied to this release. CBDRB-FY21-249.

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Destination Analysis

Workers: *Living in Rosamond CDP, CA*
Showing: *Employment locations grouped by Places (Cities, CDPs, etc.)*

Display Settings

Labor Market Segment Filter: All Workers
Number of Results: Top 10
Year: 2023

Map Controls

Color Key
Thematic Overlay
Spoke Overlay
Selection Outline
~~Identify~~ Zoom to Selection
Clear Overlays Animate Overlays

Report/Map Outputs

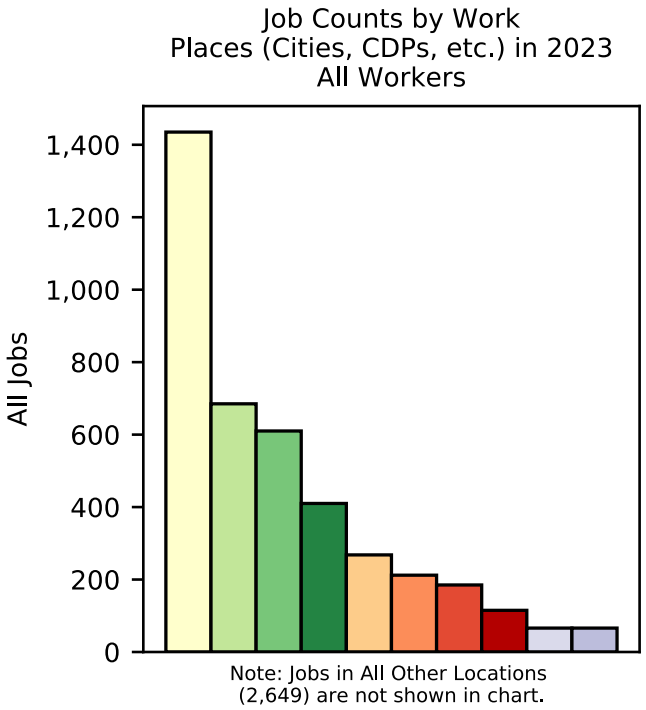
Detailed Report
Export Geography
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Legends

- 1,435 Jobs
- 685 Jobs
- 610 Jobs
- 410 Jobs
- 268 Jobs
- 212 Jobs
- 185 Jobs
- 115 Jobs
- 66 Jobs

Change Settings





View as: Bar Chart

Job Counts by Pla CDPs, etc.)
Where Workers are Employed - All Jobs

	2023 Count	Share
All Places (Cities, CDPs, etc.)	6,701	100.0%
Lancaster city, CA	1,435	21.4%
Palmdale city, CA	685	10.2%
Rosamond CDP, CA	610	9.1%
Los Angeles city, CA	410	6.1%
Bakersfield city, CA	268	4.0%
Mojave CDP, CA	212	3.2%
Santa Clarita city, CA	185	2.8%
Fresno city, CA	115	1.7%
California City city, CA	66	1.0%
Edwards AFB CDP, CA	66	1.0%
All Other Locations	2,649	39.5%

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OnTheMap

Start | Base Map | Selection | Results

Destination Analysis

Workers: *Living in Mojave CDP, CA*
Showing: *Employment locations grouped by Places (Cities, CDPs, etc.)*

Display Settings

Labor Market Segment Filter: All Workers
Number of Results: Top 10
Year: 2023

Map Controls

Color Key
Thematic Overlay
Spoke Overlay
Selection Outline
~~Identify~~ Zoom to Selection
Clear Overlays Animate Overlays

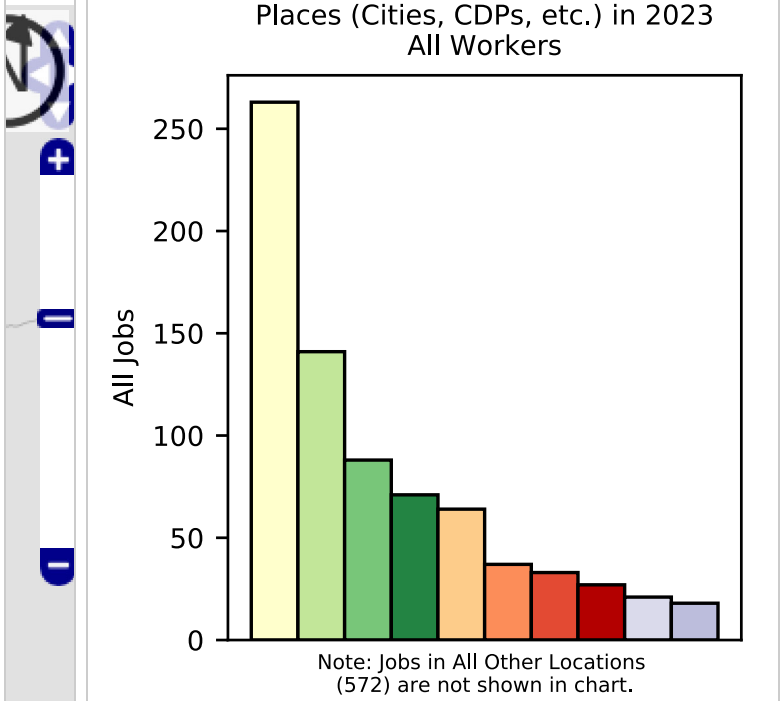
Report/Map Outputs

Detailed Report
Export Geography
Print Chart/Map

Legends

263 Jobs
141 Jobs
88 Jobs
71 Jobs
64 Jobs
37 Jobs
33 Jobs
27 Jobs
21 Jobs
18 Jobs

Change Settings



View as Bar Chart

Job Counts by Pla CDPs, etc.)
Where Workers are Employed - All Jobs

	2023 Count	Share
All Places (Cities, CDPs, etc.)	1,335	100.0%
Mojave CDP, CA	263	19.7%
Lancaster city, CA	141	10.6%
Los Angeles city, CA	88	6.6%
Palmdale city, CA	71	5.3%
Bakersfield city, CA	64	4.8%
Tehachapi city, CA	37	2.8%
California City city, CA	33	2.5%
Rosamond CDP, CA	27	2.0%
Santa Clarita city, CA	21	1.6%
Fresno city, CA	18	1.3%
All Other Locations	572	42.8%

Note: The U.S. Census Bureau reviewed this data product for unauthorized disclosure of confidential information and approved the disclosure avoidance practices applied to this release. CBDRB-FY21-249.

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Destination Analysis

Workers: *Living in Bakersfield city, CA*
Showing: *Employment locations grouped by Places (Cities, CDPs, etc.)*

Display Settings

Labor Market Segment Filter: All Workers
Number of Results: Top 10
Year: 2023

Map Controls

Color Key
Thematic Overlay
Spoke Overlay
Selection Outline
~~Identify~~ Zoom to Selection
Clear Overlays Animate Overlays

Report/Map Outputs

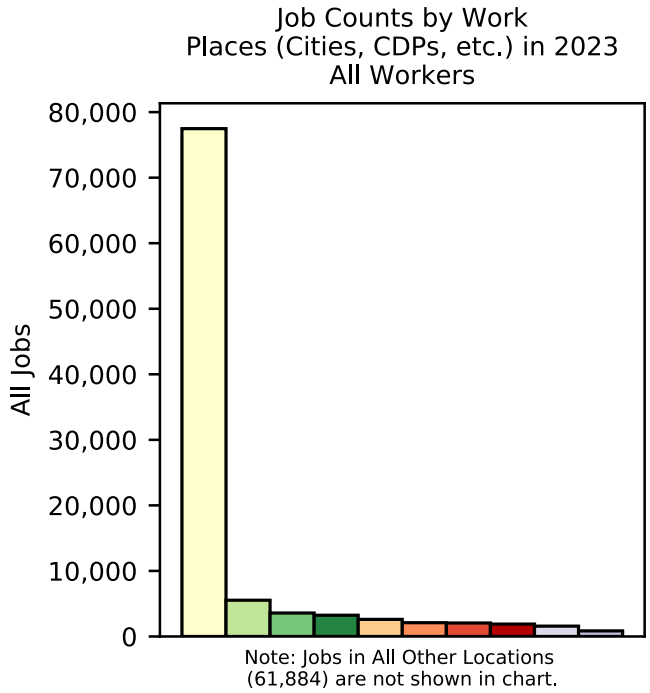
Detailed Report
Export Geography
Print Chart/Map

Legends

- 77,478 Jobs
- 5,530 Jobs
- 3,579 Jobs
- 3,240 Jobs
- 2,607 Jobs
- 2,104 Jobs
- 2,058 Jobs
- 1,891 Jobs
- 1,577 Jobs
- 851 Jobs

Change Settings





View as Bar Chart

Job Counts by Pla CDPs, etc.)
Where Workers are Employed - All Jobs

	2023 Count	Share
All Places (Cities, CDPs, etc.)	162,799	100.0%
Bakersfield city, CA	77,478	47.6%
Los Angeles city, CA	5,530	3.4%
Oildale CDP, CA	3,579	2.2%
Shafter city, CA	3,240	2.0%
Rosedale CDP, CA	2,607	1.6%
East Niles CDP, CA	2,104	1.3%
Delano city, CA	2,058	1.3%
Fresno city, CA	1,891	1.2%
Wasco city, CA	1,577	1.0%
Visalia city, CA	851	0.5%
All Other Locations	61,884	38.0%

Note: The U.S. Census Bureau reviewed this data product for unauthorized disclosure of confidential information and approved the disclosure avoidance practices applied to this release. CBDRB-FY21-249.

Accessibility | Information Quality | FOIA | Data Protection and Privacy Policy | U.S. Department of Commerce | Census Home
Source: U.S.Census Bureau, Center for Economic Studies, LEHD | e-mail: CES.OnTheMap.Feedback@census.gov

An official website of the United States government Here's how you know

OnTheMap

Start | Base Map | Selection | Results

Destination Analysis

Workers: *Living in Tehachapi city, CA*
Showing: *Employment locations grouped by Places (Cities, CDPs, etc.)*

Display Settings

Labor Market Segment Filter: All Workers
Number of Results: Top 10
Year: 2023

Map Controls

Color Key
Thematic Overlay
Spoke Overlay
Selection Outline
~~Identify~~ Zoom to Selection
Clear Overlays Animate Overlays

Report/Map Outputs

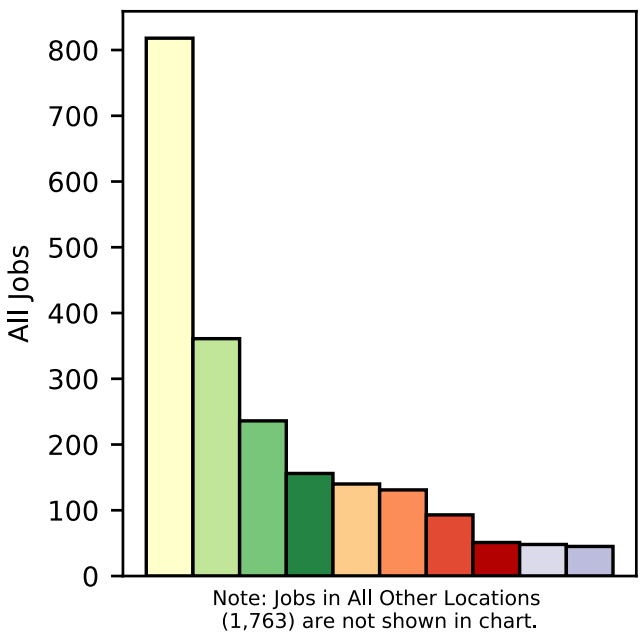
Detailed Report
Export Geography
Print Chart/Map

Legends

- 818 Jobs
- 361 Jobs
- 236 Jobs
- 156 Jobs
- 140 Jobs
- 131 Jobs
- 93 Jobs
- 51 Jobs
- 48 Jobs
- 45 Jobs

Change Settings





View as: Bar Chart

Job Counts by Pla[illegible]CDPs, etc.)
Where Workers are Employed - All Jobs

	2023 Count	2023 Share
All Places (Cities, CDPs, etc.)	3,842	100.0%
Tehachapi city, CA	818	21.3%
Bakersfield city, CA	361	9.4%
Los Angeles city, CA	236	6.1%
Golden Hills CDP, CA	156	4.1%
Lancaster city, CA	140	3.6%
Mojave CDP, CA	131	3.4%
Palmdale city, CA	93	2.4%
Santa Clarita city, CA	51	1.3%
Fresno city, CA	48	1.2%
Bear Valley Springs CDP, CA	45	1.2%
All Other Locations	1,763	45.9%

Note: The U.S. Census Bureau reviewed this data product for unauthorized disclosure of confidential information and approved the disclosure avoidance practices applied to this release. CBDRB-FY21-249.

Accessibility | Information Quality | FOIA | Data Protection and Privacy Policy | U.S. Department of Commerce | Census Home
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Fehr & Peers

Memo

Date: June 22, 2026

To: Tori Edwards

From: Jolene Hayes, AICP
Logan Aspeitia

Subject: Kern County Battery Storage Facility Construction Level-of-Service Study

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Executive Summary

Fehr & Peers has completed a Level-of-Service (LOS) Study for the Battery Storage Facility (Project) in Kern County. The LOS study reviewed traffic associated with Project construction during the AM and PM peak hours and determined construction activities will degrade the surrounding transportation network below the County's acceptable standards. Feasible recommendations were made to improve intersection operations to acceptable conditions, but the Project should work with the County to determine an acceptable Traffic Management Plan (TMP) prior to construction of the Project.

The methodologies and procedures are consistent with the Kern County Traffic Engineering standards documented in *Division Nine: Standards for Traffic Engineering* (County's guidelines).

Project Description

The Project site is located at the northwest corner of the intersection of 170th Street and Rosamond Boulevard in Rosamond, CA. The site is bounded by the Southern California Whirlwind Substation to the south and undeveloped land to the west, east, and north. The proposed Project site consists of 10 parcels that comprise approximately 120 acres proposed for development of a Battery Energy Storage Facility, plus access roads. The proposed site is in the unincorporated southeastern portion of Kern County. The proposed site is currently undeveloped with a zone classification of E (Estate) as per the Rosamond-Willow Springs Specific Plan. The Project is anticipated to have up to six (6) maintenance employees on-site daily. In addition to the Battery Energy Storage Facility, the Project will include two offsite electric tie-lines and interconnection infrastructure that will be constructed, owned and operated by Southern California Edison (SCE) for interconnecting the Battery Energy Storage Facility to the adjacent whirlwind substation. Operation of the SCE facilities included in the Project are not expected to result in new trip generation.

Construction LOS Analysis

Construction of the Battery Energy Storage Facility by the Project proponent and construction of the electric tie-line and interconnection by Southern California Edison would overlap. Construction activities are anticipated to begin in 2027 and last for up to approximately two years, with peak construction activity occurring in 2028. Construction operations will occur on weekdays between 6:00 AM and 5:00 PM.

Study Area

The study area for the LOS assessment was determined based on the construction trip generation estimates (discussed in a later section) and was verified with Kern County staff. The following two intersections were included as study locations:

- 170th Street and Rosamond Boulevard
- 170th Street and Avenue A

Analysis Scenarios

Fehr & Peers analyzed AM and PM peak hour intersection operations at the previously identified study locations under the following scenarios:

- Existing (2026) – based on traffic counts that were collected in May 2026
- Opening Year (2028) No Project Construction – 2028 forecasts were developed using a growth rate of 2% per year and include traffic associated with construction of adjacent land use development projects
- Opening Year (2028) Plus Project Construction – construction traffic generated by the Project added to the Opening Year (2028) No Project Construction traffic forecasts

Intersection Analysis Methodology

Intersection operating conditions were evaluated using the Transportation Research Board (TRB) *Highway Capacity Manual* (HCM) *7th Edition* methodology, which is considered the state-of-the practice methodology for evaluating intersection operations.

The HCM 7th Edition methodology for signalized, All Way Stop Controlled (AWSC), and roundabout controlled intersections estimates the average control delay for vehicles at intersections. For Side Street Stop Controlled (SSSC) and Two-Way Stop Controlled (TWSC) intersections, HCM 7th Edition methodology reports the worst lane delay. After the quantitative delay estimates are complete, the methodology assigns a qualitative letter grade that represents the operations of the intersection. These grades range from level of service (LOS) A (minimal delay) to LOS F (excessive congestion). LOS E represents at-capacity operations. Descriptions of the LOS letter grades for signalized and unsignalized intersections are provided in **Table 1**.

Fehr & Peers performed the intersection operations for all study locations using the latest version of the Synchro analysis software, Synchro 12, which applies the methodologies outlined in the HCM 7th Edition.

Table 1: Intersection LOS Grades

Level of Service	Description	Signalized, AWSC, and Roundabout Delay (Seconds)	SSSC (Seconds)
A	Operations with very low delay occurring with favorable progression and/or short cycle length	≤ 10.0	≤ 10.0
B	Operations with low delay occurring with good progression and/or short cycle lengths	> 10.0 to 20.0	> 10.0 to 15.0
C	Operations with average delays resulting from fair progression and/or longer cycle lengths. Individual cycle failures begin to appear	> 20.0 to 35.0	> 15.0 to 25.0
D	Operations with longer delays due to a combination of unfavorable progression, long cycle lengths, or high V/C ratios. Many vehicles stop and individual cycle failures are noticeable	> 35.0 to 55.0	> 25.0 to 35.0
E	Operations with high delay values indicating poor progression, long cycle lengths, and high V/C ratios. Individual cycle failures are frequent occurrences	> 55.0 to 80.0	> 35.0 to 50.0
F	Operation with delays unacceptable to most drivers occurring due to over saturation, poor progression, or very long cycle lengths	> 80.0	> 50.0

Source: Highway Capacity Manual 7th Edition (Transportation Research Board, 2022).

Project Construction Characteristics

Construction traffic associated with the Project was estimated using a three-step process:

1. **Trip Generation** – The *amount* of construction traffic entering/exiting the Project site was estimated
2. **Trip Distribution** – The *direction* construction trips would travel to approach and depart the site was projected
3. **Trip Assignment** – Construction trips were then *assigned* to specific roadway segments and intersection turning movements

Trip Generation Estimates

Project construction worker estimates were provided by the applicant and are shown below. The worker estimates account for construction of all components of the Project, including the Battery Energy Storage Facility, tie-lines, and interconnection.

- Peak construction activity:
  - 220 daily workers (200 onsite; 20 Southern California Edison [SCE])
  - 60 daily deliveries (55 onsite; 5 SCE)
- Average construction activity:
  - 114 daily workers (100 onsite; 14 SCE)
  - 35 daily deliveries (34 onsite; 1 SCE)

The construction worker estimates were used to generate daily and AM and PM peak hour peak and average construction trip estimates using the following assumptions:

- All workers show up to the site before 6:00 AM, which is when construction work begins.
- All workers leave the site after 5:00 PM, which is when construction work ends.
- Deliveries are being made uniformly throughout the day while construction operations are ongoing.

Note, peak hour is defined as the hour during the morning and evening when traffic on adjacent roads is the highest. The AM and PM peak hours typically occur from 7:00AM–9:00AM and 4:00PM–6:00PM, respectively. Since construction operations begin before the AM peak period, only delivery trips are anticipated to occur during the AM peak hour. Alternatively, construction ends during the PM peak period. All worker commute trips are anticipated to occur during the PM peak hour.

Peak construction trip generation estimates are provided in **Tables 2** and **4**, and average construction trip generation estimates are provided in **Tables 3** and **5**. Since the peak construction trip generation estimates are higher than the average construction trip generation estimates, they were used in the LOS analysis to analyze worst-case Project construction conditions.

Table 2: Peak Construction Daily Trip Generation Estimates

Peak Construction Operations – Daily Trip Gen			
Type	**In**	**Out**	**Total**
Workers	220	220	440
Deliveries	60	60	120
Total	**280**	**280**	**560**

Note(s):
1. Estimated workers provided by Project applicant.
2. All workers were assumed to commute alone to the site.

Source: Fehr & Peers, 2026.

Table 3: Average Construction Daily Trip Generation Estimates

Average Construction Operations – Daily Trip Gen			
Type	**In**	**Out**	**Total**
Workers	114	114	228
Deliveries	35	35	70
Total	**149**	**149**	**298**

Note(s):
1. Estimated workers provided by Project applicant.
2. All workers were assumed to commute alone to the site.

Source: Fehr & Peers, 2026.

Table 4: Peak Construction AM and PM Peak Hour Trip Generation Estimates

Type	AM Peak Hour			PM Peak Hour		
	In	Out	Total	In	Out	Total
Workers[1]	–	–	–	–	220	220
Deliveries[2]	6	6	12	–	–	–
Total	**6**	**6**	**12**	**–**	**220**	**220**

Note:
1. All workers are assumed to arrive prior to the AM peak hour and depart during the PM peak hour.
2. Deliveries are anticipated to occur uniformly throughout the day during construction operations.

Source: Fehr & Peers, 2026.

Table 5: Average Construction AM and PM Peak Hour Trip Generation Estimates

Type	AM Peak Hour			PM Peak Hour		
	In	Out	Total	In	Out	Total
Workers[1]	–	–	–	–	114	114
Deliveries[2]	4	4	8	–	–	–
Total	**4**	**4**	**8**	**–**	**114**	**114**

Note:
1. All workers are assumed to arrive prior to the AM peak hour and depart during the PM peak hour.
2. Deliveries are anticipated to occur uniformly throughout the day during construction operations.

Source: Fehr & Peers, 2026.

Trip Distribution

Trip distribution refers to the directions of approach and departure that vehicles would use to travel to and from the Project site. Construction trip distribution is based on the origins and destinations of the construction workers and deliveries, which are currently unknown. Therefore, Fehr & Peers assumed the construction trip distribution for the Project would closely resemble the construction trip distributions of adjacent developments. Streetlight is a big data source that aggregates metadata from connected vehicles. It can be used in transportation planning applications to estimate the number of vehicles on roadways and to identify the origins and destinations of those vehicles. Fehr & Peers pulled Streetlight data for the study area on a typical Tuesday through Thursday in the summer of 2016, which overlapped with construction activities for adjacent developments. Existing roadway network characteristics, local knowledge of the study area, and professional judgement were used to refine the Project construction trip distribution, which is shown in **Figure 1**.

Trip Assignment

Project trip assignment refers to the specific route and roadway segments vehicles would take to access and leave the Project. The peak construction AM and PM peak hour trip generation estimates shown in **Table 4** were applied to the trip distribution percentages shown in **Figure 1** to estimate the AM and PM peak hour construction trip assignments, which are shown in **Figure 2**.

Traffic Volumes and Forecasts

All traffic volumes and forecasts used in the LOS analysis are shown in **Figure 2**.

Existing Traffic Volumes

Existing traffic counts were collected in May 2026 during AM peak period (7-9AM) and PM peak period (4-6PM) at the existing study locations. Counts were collected during fair weather, while school was in session, and during a typical (non-holiday) weekday. The peak hour turning movement counts are provided in **Attachment A**.

Opening Year (2028) Forecasts

Opening Year (2028) No Project Construction forecasts were developed by applying a 2% per year growth rate to the existing traffic volumes and adding traffic associated with construction of the following adjacent land use development projects:

- Keyhole Wind Facility (Keyhole project)
- Rosamond Battery Energy Storage Facility (Rosamond project)

The Keyhole project is located directly west of the Project. The *Keyhole Wind Project EIR Addendum* (2022) states the project will generate up to 166 daily, 72 AM peak hour, and 72 PM peak hour construction trips. These peak hour estimates account for 60 worker commute trips and 12 delivery trips in both peak hours. Assuming similar construction operations as the Project, all Keyhole workers will be on site before the AM peak hour of adjacent street traffic occurs. Therefore, the Keyhole AM peak hour trips were updated to only account for delivery trips.

The Rosamond project is on a 38-acre site (less than one-third the size of the Project) and is located 2.8 miles southeast of the Project on Avenue A. No trip generation data has been published for the Rosamond project, however, assuming similar peak construction activity requirements as the Project, it is assumed to generate 178 daily, 4 AM peak hour, and 70 PM peak hour construction trips.

Construction traffic associated with the Keyhole and Rosamond projects were assigned to the study area using the Project construction trip distribution assumptions.

Opening Year (2028) Plus Project Construction forecasts consist of the Opening Year (2028) No Project Construction forecasts, shown in **Figure 2**, plus the Project construction trip assignment, shown in **Figure 2**.

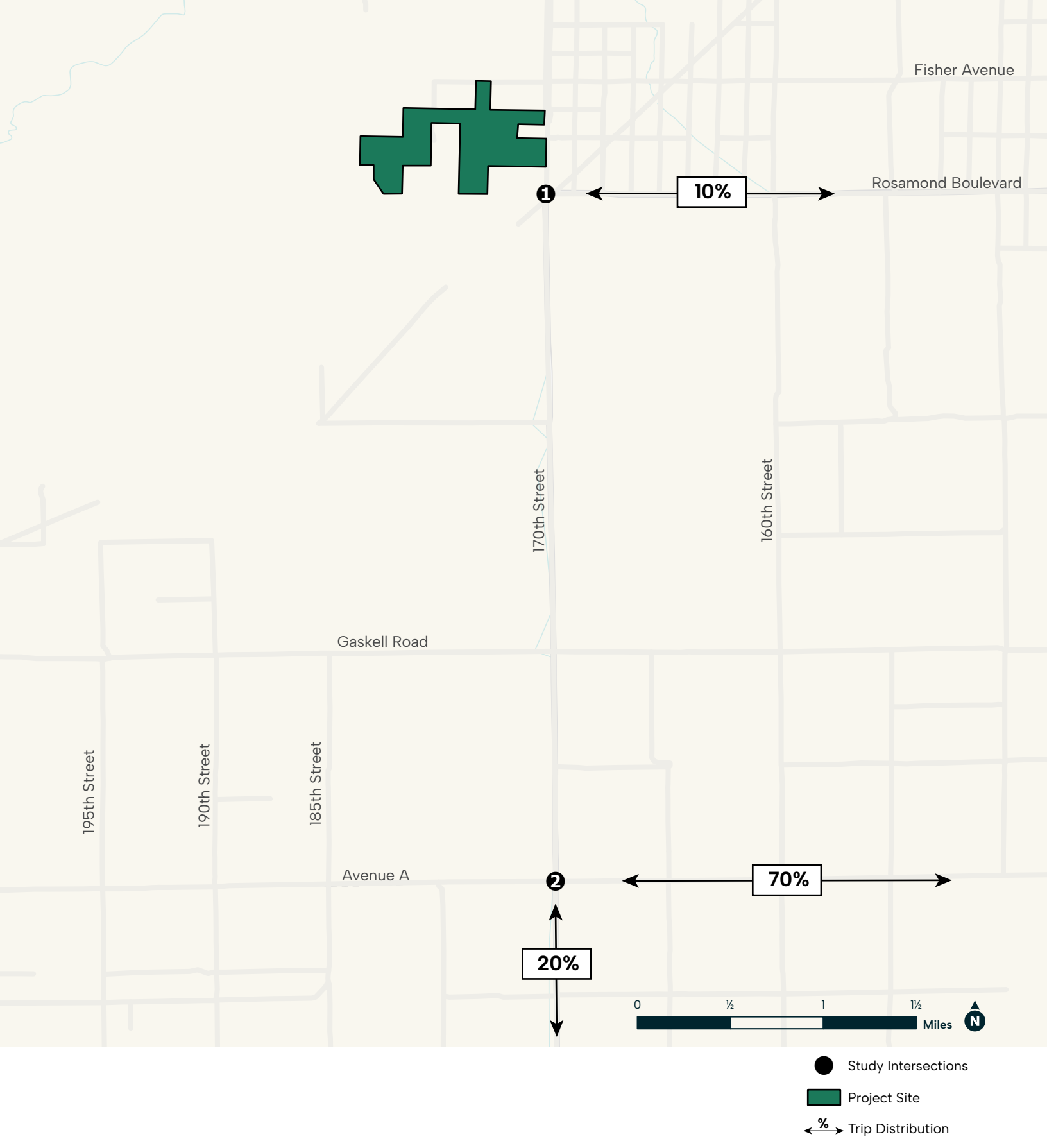
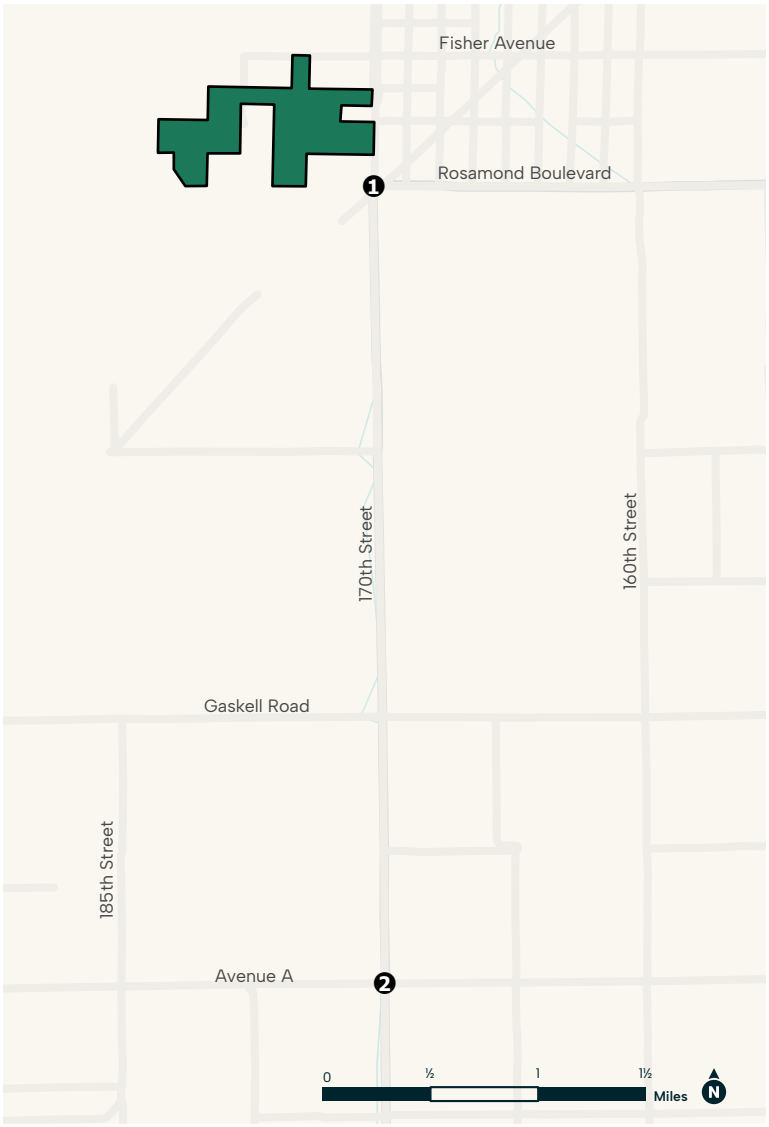


FIGURE 1

Construction Trip Distribution

Fehr & Peers



LEGEND

AM (PM) Peak Hour Traffic Volume

Lane Configuration

Stop Sign

Study Locations

Project Site

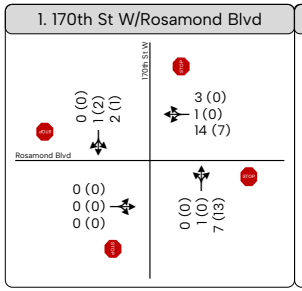
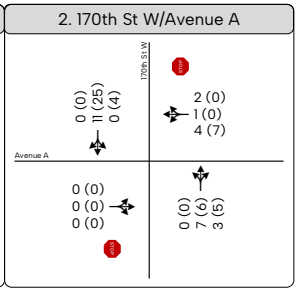
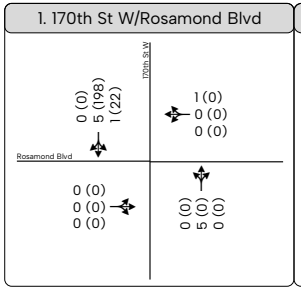
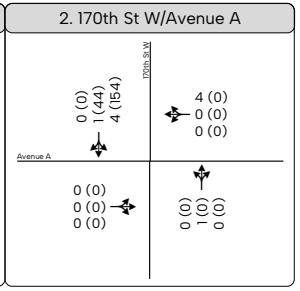
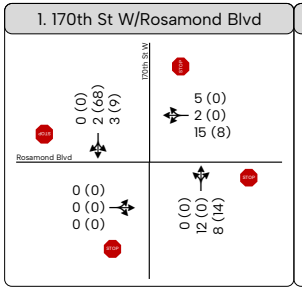
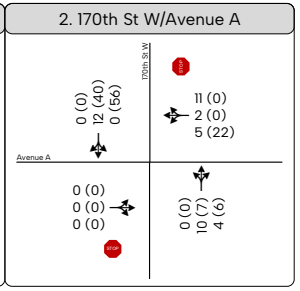
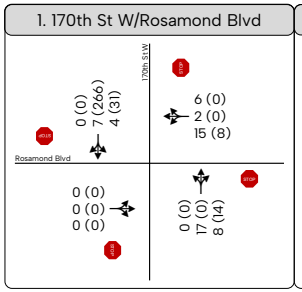
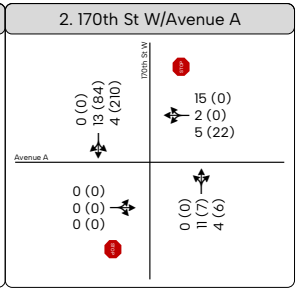
	1. 170th St W/Rosamond Blvd	2. 170th St W/Avenue A
Existing (2026)		
Project Construction Trip Assignment		
Opening Year (2028) No Project Conctruction		
Opening Year (2028) Plus Project Conctruction		

FIGURE 2

Peak Hour Traffic Volumes and Lane Configurations

Fehr & Peers

Intersection Operations

The volumes and forecasts, shown in **Figure 2**, and existing lane configurations were used to evaluate peak hour intersection operations at the study locations under all analysis scenarios. Existing Peak Hour Factors were used to analyze existing conditions and Opening Year (2028) AM peak hour conditions. The Opening Year (2028) PM PHFs were adjusted down to 0.5 to account for most construction workers leaving the Project and other development sites once the construction operations end. The LOS results are summarized in **Table 6**, and detailed LOS worksheets are provided in **Attachment B**.

As shown in **Table 6**, the Project construction activities are forecasted to degrade operations at Intersection 2 below acceptable standards (LOS D or better). The deficiency occurs during the PM peak hour when construction activity ends for the day. Fehr & Peers anticipates Project construction traffic will also degrade Intersection 2 operations prior to the AM peak hour when construction workers travel to work. Upgrading Intersection 2 to an AWSC intersection improves operations to acceptable standards. This can be achieved by placing temporary stop signs on 170th Street during the AM and PM construction worker commute periods.

A traffic management plan is recommended to be required for the Project, Keyhole project, and Rosamond project to ensure the safe movement of oversized loads, proper notification of construction activities, and overall maintenance of traffic.

Table 6: Intersection LOS

ID	Intersection	Control	Peak Hour	2026 LOS/Delay	2028 No Project Construction LOS/Delay	2028 Plus Project Construction LOS/Delay	2028 Plus Project Construction Improvements LOS/Delay[4]
1	170th St and Rosamond Blvd	AWSC	AM PM	A / 6.9 A / 6.7	A / 7.0 A / 7.7	A / 7.1 B / 14.1	- -
2	170th St and Avenue A	SSSC	AM PM	A / 8.7 (WBLR) A / 8.9 (WBLR)	A / 8.6 (WBLR) B / 11.7 (WBLR)	A / 8.7 (WBLR) **E / 38.8 (WBLR)**	A / 7.0 C / 15.1

Notes:

1. AWSC= all-way stop-controlled intersection and SSSC= side-street stop-controlled intersection.
2. AWSC delay refers to the average control delay for the entire intersection, measured in seconds per vehicle. SSSC intersections, delay refers to the worst lane delay as noted in parenthesis.
3. **Bold** represents an intersection that operates below acceptable standards.
4. Intersection 2 is analyzed as an AWSC intersection under the 2028 Plus Project Construction Improvements scenario.

Source: Fehr & Peers, 2026.

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Appendix K3
Construction Level of Service Study

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Fehr & Peers

Memo

Date: June 22, 2026

To: Tori Edwards

From: Jolene Hayes, AICP
Logan Aspeitia

Subject: Kern County Battery Storage Facility Construction Level-of-Service Study

---

Executive Summary

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Study Area

The study area for the LOS assessment was determined based on the construction trip generation estimates (discussed in a later section) and was verified with Kern County staff. The following two intersections were included as study locations:

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- 170th Street and Avenue A

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Fehr & Peers analyzed AM and PM peak hour intersection operations at the previously identified study locations under the following scenarios:

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Intersection operating conditions were evaluated using the Transportation Research Board (TRB) *Highway Capacity Manual* (HCM) *7th Edition* methodology, which is considered the state-of-the practice methodology for evaluating intersection operations.

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Source: Highway Capacity Manual 7th Edition (Transportation Research Board, 2022).

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The construction worker estimates were used to generate daily and AM and PM peak hour peak and average construction trip estimates using the following assumptions:

- All workers show up to the site before 6:00 AM, which is when construction work begins.
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Peak construction trip generation estimates are provided in **Tables 2** and **4**, and average construction trip generation estimates are provided in **Tables 3** and **5**. Since the peak construction trip generation estimates are higher than the average construction trip generation estimates, they were used in the LOS analysis to analyze worst-case Project construction conditions.

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Workers	220	220	440
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Note(s):
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Source: Fehr & Peers, 2026.

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Source: Fehr & Peers, 2026.

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	In	Out	Total	In	Out	Total
Workers[1]	–	–	–	–	220	220
Deliveries[2]	6	6	12	–	–	–
Total	**6**	**6**	**12**	**–**	**220**	**220**

Note:
1. All workers are assumed to arrive prior to the AM peak hour and depart during the PM peak hour.
2. Deliveries are anticipated to occur uniformly throughout the day during construction operations.

Source: Fehr & Peers, 2026.

Table 5: Average Construction AM and PM Peak Hour Trip Generation Estimates

Type	AM Peak Hour			PM Peak Hour		
	In	Out	Total	In	Out	Total
Workers[1]	–	–	–	–	114	114
Deliveries[2]	4	4	8	–	–	–
Total	**4**	**4**	**8**	**–**	**114**	**114**

Note:
1. All workers are assumed to arrive prior to the AM peak hour and depart during the PM peak hour.
2. Deliveries are anticipated to occur uniformly throughout the day during construction operations.

Source: Fehr & Peers, 2026.

Trip Distribution

Trip distribution refers to the directions of approach and departure that vehicles would use to travel to and from the Project site. Construction trip distribution is based on the origins and destinations of the construction workers and deliveries, which are currently unknown. Therefore, Fehr & Peers assumed the construction trip distribution for the Project would closely resemble the construction trip distributions of adjacent developments. Streetlight is a big data source that aggregates metadata from connected vehicles. It can be used in transportation planning applications to estimate the number of vehicles on roadways and to identify the origins and destinations of those vehicles. Fehr & Peers pulled Streetlight data for the study area on a typical Tuesday through Thursday in the summer of 2016, which overlapped with construction activities for adjacent developments. Existing roadway network characteristics, local knowledge of the study area, and professional judgement were used to refine the Project construction trip distribution, which is shown in **Figure 1**.

Trip Assignment

Project trip assignment refers to the specific route and roadway segments vehicles would take to access and leave the Project. The peak construction AM and PM peak hour trip generation estimates shown in **Table 4** were applied to the trip distribution percentages shown in **Figure 1** to estimate the AM and PM peak hour construction trip assignments, which are shown in **Figure 2**.

Traffic Volumes and Forecasts

All traffic volumes and forecasts used in the LOS analysis are shown in **Figure 2**.

Existing Traffic Volumes

Existing traffic counts were collected in May 2026 during AM peak period (7-9AM) and PM peak period (4-6PM) at the existing study locations. Counts were collected during fair weather, while school was in session, and during a typical (non-holiday) weekday. The peak hour turning movement counts are provided in **Attachment A**.

Opening Year (2028) Forecasts

Opening Year (2028) No Project Construction forecasts were developed by applying a 2% per year growth rate to the existing traffic volumes and adding traffic associated with construction of the following adjacent land use development projects:

- Keyhole Wind Facility (Keyhole project)
- Rosamond Battery Energy Storage Facility (Rosamond project)

The Keyhole project is located directly west of the Project. The *Keyhole Wind Project EIR Addendum* (2022) states the project will generate up to 166 daily, 72 AM peak hour, and 72 PM peak hour construction trips. These peak hour estimates account for 60 worker commute trips and 12 delivery trips in both peak hours. Assuming similar construction operations as the Project, all Keyhole workers will be on site before the AM peak hour of adjacent street traffic occurs. Therefore, the Keyhole AM peak hour trips were updated to only account for delivery trips.

The Rosamond project is on a 38-acre site (less than one-third the size of the Project) and is located 2.8 miles southeast of the Project on Avenue A. No trip generation data has been published for the Rosamond project, however, assuming similar peak construction activity requirements as the Project, it is assumed to generate 178 daily, 4 AM peak hour, and 70 PM peak hour construction trips.

Construction traffic associated with the Keyhole and Rosamond projects were assigned to the study area using the Project construction trip distribution assumptions.

Opening Year (2028) Plus Project Construction forecasts consist of the Opening Year (2028) No Project Construction forecasts, shown in **Figure 2**, plus the Project construction trip assignment, shown in **Figure 2**.

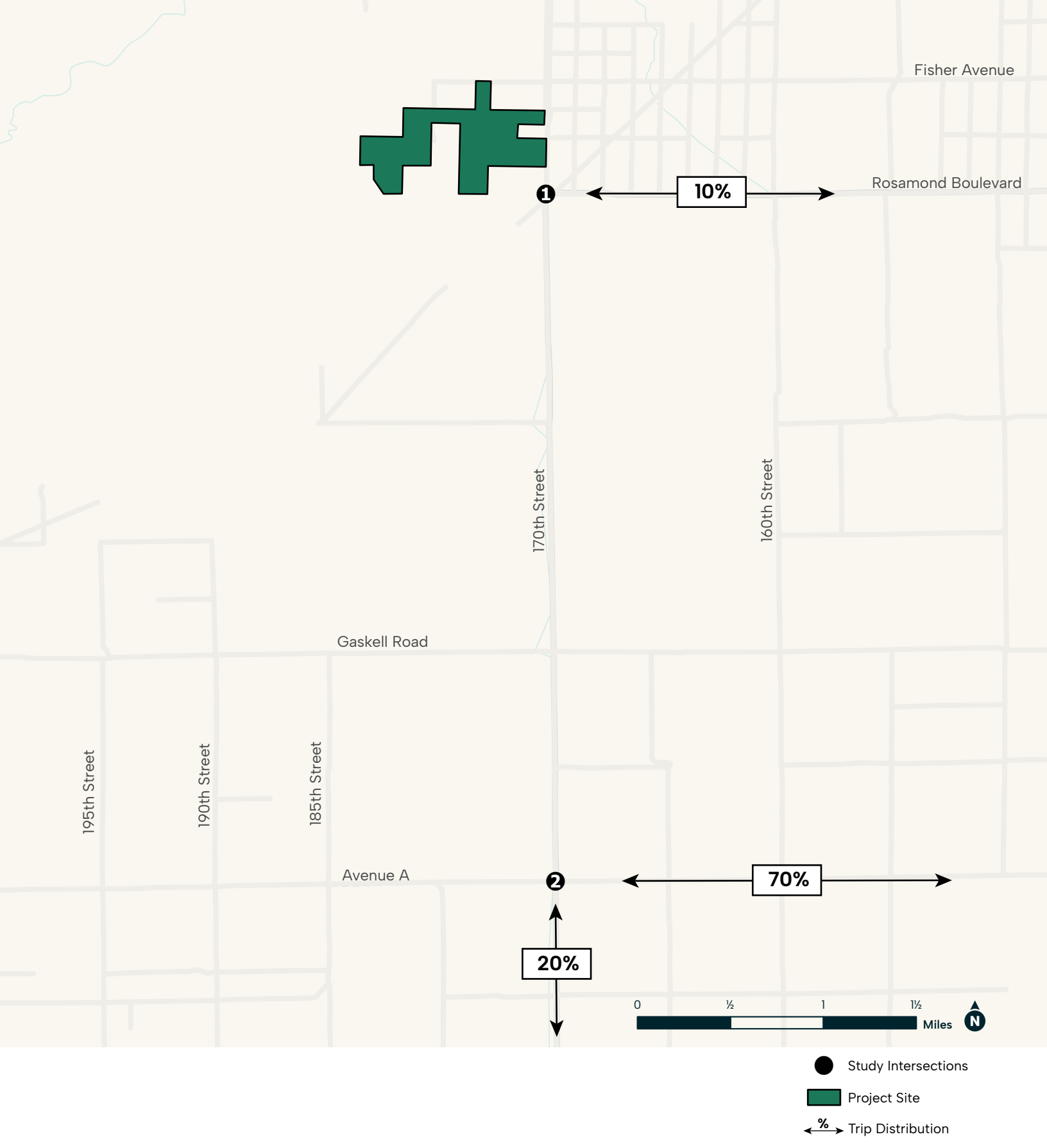
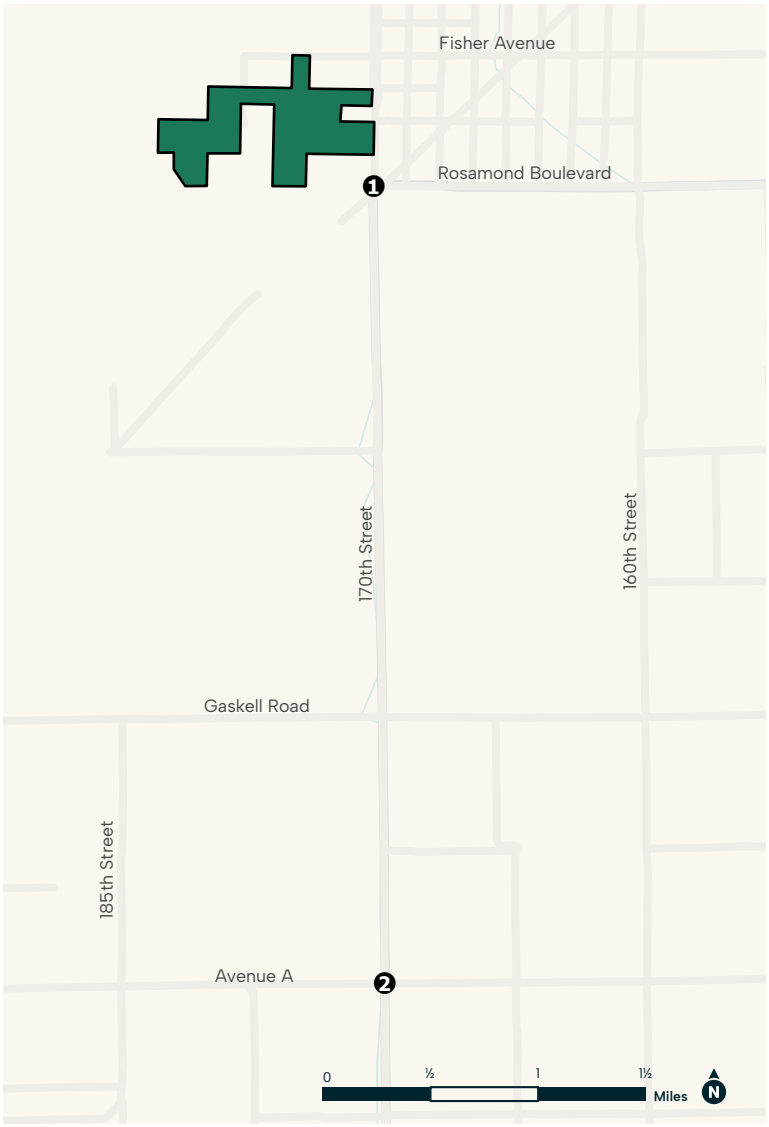


FIGURE 1

Construction Trip Distribution

Fehr & Peers



LEGEND

AM (PM) Peak Hour Traffic Volume

Lane Configuration

Stop Sign

Study Locations

Project Site

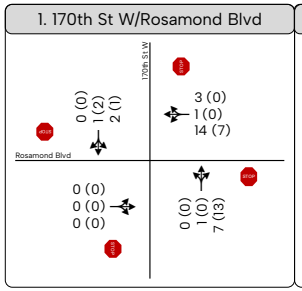
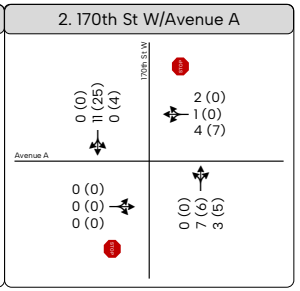
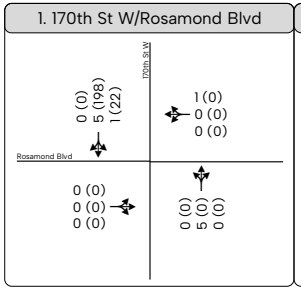
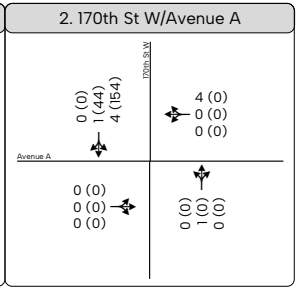
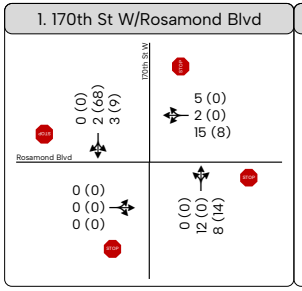
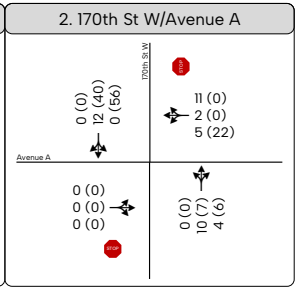
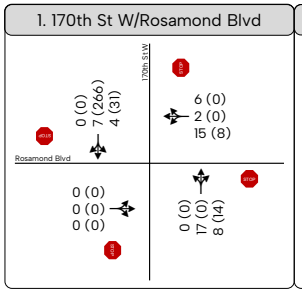
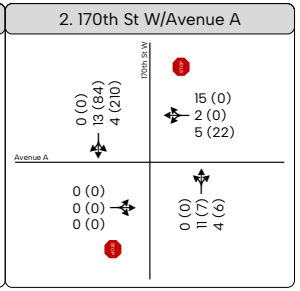
	1. 170th St W/Rosamond Blvd	2. 170th St W/Avenue A
Existing (2026)		
Project Construction Trip Assignment		
Opening Year (2028) No Project Conctruction		
Opening Year (2028) Plus Project Conctruction		

FIGURE 2

Peak Hour Traffic Volumes and Lane Configurations

Fehr & Peers

Intersection Operations

The volumes and forecasts, shown in **Figure 2**, and existing lane configurations were used to evaluate peak hour intersection operations at the study locations under all analysis scenarios. Existing Peak Hour Factors were used to analyze existing conditions and Opening Year (2028) AM peak hour conditions. The Opening Year (2028) PM PHFs were adjusted down to 0.5 to account for most construction workers leaving the Project and other development sites once the construction operations end. The LOS results are summarized in **Table 6**, and detailed LOS worksheets are provided in **Attachment B**.

As shown in **Table 6**, the Project construction activities are forecasted to degrade operations at Intersection 2 below acceptable standards (LOS D or better). The deficiency occurs during the PM peak hour when construction activity ends for the day. Fehr & Peers anticipates Project construction traffic will also degrade Intersection 2 operations prior to the AM peak hour when construction workers travel to work. Upgrading Intersection 2 to an AWSC intersection improves operations to acceptable standards. This can be achieved by placing temporary stop signs on 170th Street during the AM and PM construction worker commute periods.

A traffic management plan is recommended to be required for the Project, Keyhole project, and Rosamond project to ensure the safe movement of oversized loads, proper notification of construction activities, and overall maintenance of traffic.

Table 6: Intersection LOS

ID	Intersection	Control	Peak Hour	2026 LOS/Delay	2028 No Project Construction LOS/Delay	2028 Plus Project Construction LOS/Delay	2028 Plus Project Construction Improvements LOS/Delay[4]
1	170th St and Rosamond Blvd	AWSC	AM PM	A / 6.9 A / 6.7	A / 7.0 A / 7.7	A / 7.1 B / 14.1	- -
2	170th St and Avenue A	SSSC	AM PM	A / 8.7 (WBLR) A / 8.9 (WBLR)	A / 8.6 (WBLR) B / 11.7 (WBLR)	A / 8.7 (WBLR) **E / 38.8 (WBLR)**	A / 7.0 C / 15.1

Notes:

1. AWSC= all-way stop-controlled intersection and SSSC= side-street stop-controlled intersection.
2. AWSC delay refers to the average control delay for the entire intersection, measured in seconds per vehicle. SSSC intersections, delay refers to the worst lane delay as noted in parenthesis.
3. **Bold** represents an intersection that operates below acceptable standards.
4. Intersection 2 is analyzed as an AWSC intersection under the 2028 Plus Project Construction Improvements scenario.

Source: Fehr & Peers, 2026.

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National Data & Surveying Services

Intersection Turning Movement Count

Location: 170th St W & Rosamond Blvd
City: Rosamond
Control: 3-Way Stop(NB/SB/WB)

Project ID: 26-020198-001
Date: 5/28/2026

Data - Total

NS/EW Streets:	170th St W				170th St W				Rosamond Blvd				Rosamond Blvd				
AM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
	0	1	0	0	0	1	0	0	0	0	0	0	0	1	0	0	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
7:00 AM	0	0	1	0	0	0	0	0	0	0	0	0	2	0	2	0	5
7:15 AM	0	0	2	0	0	0	0	0	0	0	0	0	5	1	0	0	8
7:30 AM	0	1	2	0	1	1	0	0	0	0	0	0	1	0	1	0	7
7:45 AM	0	0	3	0	1	0	0	0	0	0	0	0	4	0	1	0	9
8:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	4	0	1	0	5
8:15 AM	0	0	0	0	1	0	0	0	0	0	0	0	1	0	1	0	3
8:30 AM	0	0	1	0	0	0	0	0	0	0	0	0	2	0	0	0	3
8:45 AM	0	0	1	0	1	0	0	0	0	0	0	0	1	0	0	0	3
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
TOTAL VOLUMES :	0	1	10	0	4	1	0	0	0	0	0	0	20	1	6	0	43
APPROACH %'s :	0.00%	9.09%	90.91%	0.00%	80.00%	20.00%	0.00%	0.00%					74.07%	3.70%	22.22%	0.00%	
PEAK HR :	07:15 AM - 08:15 AM																TOTAL
PEAK HR VOL :	0	1	7	0	2	1	0	0	0	0	0	0	14	1	3	0	29
PEAK HR FACTOR :	0.000	0.250	0.583	0.000	0.500	0.250	0.000	0.000	0.000	0.000	0.000	0.000	0.700	0.250	0.750	0.000	0.806
	0.667				0.375								0.750				

PM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
	0	1	0	0	0	1	0	0	0	0	0	0	0	1	0	0	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
4:00 PM	0	0	5	0	0	1	0	0	0	0	0	0	1	0	0	0	7
4:15 PM	0	0	3	0	0	1	0	0	0	0	0	0	1	0	0	0	5
4:30 PM	0	0	1	0	0	0	0	0	0	0	0	0	4	0	0	0	5
4:45 PM	0	0	4	0	1	0	0	0	0	0	0	0	1	0	0	0	6
5:00 PM	0	0	1	0	0	1	0	0	0	0	0	0	1	0	0	0	3
5:15 PM	0	0	0	0	1	1	0	0	0	0	0	0	1	0	1	0	4
5:30 PM	0	0	4	0	0	0	0	0	0	0	0	0	0	0	1	0	5
5:45 PM	0	0	1	0	0	0	0	0	0	0	0	0	1	0	0	0	2
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
TOTAL VOLUMES :	0	0	19	0	2	4	0	0	0	0	0	0	10	0	2	0	37
APPROACH %'s :	0.00%	0.00%	100.00%	0.00%	33.33%	66.67%	0.00%	0.00%					83.33%	0.00%	16.67%	0.00%	
PEAK HR :	04:00 PM - 05:00 PM																TOTAL
PEAK HR VOL :	0	0	13	0	1	2	0	0	0	0	0	0	7	0	0	0	23
PEAK HR FACTOR :	0.000	0.000	0.650	0.000	0.250	0.500	0.000	0.000	0.000	0.000	0.000	0.000	0.438	0.000	0.000	0.000	0.821
	0.650				0.750								0.438				

National Data & Surveying Services

Intersection Turning Movement Count

Location: 170th St W & W Ave A
City: Rosamond
Control: 2-Way Stop(EB/WB)

Project ID: 26-020198-002
Date: 5/28/2026

Data - Total

NS/EW Streets:	170th St W				170th St W				W Ave A				W Ave A				
AM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
	0	1	0	0	0	1	0	0	0	1	0	0	0	1	0	0	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
7:00 AM	0	1	1	0	0	0	0	0	0	0	0	0	0	0	1	0	3
7:15 AM	0	2	0	0	0	4	0	0	0	0	0	0	0	0	1	0	7
7:30 AM	0	3	1	0	0	1	0	0	0	0	0	0	2	0	1	0	8
7:45 AM	0	1	1	0	0	2	0	0	0	0	0	0	0	0	0	0	4
8:00 AM	0	1	1	0	0	4	0	0	0	0	0	0	2	1	0	0	9
8:15 AM	0	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3
8:30 AM	0	3	0	0	0	1	0	0	0	0	0	0	0	1	1	0	6
8:45 AM	0	2	0	0	2	1	0	0	0	0	0	0	1	0	1	0	7
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
TOTAL VOLUMES :	0	16	4	0	2	13	0	0	0	0	0	0	5	2	5	0	47
APPROACH %'s :	0.00%	80.00%	20.00%	0.00%	13.33%	86.67%	0.00%	0.00%					41.67%	16.67%	41.67%	0.00%	
PEAK HR :	07:15 AM - 08:15 AM																TOTAL
PEAK HR VOL :	0	7	3	0	0	11	0	0	0	0	0	0	4	1	2	0	28
PEAK HR FACTOR :	0.000	0.583	0.750	0.000	0.000	0.688	0.000	0.000	0.000	0.000	0.000	0.000	0.500	0.250	0.500	0.000	0.778
	0.625				0.688								0.583				

PM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
	0	1	0	0	0	1	0	0	0	1	0	0	0	1	0	0	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
4:00 PM	0	1	0	0	1	3	0	0	0	0	0	0	0	0	0	0	5
4:15 PM	0	1	2	0	1	7	0	0	0	0	0	0	1	0	0	0	12
4:30 PM	0	1	0	0	1	13	0	0	0	0	0	0	0	0	0	0	15
4:45 PM	0	3	3	0	0	1	0	0	0	0	0	0	4	0	0	0	11
5:00 PM	0	1	0	0	2	4	0	0	0	0	0	0	2	0	0	0	9
5:15 PM	0	0	0	0	0	1	0	0	0	0	0	0	1	0	1	0	3
5:30 PM	0	1	0	0	1	1	0	0	0	0	0	0	0	0	0	0	3
5:45 PM	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
TOTAL VOLUMES :	0	8	6	0	6	30	0	0	0	0	0	0	8	0	1	0	59
APPROACH %'s :	0.00%	57.14%	42.86%	0.00%	16.67%	83.33%	0.00%	0.00%					88.89%	0.00%	11.11%	0.00%	
PEAK HR :	04:15 PM - 05:15 PM																TOTAL
PEAK HR VOL :	0	6	5	0	4	25	0	0	0	0	0	0	7	0	0	0	47
PEAK HR FACTOR :	0.000	0.500	0.417	0.000	0.500	0.481	0.000	0.000	0.000	0.000	0.000	0.000	0.438	0.000	0.000	0.000	0.783
	0.458				0.518								0.438				

Intersection	
Intersection Delay, s/veh	6.9
Intersection LOS	A

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	0	0	0	14	1	3	0	1	7	2	1	0
Future Vol, veh/h	0	0	0	14	1	3	0	1	7	2	1	0
Peak Hour Factor	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81
Heavy Vehicles, %	3	3	3	3	3	3	3	3	3	3	3	3
Mvmt Flow	0	0	0	17	1	4	0	1	9	2	1	0
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay, s/veh	0	7.1	6.5	7.2
HCM LOS	-	A	A	A

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	0%	0%	78%	67%
Vol Thru, %	13%	100%	6%	33%
Vol Right, %	88%	0%	17%	0%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	8	0	18	3
LT Vol	0	0	14	2
Through Vol	1	0	1	1
RT Vol	7	0	3	0
Lane Flow Rate	10	0	22	4
Geometry Grp	1	1	1	1
Degree of Util (X)	0.01	0	0.025	0.004
Departure Headway (Hd)	3.468	3.991	4.03	4.131
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	1035	0	893	869
Service Time	1.478	1.999	2.034	2.142
HCM Lane V/C Ratio	0.01	0	0.025	0.005
HCM Control Delay, s/veh	6.5	7	7.1	7.2
HCM Lane LOS	A	N	A	A
HCM 95th-tile Q	0	0	0.1	0

Intersection	
Int Delay, s/veh	2.2

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	0	0	0	4	1	2	0	7	3	0	11	0
Future Vol, veh/h	0	0	0	4	1	2	0	7	3	0	11	0
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	78	78	78	78	78	78	78	78	78	78	78	78
Heavy Vehicles, %	3	3	3	3	3	3	3	3	3	3	3	3
Mvmt Flow	0	0	0	5	1	3	0	9	4	0	14	0

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	24	27	14	25	25	11	14	0	0	13	0	0
Stage 1	14	14	-	11	11	-	-	-	-	-	-	-
Stage 2	10	13	-	14	14	-	-	-	-	-	-	-
Critical Hdwy	7.13	6.53	6.23	7.13	6.53	6.23	4.13	-	-	4.13	-	-
Critical Hdwy Stg 1	6.13	5.53	-	6.13	5.53	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.13	5.53	-	6.13	5.53	-	-	-	-	-	-	-
Follow-up Hdwy	3.527	4.027	3.327	3.527	4.027	3.327	2.227	-	-	2.227	-	-
Pot Cap-1 Maneuver	985	864	1063	983	866	1067	1598	-	-	1599	-	-
Stage 1	1003	882	-	1007	884	-	-	-	-	-	-	-
Stage 2	1009	883	-	1003	882	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	981	864	1063	983	866	1067	1598	-	-	1599	-	-
Mov Cap-2 Maneuver	981	864	-	983	866	-	-	-	-	-	-	-
Stage 1	1003	882	-	1007	884	-	-	-	-	-	-	-
Stage 2	1005	883	-	1003	882	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Ctrl Dly, s/v	0	8.68	0	0
HCM LOS	A	A		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1598	-	-	-	986	1599	-	-
HCM Lane V/C Ratio	-	-	-	-	0.009	-	-	-
HCM Ctrl Dly (s/v)	0	-	-	0	8.7	0	-	-
HCM Lane LOS	A	-	-	A	A	A	-	-
HCM 95th %tile Q(veh)	0	-	-	-	0	0	-	-

Intersection	
Intersection Delay, s/veh	6.7
Intersection LOS	A

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	0	0	0	7	0	0	0	0	13	1	2	0
Future Vol, veh/h	0	0	0	7	0	0	0	0	13	1	2	0
Peak Hour Factor	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82
Heavy Vehicles, %	3	3	3	3	3	3	3	3	3	3	3	3
Mvmt Flow	0	0	0	9	0	0	0	0	16	1	2	0
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay, s/veh	0	7.2	6.4	7.1
HCM LOS	-	A	A	A

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	0%	0%	100%	33%
Vol Thru, %	0%	100%	0%	67%
Vol Right, %	100%	0%	0%	0%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	13	0	7	3
LT Vol	0	0	7	1
Through Vol	0	0	0	2
RT Vol	13	0	0	0
Lane Flow Rate	16	0	9	4
Geometry Grp	1	1	1	1
Degree of Util (X)	0.015	0	0.01	0.004
Departure Headway (Hd)	3.369	3.991	4.184	4.045
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	1067	0	860	889
Service Time	1.374	1.997	2.188	2.05
HCM Lane V/C Ratio	0.015	0	0.01	0.004
HCM Control Delay, s/veh	6.4	7	7.2	7.1
HCM Lane LOS	A	N	A	A
HCM 95th-tile Q	0	0	0	0

Intersection	
Int Delay, s/veh	1.9

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	0	0	0	7	0	0	0	6	5	4	25	0
Future Vol, veh/h	0	0	0	7	0	0	0	6	5	4	25	0
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	78	78	78	78	78	78	78	78	78	78	78	78
Heavy Vehicles, %	3	3	3	3	3	3	3	3	3	3	3	3
Mvmt Flow	0	0	0	9	0	0	0	8	6	5	32	0

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	50	56	32	53	53	11	32	0	0	14	0	0
Stage 1	42	42	-	11	11	-	-	-	-	-	-	-
Stage 2	8	14	-	42	42	-	-	-	-	-	-	-
Critical Hdwy	7.13	6.53	6.23	7.13	6.53	6.23	4.13	-	-	4.13	-	-
Critical Hdwy Stg 1	6.13	5.53	-	6.13	5.53	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.13	5.53	-	6.13	5.53	-	-	-	-	-	-	-
Follow-up Hdwy	3.527	4.027	3.327	3.527	4.027	3.327	2.227	-	-	2.227	-	-
Pot Cap-1 Maneuver	947	833	1039	943	836	1067	1574	-	-	1598	-	-
Stage 1	970	858	-	1007	884	-	-	-	-	-	-	-
Stage 2	1011	882	-	970	858	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	944	830	1039	940	833	1067	1574	-	-	1598	-	-
Mov Cap-2 Maneuver	944	830	-	940	833	-	-	-	-	-	-	-
Stage 1	966	855	-	1007	884	-	-	-	-	-	-	-
Stage 2	1011	882	-	966	855	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Ctrl Dly, s/v	0	8.87	0	1
HCM LOS	A	A		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1574	-	-	-	940	248	-	-
HCM Lane V/C Ratio	-	-	-	-	0.01	0.003	-	-
HCM Ctrl Dly (s/v)	0	-	-	0	8.9	7.3	0	-
HCM Lane LOS	A	-	-	A	A	A	A	-
HCM 95th %tile Q(veh)	0	-	-	-	0	0	-	-

Intersection	
Intersection Delay, s/veh	7
Intersection LOS	A

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	0	0	0	15	2	5	0	12	8	3	2	0
Future Vol, veh/h	0	0	0	15	2	5	0	12	8	3	2	0
Peak Hour Factor	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81
Heavy Vehicles, %	3	3	3	3	3	3	3	3	3	3	3	3
Mvmt Flow	0	0	0	19	2	6	0	15	10	4	2	0
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay, s/veh	0	7.1	6.9	7.2
HCM LOS	-	A	A	A

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	0%	0%	68%	60%
Vol Thru, %	60%	100%	9%	40%
Vol Right, %	40%	0%	23%	0%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	20	0	22	5
LT Vol	0	0	15	3
Through Vol	12	0	2	2
RT Vol	8	0	5	0
Lane Flow Rate	25	0	27	6
Geometry Grp	1	1	1	1
Degree of Util (X)	0.026	0	0.03	0.007
Departure Headway (Hd)	3.762	4.024	4.004	4.137
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	954	0	897	867
Service Time	1.776	2.041	2.015	2.152
HCM Lane V/C Ratio	0.026	0	0.03	0.007
HCM Control Delay, s/veh	6.9	7	7.1	7.2
HCM Lane LOS	A	N	A	A
HCM 95th-tile Q	0.1	0	0.1	0

Intersection	
Int Delay, s/veh	3.5

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	0	0	0	5	2	11	0	10	4	0	12	0
Future Vol, veh/h	0	0	0	5	2	11	0	10	4	0	12	0
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	78	78	78	78	78	78	78	78	78	78	78	78
Heavy Vehicles, %	3	3	3	3	3	3	3	3	3	3	3	3
Mvmt Flow	0	0	0	6	3	14	0	13	5	0	15	0

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	29	33	15	31	31	15	15	0	0	18	0	0
Stage 1	15	15	-	15	15	-	-	-	-	-	-	-
Stage 2	14	18	-	15	15	-	-	-	-	-	-	-
Critical Hdwy	7.13	6.53	6.23	7.13	6.53	6.23	4.13	-	-	4.13	-	-
Critical Hdwy Stg 1	6.13	5.53	-	6.13	5.53	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.13	5.53	-	6.13	5.53	-	-	-	-	-	-	-
Follow-up Hdwy	3.527	4.027	3.327	3.527	4.027	3.327	2.227	-	-	2.227	-	-
Pot Cap-1 Maneuver	977	857	1061	975	860	1061	1596	-	-	1592	-	-
Stage 1	1002	881	-	1002	881	-	-	-	-	-	-	-
Stage 2	1003	878	-	1002	881	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	961	857	1061	975	860	1061	1596	-	-	1592	-	-
Mov Cap-2 Maneuver	961	857	-	975	860	-	-	-	-	-	-	-
Stage 1	1002	881	-	1002	881	-	-	-	-	-	-	-
Stage 2	987	878	-	1002	881	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Ctrl Dly, s/v	0	8.65	0	0
HCM LOS	A	A		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1596	-	-	-	1010	1592	-	-
HCM Lane V/C Ratio	-	-	-	-	0.023	-	-	-
HCM Ctrl Dly (s/v)	0	-	-	0	8.6	0	-	-
HCM Lane LOS	A	-	-	A	A	A	-	-
HCM 95th %tile Q(veh)	0	-	-	-	0.1	0	-	-

Intersection	
Intersection Delay, s/veh	7.7
Intersection LOS	A

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	0	0	0	8	0	0	0	0	14	9	68	0
Future Vol, veh/h	0	0	0	8	0	0	0	0	14	9	68	0
Peak Hour Factor	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50
Heavy Vehicles, %	3	3	3	3	3	3	3	3	3	3	3	3
Mvmt Flow	0	0	0	16	0	0	0	0	28	18	136	0
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay, s/veh	0	7.6	6.6	7.9
HCM LOS	-	A	A	A

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	0%	0%	100%	12%
Vol Thru, %	0%	100%	0%	88%
Vol Right, %	100%	0%	0%	0%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	14	0	8	77
LT Vol	0	0	8	9
Through Vol	0	0	0	68
RT Vol	14	0	0	0
Lane Flow Rate	28	0	16	154
Geometry Grp	1	1	1	1
Degree of Util (X)	0.027	0	0.02	0.172
Departure Headway (Hd)	3.493	4.279	4.466	4.023
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	1019	0	794	895
Service Time	1.534	2.356	2.537	2.037
HCM Lane V/C Ratio	0.027	0	0.02	0.172
HCM Control Delay, s/veh	6.6	7.4	7.6	7.9
HCM Lane LOS	A	N	A	A
HCM 95th-tile Q	0.1	0	0.1	0.6

Intersection	
Int Delay, s/veh	5.2

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	0	0	0	22	0	0	0	7	6	56	40	0
Future Vol, veh/h	0	0	0	22	0	0	0	7	6	56	40	0
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	50	50	50	50	50	50	50	50	50	50	50	50
Heavy Vehicles, %	3	3	3	3	3	3	3	3	3	3	3	3
Mvmt Flow	0	0	0	44	0	0	0	14	12	112	80	0

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	318	330	80	324	324	20	80	0	0	26	0	0
Stage 1	304	304	-	20	20	-	-	-	-	-	-	-
Stage 2	14	26	-	304	304	-	-	-	-	-	-	-
Critical Hdwy	7.13	6.53	6.23	7.13	6.53	6.23	4.13	-	-	4.13	-	-
Critical Hdwy Stg 1	6.13	5.53	-	6.13	5.53	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.13	5.53	-	6.13	5.53	-	-	-	-	-	-	-
Follow-up Hdwy	3.527	4.027	3.327	3.527	4.027	3.327	2.227	-	-	2.227	-	-
Pot Cap-1 Maneuver	633	588	977	627	592	1055	1512	-	-	1582	-	-
Stage 1	703	661	-	996	877	-	-	-	-	-	-	-
Stage 2	1004	872	-	703	661	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	586	544	977	581	548	1055	1512	-	-	1582	-	-
Mov Cap-2 Maneuver	586	544	-	581	548	-	-	-	-	-	-	-
Stage 1	651	612	-	996	877	-	-	-	-	-	-	-
Stage 2	1004	872	-	651	612	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Ctrl Dly, s/v	0	11.71	0	4.35
HCM LOS	A	B		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1512	-	-	-	581	1050	-	-
HCM Lane V/C Ratio	-	-	-	-	0.076	0.071	-	-
HCM Ctrl Dly (s/v)	0	-	-	0	11.7	7.4	0	-
HCM Lane LOS	A	-	-	A	B	A	A	-
HCM 95th %tile Q(veh)	0	-	-	-	0.2	0.2	-	-

Intersection	
Intersection Delay, s/veh	7.1
Intersection LOS	A

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	0	0	0	15	2	6	0	17	8	4	7	0
Future Vol, veh/h	0	0	0	15	2	6	0	17	8	4	7	0
Peak Hour Factor	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81
Heavy Vehicles, %	3	3	3	3	3	3	3	3	3	3	3	3
Mvmt Flow	0	0	0	19	2	7	0	21	10	5	9	0
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay, s/veh	0	7.2	7	7.2
HCM LOS	-	A	A	A

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	0%	0%	65%	36%
Vol Thru, %	68%	100%	9%	64%
Vol Right, %	32%	0%	26%	0%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	25	0	23	11
LT Vol	0	0	15	4
Through Vol	17	0	2	7
RT Vol	8	0	6	0
Lane Flow Rate	31	0	28	14
Geometry Grp	1	1	1	1
Degree of Util (X)	0.033	0	0.032	0.015
Departure Headway (Hd)	3.818	4.048	4.001	4.096
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	939	0	896	875
Service Time	1.835	2.072	2.018	2.115
HCM Lane V/C Ratio	0.033	0	0.031	0.016
HCM Control Delay, s/veh	7	7.1	7.2	7.2
HCM Lane LOS	A	N	A	A
HCM 95th-tile Q	0.1	0	0.1	0

Intersection	
Int Delay, s/veh	4.1

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	0	0	0	5	2	15	0	11	4	4	13	0
Future Vol, veh/h	0	0	0	5	2	15	0	11	4	4	13	0
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	78	78	78	78	78	78	78	78	78	78	78	78
Heavy Vehicles, %	3	3	3	3	3	3	3	3	3	3	3	3
Mvmt Flow	0	0	0	6	3	19	0	14	5	5	17	0

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	42	46	17	44	44	17	17	0	0	19	0	0
Stage 1	27	27	-	17	17	-	-	-	-	-	-	-
Stage 2	15	19	-	27	27	-	-	-	-	-	-	-
Critical Hdwy	7.13	6.53	6.23	7.13	6.53	6.23	4.13	-	-	4.13	-	-
Critical Hdwy Stg 1	6.13	5.53	-	6.13	5.53	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.13	5.53	-	6.13	5.53	-	-	-	-	-	-	-
Follow-up Hdwy	3.527	4.027	3.327	3.527	4.027	3.327	2.227	-	-	2.227	-	-
Pot Cap-1 Maneuver	958	844	1059	956	846	1059	1594	-	-	1591	-	-
Stage 1	988	871	-	1000	880	-	-	-	-	-	-	-
Stage 2	1002	877	-	988	871	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	935	841	1059	953	844	1059	1594	-	-	1591	-	-
Mov Cap-2 Maneuver	935	841	-	953	844	-	-	-	-	-	-	-
Stage 1	985	868	-	1000	880	-	-	-	-	-	-	-
Stage 2	981	877	-	985	868	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Ctrl Dly, s/v	0	8.67	0	1.71
HCM LOS	A	A		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1594	-	-	-	1010	424	-	-
HCM Lane V/C Ratio	-	-	-	-	0.028	0.003	-	-
HCM Ctrl Dly (s/v)	0	-	-	0	8.7	7.3	0	-
HCM Lane LOS	A	-	-	A	A	A	A	-
HCM 95th %tile Q(veh)	0	-	-	-	0.1	0	-	-

Intersection	
Intersection Delay, s/veh	14.1
Intersection LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	0	0	0	8	0	0	0	0	14	31	266	0
Future Vol, veh/h	0	0	0	8	0	0	0	0	14	31	266	0
Peak Hour Factor	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50
Heavy Vehicles, %	3	3	3	3	3	3	3	3	3	3	3	3
Mvmt Flow	0	0	0	16	0	0	0	0	28	62	532	0
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay, s/veh	0	8.6	7.1	14.6
HCM LOS	-	A	A	B

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	0%	0%	100%	10%
Vol Thru, %	0%	100%	0%	90%
Vol Right, %	100%	0%	0%	0%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	14	0	8	297
LT Vol	0	0	8	31
Through Vol	0	0	0	266
RT Vol	14	0	0	0
Lane Flow Rate	28	0	16	594
Geometry Grp	1	1	1	1
Degree of Util (X)	0.031	0	0.024	0.663
Departure Headway (Hd)	3.951	5.323	5.494	4.02
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	911	0	655	897
Service Time	1.954	3.325	3.495	2.045
HCM Lane V/C Ratio	0.031	0	0.024	0.662
HCM Control Delay, s/veh	7.1	8.3	8.6	14.6
HCM Lane LOS	A	N	A	B
HCM 95th-tile Q	0.1	0	0.1	5.2

Intersection	
Int Delay, s/veh	7.8

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	0	0	0	22	0	0	0	7	6	210	84	0
Future Vol, veh/h	0	0	0	22	0	0	0	7	6	210	84	0
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	50	50	50	50	50	50	50	50	50	50	50	50
Heavy Vehicles, %	3	3	3	3	3	3	3	3	3	3	3	3
Mvmt Flow	0	0	0	44	0	0	0	14	12	420	168	0

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	1022	1034	168	1028	1028	20	168	0	0	26	0	0
Stage 1	1008	1008	-	20	20	-	-	-	-	-	-	-
Stage 2	14	26	-	1008	1008	-	-	-	-	-	-	-
Critical Hdwy	7.13	6.53	6.23	7.13	6.53	6.23	4.13	-	-	4.13	-	-
Critical Hdwy Stg 1	6.13	5.53	-	6.13	5.53	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.13	5.53	-	6.13	5.53	-	-	-	-	-	-	-
Follow-up Hdwy	3.527	4.027	3.327	3.527	4.027	3.327	2.227	-	-	2.227	-	-
Pot Cap-1 Maneuver	213	231	874	211	233	1055	1404	-	-	1582	-	-
Stage 1	289	317	-	996	877	-	-	-	-	-	-	-
Stage 2	1004	872	-	289	317	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	151	163	874	150	165	1055	1404	-	-	1582	-	-
Mov Cap-2 Maneuver	151	163	-	150	165	-	-	-	-	-	-	-
Stage 1	204	224	-	996	877	-	-	-	-	-	-	-
Stage 2	1004	872	-	204	224	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Ctrl Dly, s/v	0	38.82	0	5.78
HCM LOS	A	E		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1404	-	-	-	150	1286	-	-
HCM Lane V/C Ratio	-	-	-	-	0.294	0.266	-	-
HCM Ctrl Dly (s/v)	0	-	-	0	38.8	8.1	0	-
HCM Lane LOS	A	-	-	A	E	A	A	-
HCM 95th %tile Q(veh)	0	-	-	-	1.2	1.1	-	-

Intersection	
Intersection Delay, s/veh	7
Intersection LOS	A

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	0	0	0	5	2	15	0	11	4	4	13	0
Future Vol, veh/h	0	0	0	5	2	15	0	11	4	4	13	0
Peak Hour Factor	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78
Heavy Vehicles, %	3	3	3	3	3	3	3	3	3	3	3	3
Mvmt Flow	0	0	0	6	3	19	0	14	5	5	17	0
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay, s/veh	0	6.8	7	7.2
HCM LOS	-	A	A	A

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	0%	0%	23%	24%
Vol Thru, %	73%	100%	9%	76%
Vol Right, %	27%	0%	68%	0%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	15	0	22	17
LT Vol	0	0	5	4
Through Vol	11	0	2	13
RT Vol	4	0	15	0
Lane Flow Rate	19	0	28	22
Geometry Grp	1	1	1	1
Degree of Util (X)	0.021	0	0.029	0.025
Departure Headway (Hd)	3.856	4.043	3.657	4.062
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	931	0	980	884
Service Time	1.869	2.066	1.677	2.073
HCM Lane V/C Ratio	0.02	0	0.029	0.025
HCM Control Delay, s/veh	7	7.1	6.8	7.2
HCM Lane LOS	A	N	A	A
HCM 95th-tile Q	0.1	0	0.1	0.1

Intersection	
Intersection Delay, s/veh	15.1
Intersection LOS	C

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	0	0	0	22	0	0	0	7	6	210	84	0
Future Vol, veh/h	0	0	0	22	0	0	0	7	6	210	84	0
Peak Hour Factor	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50
Heavy Vehicles, %	3	3	3	3	3	3	3	3	3	3	3	3
Mvmt Flow	0	0	0	44	0	0	0	14	12	420	168	0
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay, s/veh	0	8.9	7.5	15.9
HCM LOS	-	A	A	C

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	0%	0%	100%	71%
Vol Thru, %	54%	100%	0%	29%
Vol Right, %	46%	0%	0%	0%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	13	0	22	294
LT Vol	0	0	22	210
Through Vol	7	0	0	84
RT Vol	6	0	0	0
Lane Flow Rate	26	0	44	588
Geometry Grp	1	1	1	1
Degree of Util (X)	0.032	0	0.068	0.684
Departure Headway (Hd)	4.387	5.411	5.534	4.19
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	819	0	651	853
Service Time	2.396	3.419	3.537	2.256
HCM Lane V/C Ratio	0.032	0	0.068	0.689
HCM Control Delay, s/veh	7.5	8.4	8.9	15.9
HCM Lane LOS	A	N	A	C
HCM 95th-tile Q	0.1	0	0.2	5.6

Appendix L
Water Supply Assessment Report

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Water Supply Assessment

Euismod Energy Storage Project

APRIL 2026

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Acronyms and Abbreviations

Acronym/Abbreviation	Definition
AF	acre-feet
AFY	acre-feet per year
AVGB	Antelope Valley Groundwater Basin
AVEK	Antelope Valley–East Kern Water Agency
BESS	battery energy storage system
County	Kern County
CWC	California Water Code
DWR	California Department of Water Resources
FVGB	Fremont Valley Groundwater Basin
gen-tie	generation transmission line
GPM	gallons per minute
GSA	groundwater sustainability agency
GSP	groundwater sustainability plan
GWMP	groundwater management plan
IRWMP	integrated regional water management plan
Judgment	Antelope Valley Groundwater Basin Judgment
MAF	million acre-feet
MPUD	Mojave Public Utility District
O&M	operations and maintenance
Physical Solution	Antelope Valley Groundwater Basin Physical Solution
Project	Euismod Energy Storage Project
RCSD	Rosamond Community Services District
SB	Senate Bill
SCE	Southern California Edison
SGMA	Sustainable Groundwater Management Act of 2014
SWP	State Water Project
UWMP	urban water management plan
Watermaster	Antelope Valley Watermaster
WRP	water reclamation plant
WSA	water supply assessment

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1 Introduction

1.1 Purpose of Document

The Euismod Energy Storage Project (Project) is subject to the California Environmental Quality Act requirements, with Kern County (County) acting as the lead California Environmental Quality Act agency. Senate Bill (SB) 610 requires preparation of a Water Supply Assessment (WSA) for projects that are subject to the California Environmental Quality Act and meet certain requirements. SB 610 is codified in California Water Code (CWC) Division 6, Part 2.10 (Sections 10910–10915). The primary purpose of SB 610 is to improve the linkage between water and land use planning by ensuring greater communication between water providers and local planning agencies, and to ensure that land use decisions for certain large development projects are fully informed as to whether a sufficient water supply is available to meet project demands.

The Project satisfies the statutory definition of a "project" for the purpose of determining SB 610 applicability because it is an industrial project occupying more than 40 acres of land, per CWC Section 10912(a)(5). In accordance with SB 610, this WSA examines the availability of the identified water supply during normal, single dry, and multiple dry years over a 20-year projection, accounting for the projected water demand of the Project in addition to other existing and planned future uses of the identified water supply. The lead agency will make an independent determination as to whether there is adequate water supply for the proposed Project, having considered the entire administrative record.

1.2 Project Location and Description

The Project will be located on approximately 120 acres of land in unincorporated Kern County, California approximately 6 miles north of State Route 138, approximately 15 miles west of State Route 14, and approximately 8 miles west of the unincorporated area of Rosamond (Figure 1). The Project site is bound to the south by Rosamond Boulevard and the Southern California Edison (SCE) Whirlwind Substation, and to the north, east, and west by undeveloped land. The Project site lies within the Fairmont Butte U.S. Geological Survey 7.5-minute quadrangle, and Township 9 North, Range 15 West, Section 14 of the Public Land Survey System (Figure 1). The topography of the Project site generally consists of flat land that gently slopes from northwest to southeast with the highest point along the northwestern boundaries of the Project site at approximately 2,810 feet above mean sea level and the lowest point along the southwestern boundary of the Project site at approximately 2,775 feet above mean sea level (Google Earth 2026).

The Project includes the construction, operation, and eventual decommissioning of a 1,150-megawatt battery energy storage system (BESS) including collector substations, inverters, collector lines, fencing, access roads, a supervisory control and data acquisition system, operations and maintenance (O&M) building, and other ancillary facilities and equipment. The Project also includes an overhead generation interconnection transmission line (gen-tie) to interconnect the BESS into the Whirlwind Substation located south of the Project site. Euismod Project LLC, Euismod Project I LLC, and Euismod Project II LLC propose to construct, operate, and decommission the facility for an anticipated 35-year operational life of the proposed Project.

1.3 Water Supply Assessment Applicability

SB 610 amended CWC Sections 10910 and 10912 to create a direct relationship between water supply and land use. SB 610 establishes the legal framework for assessing the sufficiency of water supply for new developments that qualify as a "project." Per CWC Section 10912(a), a "project" means any of the following:

- Proposed residential development of more than 500 dwelling units.
- Proposed shopping center or business establishment employing more than 1,000 persons or having more than 500,000 square feet of floor space.
- Proposed commercial office building employing more than 1,000 persons or having more than 250,000 square feet of floor space.
- Proposed hotel or motel or both, having more than 500 rooms.
- 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.
- Proposed mixed-use project that includes one or more of the above components.
- Proposed project that would demand an amount of water equivalent to, or greater than, the amount of water required by a 500 dwelling unit project.

The CWC, as amended by SB 610, requires that a WSA include a discussion of whether:

- The project will be served by a public water system (CWC Section 10910(b)).
- The project water demand is included in a current Urban Water Management Plan (CWC Section 10910(c)).
- There are any existing water supply entitlements, water rights, or water service contracts relevant to the identified water supply for the proposed project (CWC Section 10910(d)).
- Groundwater will serve as a source of water supply for the project (CWC Section 10910(f)).

Based on the characterization of these water supplies and constraints, the WSA is required to provide a discussion of whether the total projected water supplies available during normal, single dry, and multiple dry years during a 20-year projection will meet the projected water demand associated with the proposed Project, in addition to existing and planned future uses, including agricultural and manufacturing uses (CWC Section 10910(c)(3) and (4)).

As an industrial project that covers more than 40 acres of land, the Euismod Energy Storage Project qualifies as a "project" under CWC Section 10912(a), and this WSA has been prepared in accordance with SB 610.

1.3.1 Identification of a Public Water System

Section 10912 of the CWC defines a "public water system" as a system that has 3,000 or more service connections and provides piped water to the public for human consumption.

The Project site is located within Antelope Valley – East Kern Water Agency's (AVEK) service area (Figure 2). AVEK, with an annual State Water Project (SWP) entitlement of 144,844 acre-feet per year (AFY), is the third largest SWP contractor (AVEK 2021).[1] The actual annual allocation varies based on climatic conditions (wet or dry year). The

[1] One acre-foot is equal to 325,851 gallons.

imported raw water comes from the Sacramento River/San Joaquin Delta and is treated at one of four treatment plants. AVEK, while primarily a wholesale water agency, is defined by the statute (CWC Section 10912(c)(3)) to be a "public water system" and is evaluated as a potential source of Project supply in this WSA.

There are no other public water systems located in the immediate vicinity of the Project site. The nearest water system is Winterhaven Mobile Estates, located approximately 6 miles south of the Project site (Figure 2). However, Winterhaven Mobile Estates does not meet the CWC Section 10912 definition of a public water system. Winterhaven Mobile Estates currently serves a population of approximately 56 people with 19 residential connections and one commercial connection. Winterhaven Mobile Estates is supplied by groundwater from a single well (SWRCB 2026a). Water from Winterhaven Mobile Estates is not considered a potential source of Project supply due to its small size and reliance solely on groundwater.

The nearest public water system is Rosamond Community Services District (RCSD), located approximately 11 miles east of the Project site (Figure 2). RCSD currently serves a population of approximately 17,711 people with 5,150 residential connections and 143 commercial connections. RCSD purchases water from AVEK and pumps groundwater from two wells (SWRCB 2026b). RCSD has a filling station for water trucks located at 35th Street West and Felsite Avenue in Rosamond, California. Water is available for a rate of 1 cent per gallon (Houghton pers. comm. 2026). Water from RCSD is evaluated as a potential source of Project supply in this WSA.

Another water system that does not meet the CWC Section 10912 definition of a public water system but is evaluated as a potential source of Project supply in this WSA is Mojave Public Utility District (MPUD), located approximately 16 miles east of the Project site (Figure 2). MPUD is considered a potential source of Project supply because MPUD offers metered accounts for construction projects to fill water trucks from hydrants within their service area and because MPUD receives SWP water from AVEK. Final water hydrant location is determined by MPUD after the application for construction water permit is received (Appendix A). MPUD serves a population of approximately 4,699 people with 989 residential connections, 199 commercial connections, and 13 industrial connections. MPUD purchases water from AVEK and pumps groundwater from six wells (SWRCB 2026c).

Other nearby water systems that could potentially serve the Project because they receive SWP water from AVEK include Los Angeles County Waterworks District No. 40, Lake Elizabeth Mutual Water Company, and California Water Service Company – Leona Valley, among others.

Because AVEK and RCSD serve more than 3,000 urban water connections or provide more than 3,000 acre feet (AF) of water annually, both water suppliers are required to prepare an Urban Water Management Plans (UWMP) which are described in more detail in Sections 1.3.2, 5, and 6 of this WSA.

1.3.2 Urban Water Management Plan Coverage

UWMPs are prepared by California's urban water suppliers to support long-term resource planning and ensure adequate water supplies. UWMPs must be updated and submitted to the Department of Water Resources (DWR) every five years for review and approval. DWR has identified the UWMP as a foundational document in the preparation of a WSA, noting that a thorough UWMP can provide the required information to fulfill the standards set forth by SB 610. UWMPs are required to assess the reliability of water sources over a 20-year period under normal-year, dry-year, and multiple dry-year scenarios. These are the same requirements of a WSA, as specified by SB 610. A WSA may also rely on additional water supply data beyond the information in the UWMP.

The Project site is located within AVEK's service area, which is a wholesale water supplier of SWP water to the region. AVEK prepared an UWMP in 2020 that accounts for future growth within its service area. Although the water demand of the Project was not explicitly accounted for in AVEK's UWMP as a standalone project, the UWMP accounts for future growth within AVEK's service area which may include development of the proposed Project (AVEK 2021). RCSD also prepared an UWMP in 2020 that accounts for future growth within its service area (RCSD 2023). Descriptions of AVEK's and RCSD's UWMPs, as well as other applicable water management plans, are included in Section 5 of this WSA, and this WSA uses data provided in the UWMPs, where applicable, to assess water supply availability pursuant to CWC Section 10910(c)(3).

1.3.3 Groundwater as a Component of Project Water Supply

Groundwater from an on-site well(s) is a potential source of Project water supply. The Project site overlies the Antelope Valley Groundwater Basin (AVGB), DWR Basin No. 6-044 (Figure 3). The majority of the AVGB has been adjudicated with an order to be managed by a watermaster since 2015. The AVGB was adjudicated to provide a framework to sustainably manage the basin to reverse groundwater level declines and reduce subsidence (AVWM 2025). The Project site is located within the adjudicated portion of the AVGB and is therefore bound by the judgement stipulated for the basin. The Project plans to purchase existing groundwater rights via an Adjudicated Water Rights Purchase Agreement.

In addition, groundwater from the Fremont Valley Groundwater Basin (FVGB), DWR Basin No. 6-045, sourced from a private well(s) or purchased from a local retailer such as MPUD and trucked to the Project site is a potential source of Project supply. MPUD obtains a portion of its supply from wells in the FVGB. The FVGB is designated by DWR as a low priority basin with regard to the Sustainable Groundwater Management Act (SGMA) of 2014 and is not in or projected to be in a state of overdraft. The low priority ranking is based on the low population density, low number of private and public supply wells, and lack of irrigated agriculture, among other metrics (DWR 2026a). As such, the FVGB is not required to be managed by a groundwater sustainability agency (GSA) or prepare a groundwater sustainability plan (GSP) at this time. The FVGB is also not currently adjudicated and managed by a watermaster or other oversight entity. A groundwater management plan (GWMP) has been developed by the City of California City, AVEK, MPUD, and other local and regional stakeholders to act as a pre-GSP document to facilitate the sustainable management of groundwater resources in the FVGB (Woodard & Curran 2018).

Pursuant to CWC Section 10910(f), groundwater resources in the AVGB and FVGB are described in greater detail in Sections 4 and Section 6 of this WSA.

1.3.4 Sufficiency of Supplies Over the Next 20 Years

As described in Sections 4 and 6 of this WSA, there is sufficient groundwater in the AVGB and FVGB, and SWP water from AVEK, available to supply the proposed Project during normal, single dry, and multiple dry years during a 20-year projection, in addition to existing and planned future uses of the identified water supply (CWC Section 10910(c)(3) and (4)).

2 Water Demand

2.1 Existing Water Demand

The majority of the Project site has historically remained vacant and undeveloped. There is no known information regarding past or current water use at the Project site.

2.2 Project Water Demand

The Project consists of the construction, operation, and eventual repower or decommissioning of a 1,150-megawatt BESS facility. The primary components of the Project include a BESS facility, an O&M building, a Project substation, a 220-kilovolt overhead gen-tie line, access roads, fencing, and interconnection facilities with the existing SCE owned and operated Whirlwind Substation. It is anticipated that up to six full-time staff will operate the facility.

Water for construction and O&M will be sourced from a new on-site well(s), from off-site well(s) located in the FVGB and delivered to the site via water trucks, from a local water retailer and delivered to the site via water trucks, or a combination of these sources. The Project is anticipated to require approximately 55 AF for construction over an approximate two-year period (27.5 AFY), assuming that BESS facility and gen-tie will be constructed simultaneously, and 3 AFY or less for operation (Euismod Project LLC 2025; Traficanti pers. comm. 2026). Based on this, the total Project water demand is estimated to be approximately 109 AF over the 20-year, SB 610 planning horizon and 215 AF over the life of the Project (38-years). The estimated water demand for each phase of the Project is provided in Table 1.

Table 1. Project Water Demand

Phase / Activity	Duration	Annual Water Demand (AFY)	Total Water Demand (AF)
Construction	2 years	27.5	55
Operation and Maintenance	35 years	3	105
Decommissioning	1 year	55	55
		Total	**215**

Source: Euismod Project LLC 2025; Traficanti pers. comm. 2026.
Notes: AF = acre-feet; AFY = acre-feet per year.

2.2.1 Construction Water Demand

Construction of the Project is anticipated to be completed in two years. Construction will include site preparation, grading, building, road improvements, and testing. Water for grading and dust suppression are expected to be the primary water demands during construction and are estimated to require approximately 27.5 AFY and 55 AF total (Euismod Project LLC 2025; Traficanti pers. comm. 2026). The estimated Project construction water demand of 55 AF provides a conservative estimate of construction water demand appropriate for long-term planning purposes. The annual demand estimate of 27.5 AFY assumes construction will be completed in two years, however, construction could potentially extend over a longer period in which case the annual water demand would be less.

2.2.2 Operation and Maintenance Water Demand

Once construction is complete, the operational water demand is estimated to be 3 AFY or less (Euismod Project LLC 2025; Traficanti pers. comm. 2026). Water demands during operation will include water for the O&M facility, landscaping, fire suppression, and various other uses. Water for the O&M facility and fire suppression is estimated to be approximately 0.06 AFY (Table 2). This estimate is based on the sanitary demands of six employees at 10 gallons per employee per shift (0.05 AFY),[2] and a one-time demand to fill one or more water storage tanks totaling up to 30,000 gallons (less than approximately 0.01 AFY over 35-years) for fire supply (EPA 2023).[3] Additional O&M water demands may include landscaping and other various uses, so for long-term planning purposes the total O&M demand was rounded up to 3 AFY (Table 2).

Table 2. Project Operation and Maintenance Water Demand

Activity	Annual Water Demand (AFY)	Total Water Demand (AF)
Sanitary/Drinking Water for Six Employees	0.05	1.75
Fire Flow	<0.01	0.25
Landscaping/Other Uses	2.94	102.9
Total	**3**	**105**

Source: Euismod Project LLC 2025; Traficanti pers. comm. 2026.
Notes: AF = acre-feet; AFY = acre-feet per year; total water demand reflects estimated 35-year operational life.

2.2.3 Decommissioning Water Demand

The Project's operational life is expected to be 35 years. At the end of that time, the BESS would be recycled following a pre-determined Decommissioning Plan. Because the water requirements for decommissioning is presently unknown, water demand is conservatively assumed to equal the demand for Project construction of 55 AF. Decommissioning is anticipated to last approximately one-year and require a total of 55 AF.

2.2.4 Total Estimated Project Water Demand

Table 3 provides an amortization of the Project's water demand over the estimated Project life cycle (38 years) and over the SB 610 regulatory 20-year planning horizon. The total amortized annual water demand is based on the construction, O&M, and decommissioning water demands presented in Table 1. The decommissioning water demand was not included in the 20-year amortization because the Project is expected to be operational for 35 years after construction. The total amortized annual water demand over the SB 610 planning horizon is approximately 5.5 AFY and over the life of the Project is approximately 5.7 AFY (Table 3).

Table 3. Project Amortized Water Demand

WSA 20-year Amortization	Project Life 38-Year Amortization
5.5 AFY[a]	5.7 AFY[b]

[2] Six employees * 10 gal/employee per shift * 260 shifts/year = 15,600 gals per year or 0.05 AFY.
[3] It is assumed that the 30,000-gallon fire flow demand will occur at the start of the Project and will not require subsequent replenishment throughout the operation of the Project. Amortizing the 30,000-gallon demand over the 35-year operational period leads to an estimated annual demand of less than 0.01 AFY.

Notes: WSA = Water Supply Assessment, as defined by Senate Bill 610; AFY = acre-feet per year.

[a] This amortized volume includes two years of construction water demand (55 AF total) and 18 years of operation water demand (54 AF) for a total demand of 109 AF over 20 years.

[b] This amortized volume includes two years of construction water demand (55 AF total), 35 years of operation water demand (105 AF), and one year of decommissioning water demand (55 AF) for a total of 215 AF over 38 years.

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3 Climate

The Project site is characterized by a warm-summer Mediterranean climate, with temperatures averaging between 45 to 80 °F (WRCC 2026). The average maximum temperature in the Project vicinity, based on temperature data recorded at the Fairmont, CA weather station, for the period from 1906 to 2026 ranges from 54 to 91 °F, and the average minimum temperature ranges from 36 to 68 °F (WRCC 2026). Maximum temperatures in the summer typically reach the low-100s °F and minimum temperatures in the winter reach the mid-20s °F. The average annual precipitation at the Fairmont, CA weather station for the period from 1909 to 2026 is approximately 15 inches (WRCC 2026).

Projected future climate conditions in California indicate gradual warming, with an increase in extremely hot days relative to historical norms, and greater year-to-year precipitation variability. Warming of approximately 3.6°F to 12.6°F is expected by the end of the century (Pierce et al. 2018). Additionally, there will be fewer wet days, but increased precipitation on the wettest days (i.e., wetter winters and drier spring and autumn), resulting in modest annual precipitation changes but an increase in the frequency of dry years (Pierce et al. 2018).

The influence of climate on water supply availability is considered in Section 6 when assessing whether the total projected water supplies available during normal, single dry, and multiple dry years during a 20-year projection will meet the projected water demand of the proposed Project, in addition to existing and planned future uses.

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4 Water Resources

4.1 Surface Water

The Project site is located within the Antelope-Fremont Valleys watershed (Figure 4). The Antelope-Fremont Valleys watershed (Hydrologic Unit Code 18090206) is a large, closed basin in the western Mojave Desert with no outlet to the ocean. The watershed straddles the Los Angeles–Kern County line and drains a total of 3,387 square miles. Approximately 80% of the watershed is characterized by a low to moderate slopes of 0–7%. The remaining 20% consists of foothills and rugged mountains, some of which reach up to 3,600 feet above mean sea level in elevation. The floor of the Antelope-Fremont Valleys watershed generally lacks defined natural channels outside of the foothills and consequently is subject to unpredictable sheet flow patterns (AVRWMG 2019).

All water that enters the Antelope-Fremont Valleys watershed either infiltrates into the underlying groundwater basin or flows toward three playa lakes (or dry lakes) located near the center of the watershed—Rogers, Rosamond, and Buckhorn dry lakes. A playa lake is formed when rain fills a playa, or small, round depression in the surface of the ground. Playa lakes are usually endorheic, which means they have no outflow of water. These playa lakes are usually dry, and they only receive water following intense and/or prolonged rainfall. Surface runoff that collects in the dry lakes quickly evaporates from the surface, and only a small quantity of water infiltrates to the groundwater due to the nearly impermeable nature of the playa soils (AVRWMG 2019).

Natural surface water features in the Project area are ephemeral, meaning that they only convey flows in direct response to precipitation events. Man-made surface water features in the area include the California and Los Angeles aqueducts (Figure 4). The Los Angeles Aqueduct is a water conveyance system built and operated by the Los Angeles Department of Water and Power that delivers water from the Owens River in the eastern Sierra Nevada mountains to Los Angeles. The California Aqueduct is part of the SWP, which is the nation's largest state-built water and power development and conveyance system that includes pumping and power plants, reservoirs, lakes, storage tanks, canals, tunnels and pipelines that capture, store, and convey water to 29 contract water agencies. Imported water supplies are discussed in greater detail in Section 4.3.

As there are no perennial waterways or waterbodies in the Project area, surface water is not a proposed source of Project water supply.

4.2 Groundwater

4.2.1 Antelope Valley Groundwater Basin

The Project overlies the AVGB which covers an area of 1,580 square miles (DWR 2004a). The AVGB is bound on the north by FVGB; on the east by ridges, buttes and low hills forming a drainage divide; on the southwest by the San Andreas fault zone at the base of the San Gabriel mountains; and on the northwest by the Garlock fault zone at the base of the Tehachapi Mountains (DWR 2004a).

Approximately 1,390 square miles, or 90% of the AVGB is adjudicated, groundwater pumping allocations have been defined, and a watermaster has been appointed to sustainably manage the basin (Figure 3). The adjudicated area is divided into five subareas for management purposes: 1) Central Antelope Valley Subarea, 2) West Antelope Valley

Subarea, 3) South East Subarea, 4) Willow Springs Subarea, and 5) Rogers Lake Subarea (AVWM 2025). The Project site is located in the West Antelope Valley Subarea (Figure 3). Additional information about the adjudication and watermaster is provided in Section 5.1 and the judgment is included in Appendix B.

Hydrogeologic Setting

The two primary water-bearing units of the AVGB include Holocene[4] and Pleistocene[5] unconsolidated alluvial and lacustrine deposits (Figure 5). These deposits are coarsest at higher elevations and become better sorted and finer grained in the valley bottom. Two primary aquifers (upper and lower) are separated by thick, low permeability clay deposits that can reach as thick as 400 feet. The generally unconfined upper aquifer is the primary source of groundwater for the valley. Specific yield for this aquifer ranges from 1 to 30%, and well production is typically moderate to highly productive, with well yields reported to average just under 300 gallons per minute (DWR 2004a). The lower aquifer is generally confined. A small portion of the AVGB that extends southwest into the San Gabriel mountains is composed of older alluvial and lacustrine deposits, as well as Mesozoic[6] and Precambrian[7] igneous and metamorphic rock complexes (Figure 5). The Project site is located on Holocene and Pleistocene age alluvium (lake, playa, and terrace deposits). Subsurface flow between the adjudicated and unadjudicated portions of the AVGB is considered nominal (AVWM 2025). The total groundwater storage capacity of the AVGB is estimated to be around 68 to 70 million acre-feet (MAF; DWR 2004).

Groundwater Production

Groundwater production in the AVGB was at its highest in the 1950s, but as land use converted from agricultural to urban and with introduction of SWP water in 1972, groundwater pumping decreased until the mid-1980s when the area started to experience rapid population growth (USGS 2003). In 2024, reported groundwater production within the adjudicated portion of the AVGB totaled 63,563.21 AF (excluding the recovery of stored water), which is approximately 18,700 AF below the native safe yield of 82,300 AFY (AVWM 2025).

Pursuant to CWC Section 10910(f), groundwater production from the adjudicated portion of the AVGB where the Project is located for the past five years is provided in Table 4. The location of water supply wells in the adjudicated portion of the AVGB is shown in *Figures 24 and 25* of the *Final Antelope Valley Watermaster 2024 Annual Report* (AVWM 2025).[8]

Table 4. Historical Groundwater Production in the Antelope Valley Groundwater Basin

Calendar Year	Reported Production in Adjudicated Portion of Basin (AF)[a]
2020	72,664.45
2021	79,574.68
2022	73,410.79
2023	58,407.83
2024	63,563.21

Source: AVWM 2025.

4 The Holocene Epoch began about 12,000 years ago and continues to present day.
5 The Pleistocene Epoch began about 2.6 million years ago and lasted until about 12,000 years ago.
6 The Mesozoic Epoch began about 245 million years ago and lasted until about 65 million years ago.
7 The Precambrian Epoch began about 4,600 million years ago and lasted until about 544 million years ago.
8 A copy of the *Final Antelope Valley Watermaster 2024 Annual Report* can be accessed at the following: https://avwatermaster.net/wp-content/uploads/2025/09/2024-AVWM-Annual-Report.pdf.

Notes: AF = acre-feet.
[a] Reported production volumes do not include recovered stored water.

Groundwater Levels

The AVGB primarily receives recharge from perennial runoff from the surrounding mountains. Most recharge occurs at the foot of the higher elevation areas by percolation through the head of alluvial fan systems. The Big Rock and Little Rock Creeks in the southern part of the AVGB contribute about 80% of runoff into the basin (DWR 2004a). Groundwater levels in the AVGB have historically ranged from an increase of 84 feet to a decrease of 66 feet from the mid-1970s to late 1990s. The largest declines have been observed in the urban areas such as Lancaster and Edwards Air Force Base. These areas have also experienced subsidence because of groundwater pumping (DWR 2004a). Depth to groundwater in the vicinity of the Project site has historically ranged from approximately 147 feet below ground surface to approximately 323 feet below ground surface between 1951 and 2005 (DWR 2026b).

Historical groundwater level data for wells in the Project area is limited. The closest actively monitored well with publicly available data is State Well Number 009N014W19L001S, which is located approximately 1.5 miles southwest of the Project site (Figure 6; USGS 2026). There are several inactively monitored wells that are closer to the Project site, but that have more limited and older datasets. Available historical groundwater level data for wells near the Project site is presented in Table 5 and hydrographs are shown in Figure 6.

Groundwater Quality

Groundwater in the AVGB varies by well and location but is generally of good quality and suitable for domestic, agricultural, and industrial uses. The average concentration of total dissolved solids (TDS) is approximately 350 milligrams per liter (DWR 2004a). Constituents of concern in the AVGB that have been detected at elevated concentrations that exceed drinking water standards include TDS, nitrate, chloride, arsenic, total chromium, fluoride, and boron (AVWM 2025). In general, of these constituents, arsenic is the only constituent that is widespread at a concentration above the drinking water maximum contaminant level of 10 micrograms per liter. Arsenic is a naturally occurring constituent commonly detected at elevated concentrations in desert basins in Southern California. Elevated levels of arsenic have been detected in wells located to the south and west of the Project site (ACWM 2025). Groundwater with elevated levels of arsenic, and the other constituents listed, is either treated at the wellhead or blended with other water prior to human consumption.

Well Inventory

A review of the following databases for information about wells on and near Project site was completed: SGMA Data Viewer (DWR 2026b), National Water Information System Mapper (USGS 2026), and Groundwater Ambient Monitoring and Assessment Program Groundwater Information System (SWRCB 2026d). No groundwater wells are currently located on the Project site. The location of groundwater wells in the vicinity of the Project site is shown in Figure 6, and summary of well completion information and historical groundwater level data for selected wells is provided in Table 5 and Figure 6.

Table 5. Groundwater Wells in the Vicinity of the Project Site

Site Name	Well Depth (ft)	Land Surface Elevation (ft MSL)	Water Level Measurement Date	Water levels (ft MSL)	Distance from Project Site (Miles)	USGS Site Status
009N014W19L001S	Unknown	2,685	3/20/2025	338.34	1.6	Active
009N014W20B001S	485.8	2,656.4	3/20/2025	337.13	2.5	Active
009N014W31L001	659	2,603	N/A	N/A	3.2	Active
009N015W12M001S	Unknown	2,896	3/10/1977	512.90	1.1	Inactive
009N015W25D001S	344	2,689.8	11/27/1956	264.00	1.0	Inactive

Source: USGS 2026.
Notes: ft = feet; MSL = mean sea level; N/A = not available.

4.2.2 Fremont Valley Groundwater Basin

A potential source of Project water supply is groundwater from the FVGB sourced from a private well(s) or purchased from a local retailer such as MPUD and trucked to the Project site. The FVGB covers approximately 523 square miles and is bound on the northwest by the El Paso Mountains and the Sierra Nevada; on the east by crystalline rocks of the Summit Range, Red Mountain, Castle Butte, Bissell Hills, and Rosamond Hills; and on the southwest by the AVGB (Figure 3). The Garlock and El Paso fault zones, which extend along the foothills of the Sierra Nevada and El Paso Mountains, restrict groundwater flow on the west and northwest sides of the basin (Figure 3; DWR 2004b).

Hydrogeologic Setting

The FVGB is composed of Holocene and Pleistocene unconsolidated alluvial and lacustrine deposits that are upwards of approximately 1,700 feet thick along the margin of the basin and thin to approximately 400 feet toward the middle of the basin near Koehn Lake (Woodard & Curran 2018). The alluvium is the primary water-bearing unit in the basin. Groundwater in the alluvium is generally unconfined, although locally confined conditions occur where it is interbedded with thick layers of lacustrine silt and clay near Koehn Lake. Well yields average approximately 530 GPM, with a maximum yield of approximately 2,580 GPM (DWR 2004b).

The FVGB is estimated to have a storage capacity of 4.8 MAF, however, the amount of groundwater in storage is currently unknown (DWR 2004b). Recent investigations have estimated groundwater storage to be several MAF higher (Woodard & Curran 2018). The average groundwater recharge in the basin is estimated to be 13,800 AFY (Woodard & Curran 2018).

Groundwater Production

Historical groundwater production in FVGB has been estimated by Woodard & Curran (2018). According to the estimates, groundwater production in the FVGB peaked in the 1970s at approximately 63,600 AF and decreased in subsequent years to approximately 15,300 AF in 1990 and approximately 6,400 AF in 2010 (Woodard & Curran 2018). The decrease in groundwater production over time is due to imported SWP water becoming available in 1980 and a significant reduction in agriculture (Woodard & Curran 2018). Recent groundwater production data are not available, but Woodard & Curran (2018) estimated that total groundwater demand in 2025 would be between 7,985 AF and 11,236 AF.

Groundwater Levels

Long-term groundwater level data indicate that groundwater levels in the FVGB have declined over time, most significantly in the late 1950s through the 1970s due to drought and increased groundwater extractions. In the 1980s, groundwater levels continued to decline but at a much lower rate due to decreased pumping, imported water deliveries, and wetter climatic conditions. Current groundwater extraction in the FVGB is significantly lower than historical rates, and declines in groundwater levels have decreased significantly since that time (Woodard & Curran 2018).

Groundwater Quality

Groundwater in the FVGB varies by well and location but is generally of good quality and suitable for domestic, agricultural, and industrial uses. Constituents of concern in the FVGB that have been detected at elevated

concentrations that exceed drinking water standards include TDS, nitrate, arsenic, boron, chloride, and hexavalent chromium. In general, of the constituents listed, arsenic is the only constituent that is widespread at concentrations above the maximum contaminant level. As stated previously, arsenic is a naturally occurring constituent commonly detected at elevated concentrations in desert basins in Southern California and can be treated at the wellhead or blended with other water prior to human consumption.

4.3 Imported Water

Imported water supply in the Project area comes from the SWP, which derives its water from rivers and reservoirs in Northern California and the Sacramento-San Joaquin River Delta and delivers water to 750,000 acres of farmland and 27 million people in Central and Southern California. The Project site has no direct connection to imported water. AVEK delivers SWP water to local retail agencies including RCSD and MPUD (AVEK 2021).

DWR manages and operates the SWP to ensure adequate water supplies are available to meet both human and environmental requirements under various hydrologic conditions. The SWP contractors consist of 29 public entities that have long-term contracts with DWR for all or a portion of their water needs (DWR 2020). There are four different types of SWP deliveries including Table A, Article 21, carryover, and turnback pool water. Table A allocations are based on each contractors' proportion of the SWP's maximum delivery capability of up to 4,172,786 AFY, as established in long-term water supply contracts developed between DWR and the contractors. Article 21 water is SWP water that contractors may receive on a short-term basis in addition to their Table A water and is generally available in wet water years when a surplus is available. Carryover water is unused Table A water that may be stored in the SWP's share of San Luis Reservoir for the contractor to use in the following year. Turnback pool water is Table A water that is sold to another contractor when a contractor determines their Table A allocation exceeds their water needs for the year (DWR 2020).

The reliability of SWP water delivery varies and depends on a number of factors including rainfall, snowpack, reservoir storage, pumping capacity of SWP facilities, and legal/regulatory restrictions. The current 2026 allocation is 30% of Table A water (DWR 2026c).

AVEK is the third largest SWP contractor with an entitlement of 144,844 AFY (AVEK 2021). Imported water is delivered to AVEK through the SWP facilities. AVEK infrastructure supports a 2,400-square mile territory that spans several counties. Infrastructure includes four water treatment facilities, three groundwater banking and recovery facilities, 184 miles of pipeline, 11 pump stations, and 67 million gallons of treated storage (AVEK 2021). As a water wholesaler, AVEK does not typically sell to individuals and would not be available as a direct source of water for the Project, rather, water provided by AVEK would likely need to be purchased through one of the retail water agencies that AVEK serves. AVEK's water supply entitlements, as identified in CWC Section 10910(d)(2)(A), are included as Appendix C.

4.4 Wastewater/Recycled Water

Recycled water in the Project area is available from two primary sources, the Palmdale Water Reclamation Plant (WRP), located approximately 28 miles southeast of the Project site, and Lancaster WRP, located approximately 17 miles southeast of the Project site. The Los Angeles County Sanitation Districts owns and operates both plants, which collect and treat wastewater from the Cities of Palmdale and Lancaster. Both plants currently provide primary, secondary, and tertiary treatment. The Palmdale WRP has a design capacity of 12 million gallons per day and in 2019 treated 9,021 AF of wastewater for urban and agricultural reuse (AVEK 2021). The Lancaster WRP has a

design capacity of 18 million gallons per day and in 2018 treated 15,052 AF of wastewater for agriculture, irrigation, wildlife habitat, maintenance, recreational impoundments, and urban reuse (AVEK 2021).

Recycled water is not currently considered a proposed water source for the Project but could serve as a backup source, if needed.

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5 Water Management Plans and Programs

5.1 Antelope Valley Judgment and Physical Solution

The AVGB was adjudicated in December 2015 with the Superior Court of the State of California's approval of the AVGB Judgment (Judgment) and Physical Solution (Physical Solution).[9] The Judgment determined the AVGB to be in a state of overdraft, established respective water rights among groundwater producers, and ordered a rampdown of production to the native safe yield (AVWM 2025).

As part of the Judgment, the Antelope Valley Watermaster (Watermaster) was formed and appointed by the court to implement and enforce the Judgment. The Watermaster board is composed of one representative each from AVEK and Los Angeles County Waterworks District 40, one other public water supplier representative, and two landowner representatives. The Watermaster is charged with administering the adjudicated water rights and managing the groundwater resources within the area of adjudication (AVWM 2025).

The Physical Solution quantified the reduction of groundwater production within the adjudicated area to reach the native safe yield of 82,300 AFY over a seven-year period (2016–2022) to a final production right. Producers that were allocated a portion of the native safe yield were required to reduce production linearly from a pre-rampdown production amount to their assigned production right. A production right is the portion of the native safe yield assigned to each party of the Judgment. Production rights under the Judgment include: overlying production rights (58,322 AFY), non-overlying production rights (12,345 AFY), federal reserved water right (7,600 AFY), small pumper class rights (3,806 AFY), and California production right (207 AFY). All parties other than the small pumper class, defined as using less than 3 AFY, are required to install meters on their wells for monitoring production and report production to the Watermaster. Parties that produce groundwater in excess of a production right incur a replacement obligation and are required to pay a replacement water assessment. New production can be approved by the Watermaster if the proposed use is reasonable and would not cause material injury; however, all new production is subject to a replacement obligation (AVWM 2025).

In addition to production rights, there are six other potential production categories identified in the Judgment: pre-rampdown production, imported water return flows, carry over, stored water, other rights to produce groundwater, and additional production. Of particular relevance to the proposed Project is carry over which is the unused portion of an annual production right that can be carried over to the next year for up to ten years. At the end of ten years, the producer may enter into a storage agreement with the Watermaster to store unproduced carry over water.

Along with the native safe yield, the Judgment established a total safe yield for the basin, which is the amount of groundwater that can be safely pumped over the long-term and is the sum of the native safe yield plus return flows from imported water. Because imported surface water provides groundwater recharge through return flows estimated at approximately 27,700 AFY, the total safe yield was set at 110,000 AFY.

9 The Judgment is posted on the Watermaster website at www.avwatermaster.net

5.2 Antelope Valley Water Master Annual Report

Under the Judgment, the Watermaster has the responsibility of preparing annual reports. The annual reports provide an update on groundwater conditions in the Basin and Watermaster activities. The latest annual report as of the writing of this WSA is the *Antelope Valley Watermaster 2024 Annual Report* (AVWM 2025).

According to the 2024 annual report, total production by parties with production rights has declined since the AVGB was adjudicated and appears to be stabilizing close to the native safe yield. Groundwater levels across the AVGB have either stabilized or the rates of decline have decreased in recent years when compared to the preceding two decades (AVWM 2025).

5.3 Antelope Valley–East Kern Water Agency 2020 Urban Water Management Plan

AVEK is a wholesale supplier of SWP water to the region. SWP water is a secondary water source for AVEK's customers and is used in lieu of, or in addition to, pumped groundwater (AVEK 2021). AVEK currently provides water to 27 retail water agencies, water companies, and agricultural customers, including RCSD and MPUD. The Project site is located in the western portion of AVEK's service area. The 2020 UWMP was prepared with stakeholder involvement to maximize the region's ability to assess and plan for the region's water future (AVEK 2021). A draft 2025 UWMP is anticipated to be completed in mid-2026.

AVEK water supplies include imported water from the SWP, non-SWP imported water, and groundwater pumped from the AVGB. SWP water supply availability fluctuates depending on multiple factors such as rainfall, snowpack, reservoir storage, pumping capacity, and regulatory and environmental mandates. AVEK assumed a long-term average allocation of 58% (84,010 AFY) in 2020, with a gradual reduction to 52% in 2045 (75,320 AFY). AVEK groundwater well production is from the adjudicated portion of the AVGB. The Judgment stipulates a final production right of 82,300 AFY, 15,634 AFY of which is allocated to AVEK and its customers (AVEK 2021; AVWM 2025). Additional groundwater pumping rights are available from imported water return flows, of which in 2019 AVEK received 822 AF (AVEK 2021).

To address water supply reliability, AVEK evaluated its supply through 2045 for normal, single dry, and multiple dry years, and assessed the drought risk between 2020 and 2025. To meet the water needs of its customers despite varying conditions, AVEK focused on groundwater banking programs to store excess SWP water during wet periods for use during dry and high-demand periods. AVEK concludes in its UWMP that all of its supplies combined enable AVEK to meet demands through 2045 in its entire service area (AVEK 2021).

5.4 Rosamond Community Services District 2020 Urban Water Management Plan

The 2020 UWMP provides information on RCSD's current and projected water use and supply reliability. RCSD's water supplies include groundwater pumped from the AVGB, banked groundwater, and surface water imported from AVEK. Groundwater is RCSD's primary water source. In 2020, RCSD pumped approximately 2,457 AF of groundwater and purchased 36 AF of SWP from AVEK (RCSD 2023). RCSD makes an annual request to AVEK for SWP water, dependent on SWP availability. There is no guarantee that the request will be fulfilled. RCSD

groundwater supplies are from the adjudicated portion of the AVGB. Per the Judgment, RCSD has a groundwater production right of 404.42 AFY. There are currently no plans to increase water supply as the current supply is sufficient to meet demands (RCSD 2023).

Based on average water consumption, potable water demands in the UWMP are projected to be approximately 3,707 AFY in 2045, with an overall increase of 1,008 AFY from the 2025 projected demand of 2,699 AFY. Significant findings of the UWMP include adequate water supply over the planning period given supply and demand assumptions for normal years. Deficits identified for single or multiple-dry year conditions, in which demands will exceed supplies of groundwater, will be addressed by RCSD's banked groundwater supplies. Therefore, the combined groundwater and banked groundwater supplies are sufficient for single and multiple dry years between 2025 and 2024 (RCSD 2023).

5.5 Antelope Valley Integrated Regional Water Management Plan 2019 Update

The Integrated Regional Water Management Planning Act of 2002 (SB 1672) authorizes a regional water management group to prepare and adopt an integrated regional water management plan (IRWMP) that addresses regional scale water supply and related matters. The Project site falls within the Antelope Valley IRWMP area.

The Antelope Valley IRWMP was created when agencies in the Antelope Valley region recognized the need for regional cooperation and planning (AVRWMG 2019). Members of the group include AVEK, Antelope Valley State Water Contractors Association, City of Lancaster, City of Palmdale, Littlerock Creek Irrigation District, Los Angeles County Sanitation District Nos. 14 and 20, Los Angeles County Waterworks District 40, Palmdale Water District, Quartz Hill Water District, and RCSD (AVRWMG 2019). The plan defines expected demands for water within the entire Antelope Valley region through 2040.

The Antelope Valley IRWMP anticipated that there would be a surplus of water between 5,000 and 21,800 AFY through 2025, but a deficit of up to 19,500 AFY through 2040 (AVRWMG 2019). To address this mismatch, water agencies in the region plan to develop adequate reserves by banking water in average year conditions and by implementing water conservation measures, increasing use of recycled water, enhancing stormwater capture, reducing reliance on imported water, and improving conveyance infrastructure (AVRWMG 2019).

5.6 Fremont Basin Integrated Regional Water Management Plan

The Fremont Basin IRWMP was developed by the City of California City, MPUD, and AVEK with input from a variety of regional stakeholders to support the integrated management of water resources in the region. The Fremont Basin IRWMP is a living document that encourages adaptive management to meet the needs of the evolving region.

Water demands in the region are satisfied by local groundwater supplies, imported SWP water, and recycled water. A water supply and demand assessment is included in Section 3 and Appendix B of the Fremont Basin IRWMP (Woodard & Curran 2019). The assessment compared projected water supplies to demands in the FVGB in five-year increments through 2040 under four potential scenarios including baseline, light, medium, and heavy agricultural growth. The baseline condition is based on planned residential and industrial development documented in UWMPs and other planning documents, while the light, medium, and heavy growth scenarios assume potential

agricultural activity, though there are no formal plans to increase agriculture beyond current levels. The assessment concluded that the baseline and light growth scenarios are likely to be sustainable, but the medium and heavy growth scenarios may not be. However, the Fremont Basin IRWMP notes that there are currently no plans to increase agriculture in the FVGB (Woodard & Curran 2019).

While water supplies have historically been able to meet demands and are expected to continue to be able to, the region faces several water supply issues including a limited understanding of the storage and withdrawal capacity of the FVGB, potential interruptions and variability in SWP supply, and vulnerability to damage to conveyance systems during seismic events. To address these potential issues, the Fremont Basin IRWMP identified two water supply objectives including increase regional water supply reliability to meet demands and ensure sustainable use of the FVGB. To accomplish these objectives, several targets were set including increase recycled water use and stormwater capture, maintain conservation programs, identify infrastructure at risk of being compromised, begin developing a GSA and GSP for the FVGB, define the safe yield of the FVGB, and manage the FVGB such that the 10-year average change in groundwater levels is zero. Updates and progress achieved for each planning target are to be included in the next reporting cycle and posted on City of California City's website. The Fremont Basin IRWMP and projects described within enables water agencies in the region to ensure the sustainable use of local water sources for future generations (Woodard & Curran 2019).

5.7 Fremont Valley Basin Groundwater Management Plan

The FVGB GWMP was prepared as part of the Fremont Basin IRWMP (Woodard & Curran 2019) to act as a pre-GSP document to facilitate the sustainable management of groundwater resources in the FVGB (Woodard & Curran 2018). The GWMP provides a description of the basin physical setting, characterizes the basin hydrogeology, evaluates water demand and supplies, outlines basin management goals and objectives, establishes basin management strategies and projects, and identifies the monitoring program. As described above in Section 5.6 and below in Section 6.2, groundwater supplies are predicted to be sufficient to satisfy planned residential and industrial development in the basin (baseline scenario) and light agricultural growth (light growth scenario), but may not be sufficient for medium or heavy agricultural growth. As such, the GWMP identifies management strategies and projects to support the long-term sustainable management of the FVGB including agricultural and urban water use efficiency, groundwater remediation, conjunctive use programs, recycled water projects, and stormwater capture and recharge to name a few (Woodard & Curran 2018).

5.8 Groundwater Well Permitting

If a new or altered groundwater well is used as the source of supply, the Project would be required to obtain a well permit from the Kern County Environmental Health Division for the construction and/or reconstruction of the well. Information that must be submitted with the application includes property information, consultant information, registered well driller information, well construction information, plot plan, and method of construction or destruction. All work must be performed by a licensed C-57 well driller and follow the statewide well construction standards contained in DWR Bulletins 74-81 and 74-90. Title 22 standards must also be followed for public water supply wells.

6 Reliability of Water Supplies

The Project will require approximately 55 AF of water for construction over a two-year period, 3 AFY for operation over a 35-year period, and 55 AF for decommissioning over a one-year period. The majority of Project water use will be temporary and of short duration for construction and decommissioning. The Project's operational water use will be low and close to de minimis.

Proposed sources of Project water supply include groundwater from the AVGB sourced from a new on-site well(s) via an Adjudicated Water Rights Agreement, groundwater from the FVGB sourced from a private well(s) or purchased from a local retailer such as MPUD and trucked to the Project site, SWP water provided by AVEK through a local retailer such as RCSD and trucked to the Project site, or a combination of these sources. SWP water provided by AVEK through a local retailer would be unused water within existing agreements or surplus water, if available (AVEK occasionally transfers untreated SWP water to agencies when surplus water is available). The following provides an assessment of these three sources of supply including groundwater from the AVGB, groundwater from the FVGB, and SWP water.

6.1 Antelope Valley Groundwater Basin Assessment

The majority of the AVGB was adjudicated in 2015 (Appendix B). The Project site is located in the adjudicated area of the basin. The Judgment established a native safe yield of 82,300 AFY and total safe yield of 110,000 AFY (AVWM 2025). Groundwater production over the past five years has been below both the native and total safe yields, and ranged from approximately 58,408 AF in 2023 to 79,757 AF in 2021.

The Judgment limits the amount of groundwater that can be produced without replacement. Groundwater production is actively managed by the Watermaster to ensure sustainability of the basin groundwater supplies. Only parties listed in the Judgment can pump groundwater. A production right is the portion of the native safe yield assigned to each party of the Judgment. The Project plans to purchase production rights of sufficient volume for Project construction and operation from an existing water rights holder who holds 294 AF of overlying production rights and 2,432 AF of carry over water. Specifically, the Project is purchasing 3 AF of permanent production rights and 65 AF of carry over water rights from the year 2023 (Traficanti, pers. comm. 2026).

Because the Project will purchase existing production rights and groundwater production is currently below the native safe yield and has been for multiple years, there is sufficient groundwater available to satisfy the Project demand and all other groundwater uses during normal, single dry, and multiple dry years over a 20-year projection and the life of the Project (CWC Section 10910(f)).

6.2 Fremont Valley Groundwater Basin Assessment

The FVGB is not adjudicated and is designated by DWR as low priority. Annual average recharge to the basin is estimated to be approximately 13,800 AFY and the total storage capacity of the basin is estimated to be 4.8 MAF or more (DWR 2004b; Woodard & Curran 2018). Groundwater production in the FVGB is not measured.

The FVGB GWMP (Woodard & Curran 2018) evaluated projected water demands in the FVGB, including groundwater demands, in five-year increments through 2040 under four potential scenarios including baseline, light, medium,

and heavy agricultural growth. The baseline condition is based on planned residential and industrial development while the light, medium, and heavy growth scenarios assume potential agricultural activity, though there are no formal plans to increase agriculture beyond current levels (Woodard & Curran 2018). Current (2025) groundwater extraction in the FVGB is estimated to be 7,985 AF. For year 2030, the closest year to when the proposed Project would be constructed, groundwater demand is estimated to range from 8,456 AF in the baseline scenario to 13,467 AF in the heavy growth scenario (Woodard & Curran 2018). This indicates that under all scenarios, groundwater demand will be lower than or approximately equal to the annual recharge to the basin of 13,800 AFY around the time the Project is constructed. Looking beyond 2030, groundwater demand is estimated to be below the average recharge to the basin under the baseline and light growth scenarios, but exceed the average recharge under the medium agriculture growth scenario in 2040 and the heavy agriculture growth scenario in 2035 and 2040 by up to 4,446 AF. Under the baseline scenario, which is based on planned residential and industrial development, groundwater demand is projected to be 9,893 AF in 2040 (Woodard & Curran 2018).

Based on current and projected groundwater demands in the FVGB assuming planned residential and industrial development, there is sufficient groundwater available to satisfy the Project demand and all other groundwater uses during normal, single dry, and multiple dry years over a 20-year projection and the life of the Project (CWC Section 10910(f)). Although there is potential for future groundwater production to exceed the annual average recharge rate if medium or heavy agricultural growth occurs, the Project's operational demand is low and decommissioning demand is temporary so the Project would not have a significant contribution to the exceedance. Additionally, as described above, there are currently no plans to increase agriculture in the FVGB. These hypothetical scenarios were analyzed to simply illustrate how additional agricultural growth would impact the FVGB to inform future decisions for managing the basin sustainably (Woodard & Curran 2018).

6.3 AVEK Assessment

AVEK delivers treated water from the SWP and groundwater to 23 customers, and untreated SWP water to four customers. Untreated SWP water is also banked in three locations for later recovery (AVEK 2021). The service area includes over 500,000 people spanning 2,400 square miles in northern Los Angeles County and eastern Kern Counties, as well as a small portion of Ventura County (AVEK 2021). AVEK is entitled to 144,844 AFY of water from the SWP; however, the annual allocation varies depending on various regulatory and environmental factors. Through 2006, the long-term average was a 91% allocation (AVEK 2021). Starting in 2007, the allocation varied widely, with a maximum of 85% (123,117 AF) in 2017 and a minimum of 5% (7,242 AF) in 2014 and 2021. The actual five-year average from 2017 through 2021 was 44% and the 15-year average was 45% (AVEK 2021). This amounts to approximately 65,000 AFY.

Since 2014, AVEK customers have typically purchased around 40,000 AF of water each year, which until 2020 was well below the amount available to AVEK for delivery (AVEK 2021). AVEK water deliveries in 2021 included 18,906 AF of SWP water, 18,908 AF of recovered imported water/groundwater, 2,350 AF of exchange/transfer, and 625 AF into water banking/storage. A total of 38,538 AF of treated water was delivered to AVEK customers in 2021 (AVEK 2021). For years where the SWP allocation is below AVEK customer demand, such as in 2021, AVEK can use carryover water stored from previous years, and purchase dry year water when available. In 2021, AVEK used 18,908 AF of stored water to offset the 5% allocation of SWP water, resulting in a balance of 66,000 AF of stored water for future dry years.

AVEK has a production right in the AVGB per the Judgment of 3,550 AF (AVWM 2025). This is the final production right at the end of the seven-year ramp down period which ended in 2022. In addition, AVEK also owns 700 AFY of

Healy Production Rights as of January 2022 (AVWM 2022). The total available water for AVEK in 2022 including imported water return flows and carryover water was 5,270 AF. In 2021, the total available for use was 5,420 AF. Actual groundwater production was 18,908 AF in 2021, which was withdrawn from AVEK's stored water supply (AVWM 2022). As of 2022, AVEK has a stored balance of 66,000 AF of water available for use when SWP deliveries are deficient compared to demand (AVEK 2021). AVEK's goal is to have enough groundwater stored to meet demands during three consecutive years of 10% allocations from the SWP (AVEK 2021).

In 2021, imported SWP deliveries to AVEK customers were split by treated and untreated water deliveries as well as inside and outside the adjudicated area (AVWM 2022). Treated SWP deliveries outside the adjudicated area amounted to 1,738.50 AF, approximately 10% of the total treated water. Untreated water deliveries totaled 2,320 AF in 2021, which was approximately 12% of total SWP deliveries. Of that, 409 AF (18%) was delivered to AVEK customers outside of the adjudicated area.

AVEK groundwater production was split by customer and delivery location as well (AVWM 2022). In 2021, actual groundwater production was 18,908 AF. Of that, 2,133 AF (11%) was treated and 16,775 AF was from additional locations, and 141 AF of treated groundwater was delivered to AVEK customers outside the adjudicated area (6.7%). Of the additional locations, 151 AF (<1%) of the water was delivered to AVEK customers outside the adjudicated area (AVWM 2022).

The 15-year average SWP delivery to AVEK was 45% of the 144,844 AF entitlement, or 65,000 AF (AVEK 2023). In AVEK's 2020 UWMP, SWP supply availability was modeled under future conditions out to 2045, with the forecast ranging from 52% to 58% (75,320 to 84,010 AF).

AVEK's reliable quantities of projected water supply sources, from 2025 to 2045, are provided in Table 6. Pursuant to CWC Section 10910(f), Table 6 includes AVEK's projected production from the AVGB.

Table 6. AVEK Water Supplies

	Actual Volume	Projected Water Supply				
Water Supply	2020	2025	2030	2035	2040	2045
SWP	29,507	81,840	79,660	77,490	75,320	75,320
Groundwater[1]	12,229	4,350	4,350	4,350	4,350	4,350
New Supply[2]	0	4,890	9,780	12,190	14,760	17,340
Groundwater Bank	7,213	0	0	0	0	0
Supply Totals	**48,949**	**91,080**	**93,790**	**94,030**	**94,430**	**97,010**

Source: AVEK 2021.
Note: All values in acre-feet per year.
1 Groundwater supply includes both AVEK production right per Judgment (3,550 AF) and imported water return flows and carryover water (800 AF).
2 New supply per LACWD MOU is 70% of total new projected demand.

AVEK's projected quantities of imported water supplies and groundwater supplies are based on long-term average allocations reported for the future conditions study from the 2019 Delivery Capability Report issued by DWR (DWR 2020; AVEK 2021). In the event SWP water may be limited for any given year, AVEK has the flexibility to recover banked groundwater from the AVGB. AVEK's goal is to have enough groundwater stored to meet demands during three consecutive years of 10% allocations from the SWP (AVEK 2021).

6.3.1 AVEK Water Supply and Demand Comparison

AVEK's 2020 UWMP considered the following when developing water demand projections for its service area: population growth, per capita demand rebound from spring 2016 severe water restrictions, passive and active conservation, climate change, groundwater pumped, and recycled water (AVEK 2021). Population growth was based on projections from Southern California Association of Governments for Los Angeles and Ventura Counties, and Kern County Council of Governments. An average annual growth rate of 1.33% was used, with a high growth rate initially (2020–2025) and lower rates at the end of the projection (AVEK 2021). Per capita demand estimates were based on 2015–2020 demands of AVEK customers. A post-drought rebound of 205 gallons per capita per day was assumed, which represents 90% of the weighted average 2020 gallons per capita per day target for AVEK retailers that submit an UWMP. AVEK assumed 150 gallons per capita per day for new development, based on it being more efficient than existing development (AVEK 2021). Although AVEK's 2020 UWMP does not explicitly identify and account for the water demand associated with the proposed Project, AVEK's demand projections account for development and population growth within its service area and, as discussed below, AVEK's projected 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 existing and planned future uses of the water supply (CWC Section 10910(c)).

The single dry year SWP water supply allocation was set to 5%, which was delivered in 2014 and 2021. The lowest consecutive five-year period occurred from 1988 to 1992, with an average allocation of 20.3% under the existing conditions. From 2012 to 2016, the average allocation was 37% (AVEK 2021).

AVEK's projected water supplies available during normal years in five-year increments from 2025 to 2045 are provided in Table 7.

Table 7. AVEK Normal Year Supply and Demand Comparison

Supply/Demand	2025	2030	2035	2040	2045
SWP[1]	81,840	79,660	77,490	75,320	75,320
Groundwater[2]	4,350	4,350	4,350	4,350	4,350
New Supply[3]	4,890	9,780	12,190	14,760	17,340
Groundwater Bank	0	0	0	0	0
Supply Totals	*91,080*	*93,790*	*94,030*	*94,430*	*97,010*
Demand Totals	*44,440*	*50,990*	*51,880*	*55,210*	*57,590*
Difference	**46,640**	**42,800**	**42,150**	**39,220**	**39,420**

Source: AVEK 2021.
Note: All values in acre-feet per year.
1 52–58% forecast for SWP allocation.
2 Groundwater Supply includes AVEK production right per Judgment (3,550 AF) and imported water return flows and carryover water (800 AF).
3 New supply per LACWD MOU is 70% of total new projected demand.

A "single dry" year for AVEK was represented in 2014, in which the SWP allocation was the lowest at 5% of entitlement. AVEK's projected water supplies available during single dry years in five-year increments from 2025 to 2045 are provided in Table 8.

Table 8. AVEK Single Dry Year Supply and Demand Comparison

Supply/Demand	2025	2030	2035	2040	2045
SWP[1]	7,240	7,240	7,240	7,240	7,240
Groundwater	4,350	4,350	4,350	4,350	4,350
New Supply	4,890	9,780	12,190	14,760	17,340
Groundwater Bank[2]	27,960	29,620	28,100	28,860	28,660
Supply Totals	*44,440*	*50,990*	*51,880*	*55,210*	*57,590*
Demand Totals	*44,440*	*50,990*	*51,880*	*55,210*	*57,590*
Difference	**0**	**0**	**0**	**0**	**0**

Source: AVEK 2021.
Note: All values in acre-feet per year.
1 5% SWP Allocation.
2 Groundwater banking extractions will offset the reduction in SWP deliveries to meet demand.

AVEK's projected water supplies available during five consecutive dry years in five-year increments from 2025 to 2045 are provided in Table 9.

Table 9. AVEK Multiple Dry Year Supply and Demand Comparison

Year	Supply/Demand	2025	2030	2035	2040	2045
First Year	Supply Totals	44,440	50,990	51,880	55,210	57,590
	Demand Totals	44,440	50,990	51,880	55,210	57,590
	Difference	0	0	0	0	0
Second Year	Supply Totals	55,920	60,810	63,220	65,790	68,370
	Demand Totals	44,440	50,990	51,880	55,210	57,590
	Difference	**11,480**	**9,820**	**11,340**	**10,580**	**10,780**
Third Year	Supply Totals	44,440	50,990	51,880	55,210	57,590
	Demand Totals	44,440	50,990	51,880	55,210	57,590
	Difference	0	0	0	0	0
Fourth Year	Supply Totals	46,280	51,170	53,580	56,150	58,730
	Demand Totals	44,440	50,990	51,880	55,210	57,590
	Difference	**1,840**	**180**	**1,700**	**940**	**1,140**
Fifth Year	Supply Totals	44,440	50,990	51,880	55,210	57,590
	Demand Totals	44,440	50,990	51,880	55,210	57,590
	Difference	0	0	0	0	0

Source: AVEK 2021.
Note: All values in acre-feet per year.

Based on the above water supply and demand comparison of AVEK as a public water supplier for the Project area and retail water agencies in the region, sufficient supplies exist to serve future water demands of development intensities consistent with the proposed Project during normal, single dry, and multiple dry years over a 20-year

projection, in addition to existing and planned future uses of the water supply (CWC Section 10910(c)). The majority of Project water use will be temporary and of short duration for construction and decommissioning, and water use for Project O&M will be low. The amortized demand of the Project is a nominal 5.5 AFY so the additional demand on the existing supplies would be negligible.

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7 Conclusion

The Project will require approximately 55 AF of water for construction over a two-year period, 3 AFY for operation over a 35-year period, and 55 AF for decommissioning over a one-year period. The majority of Project water use will be temporary and of short duration for construction and decommissioning, and water use for Project O&M will be low. The amortized demand of the Project is approximately 5.5 AFY.

Proposed sources of Project water supply include groundwater from the AVGB sourced from a new on-site well(s) via an Adjudicated Water Rights Agreement, groundwater from the FVGB sourced from a private well(s) or purchased from a local retailer such as MPUD and trucked to the Project site, SWP water provided by AVEK through a local retailer such as RCSD and trucked to the Project site, or a combination of these sources. Table 10 provides a summary of these water supply sources and the sufficiency of each source is described below.

The Project plans to purchase existing groundwater production rights in the AVGB via an Adjudicated Water Rights Purchase Agreement. Because the Project plans to purchase existing production rights under the Judgment and groundwater production in the AVGB is managed by the Watermaster, there is sufficient groundwater available to satisfy the Project demand and all other groundwater uses during normal, single dry, and multiple dry years over a 20-year projection and the life of the Project (CWC Section 10910(f)).

Current and projected groundwater demands in the FVGB based on planned residential and industrial development are below the annual average recharge rate in the basin which means there is sufficient groundwater available to satisfy the Project demand and all other groundwater uses during normal, single dry, and multiple dry years over a 20-year projection and the life of the Project (CWC Section 10910(f)). If medium or heavy agriculture growth were to occur in the FVGB, groundwater demand could exceed the annual average recharge rate and potentially lead to overdraft; however, there are currently no plans to increase agriculture in the FVGB and these hypothetical scenarios were analyzed to simply illustrate how additional agricultural growth would impact the basin to inform future decisions for managing the basin sustainably (Woodard & Curran 2018).

AVEK has sufficient water supplies to serve current and future water demands within its service area. AVEK has historically had more SWP water available for delivery than typically purchased by customers (AVEK 2021). AVEK receives an annual allocation of SWP water and also has banked SWP water available in the event demands exceed the annual allocation. Although AVEK's 2020 UWMP does not explicitly account for the Project water demand as a standalone project, the UWMP accounts for future growth consistent with the proposed Project. Therefore, AVEK's projected supplies available during normal, single dry, and multiple dry water years during a 20-year projection are sufficient to satisfy the Project's demand, in addition to existing and planned future uses of the water supply (CWC Section 10910(c)).

Table 10. Water Supply and Demand Summary

Water Source	Total Supply	Current Demand	Current Available Supply	Amortized Project Demand of 5.5 AFY as Percent of Current Available Supply	Projected Demand	Projected Available Supply	Amortized Project Demand of 5.5 AFY as Percent of Projected Available Supply
Antelope Valley Groundwater Basin	82,300[a]	63,563[b]	18,737	0.03%	≤82,300[c]	N/A[c]	N/A[c]
Fremont Valley Groundwater Basin	13,800[d]	7,985[e]	5,815	0.09%	9,893[f]	3,907	0.1%
State Water Project	65,000[g]	40,000[h]	25,000	0.02%	57,590[i]	7,410	0.07%

Notes: All values are in acre-feet per year (AFY); N/A = not applicable.

a Native safe yield of the AVGB. The total safe yield is 110,000 AF (AVWM 2025).
b Total reported groundwater extractions in the AVGB in 2024 (AVWM 2025).
c The Judgment limits groundwater extraction in the AVGB. The Project plans to purchase production rights that are within the safe yield.
d Average annual recharge to the FVGB (Woodard & Curran 2018).
e Estimated groundwater extraction in the FVGB in 2025 under the baseline scenario (Woodard & Curran 2018).
f Estimated groundwater extraction in the FVGB in 2040 under the baseline scenario (Woodard & Curran 2018).
g Average AVEK SWP supply for 15-year period from 2007 to 2021. AVEK's total allocation is 144,844 AFY (AVEK 2021).
h Average AVEK SWP demand for 8-year period from 2014 to 2021 (AVEK 2021).
l AVEK's projected SWP in 2045. AVEK's total allocation is 144,844 AFY (AVEK 2021).

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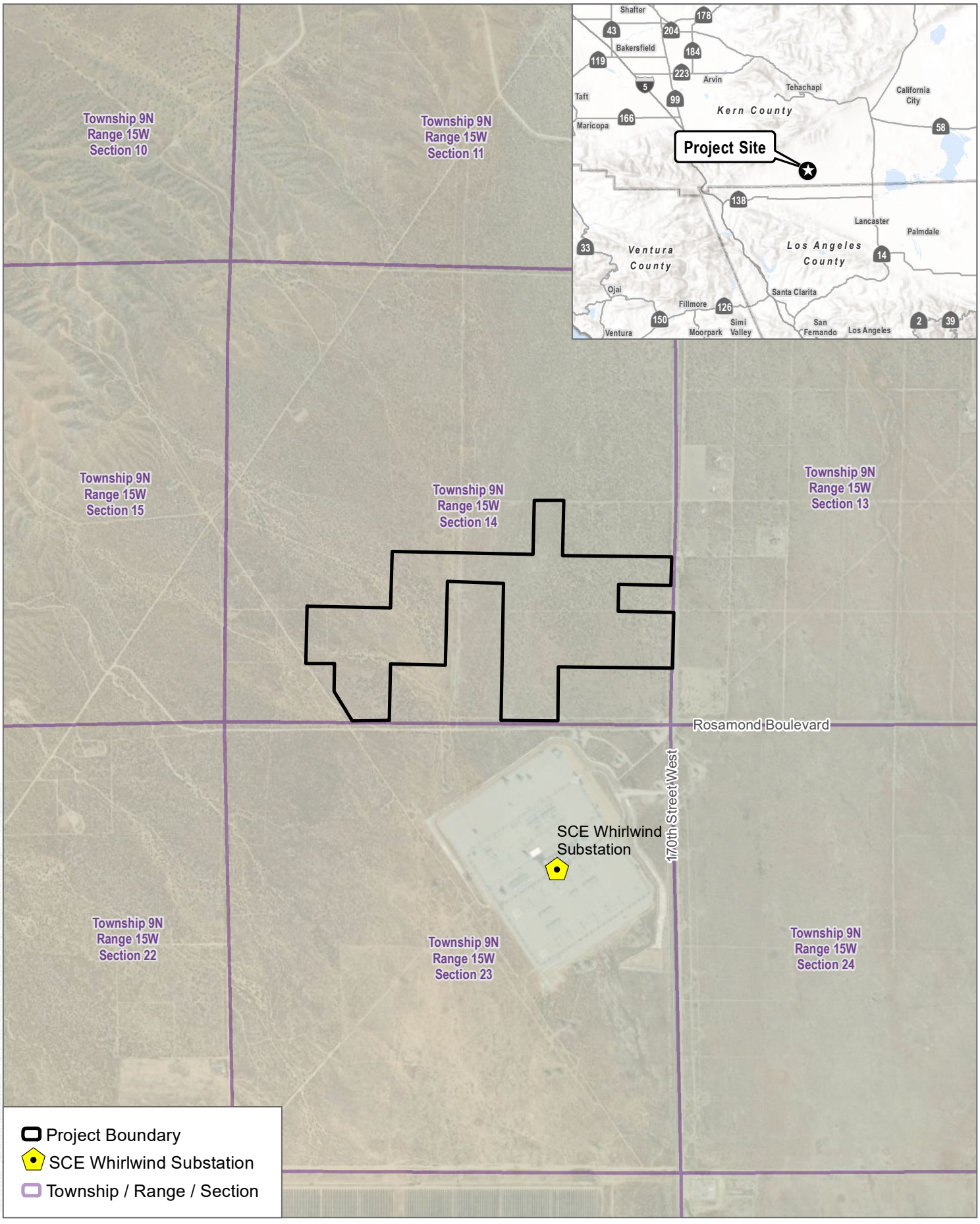
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SOURCE: ESRI; USGS

DUDEK

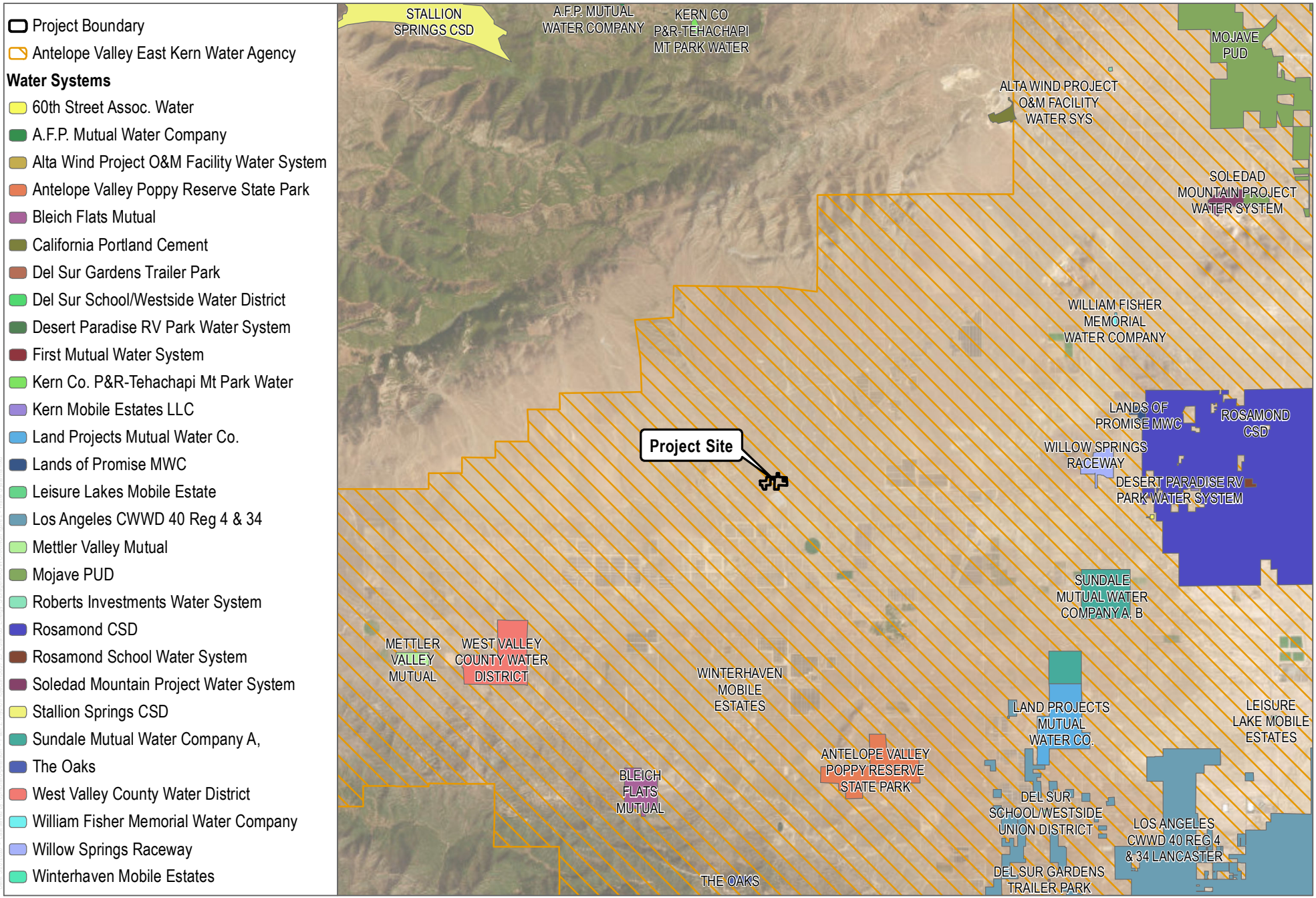
0 750 1,500 Feet

FIGURE 1

Project Location

Euismod Energy Storage Project

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SOURCE: ESRI; SWRCB; DWR

DUDEK

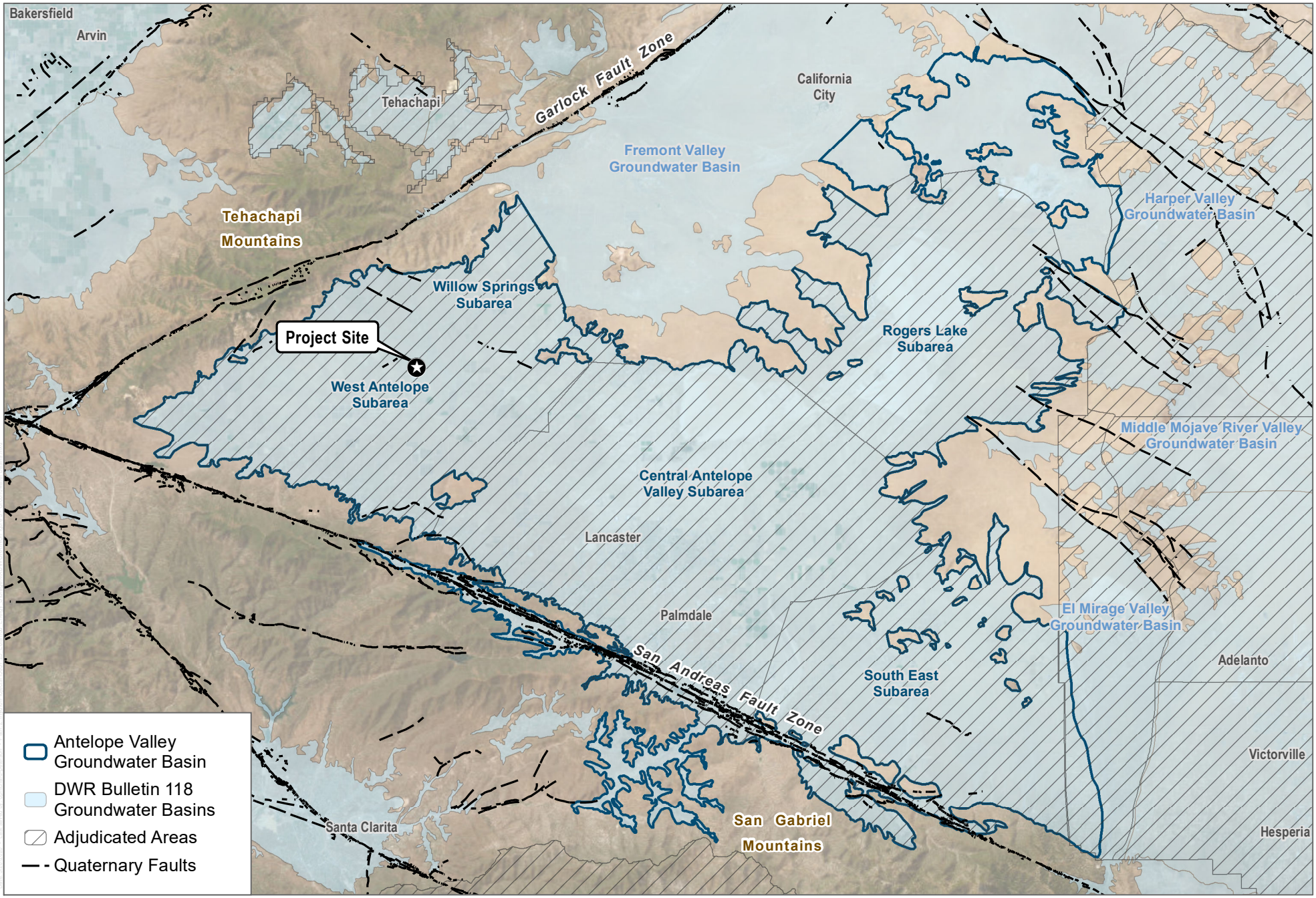
0 1.75 3.5 Miles

FIGURE 2

Water Systems

Euismod Energy Storage Project

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SOURCE: ESRI; USGS; DWR

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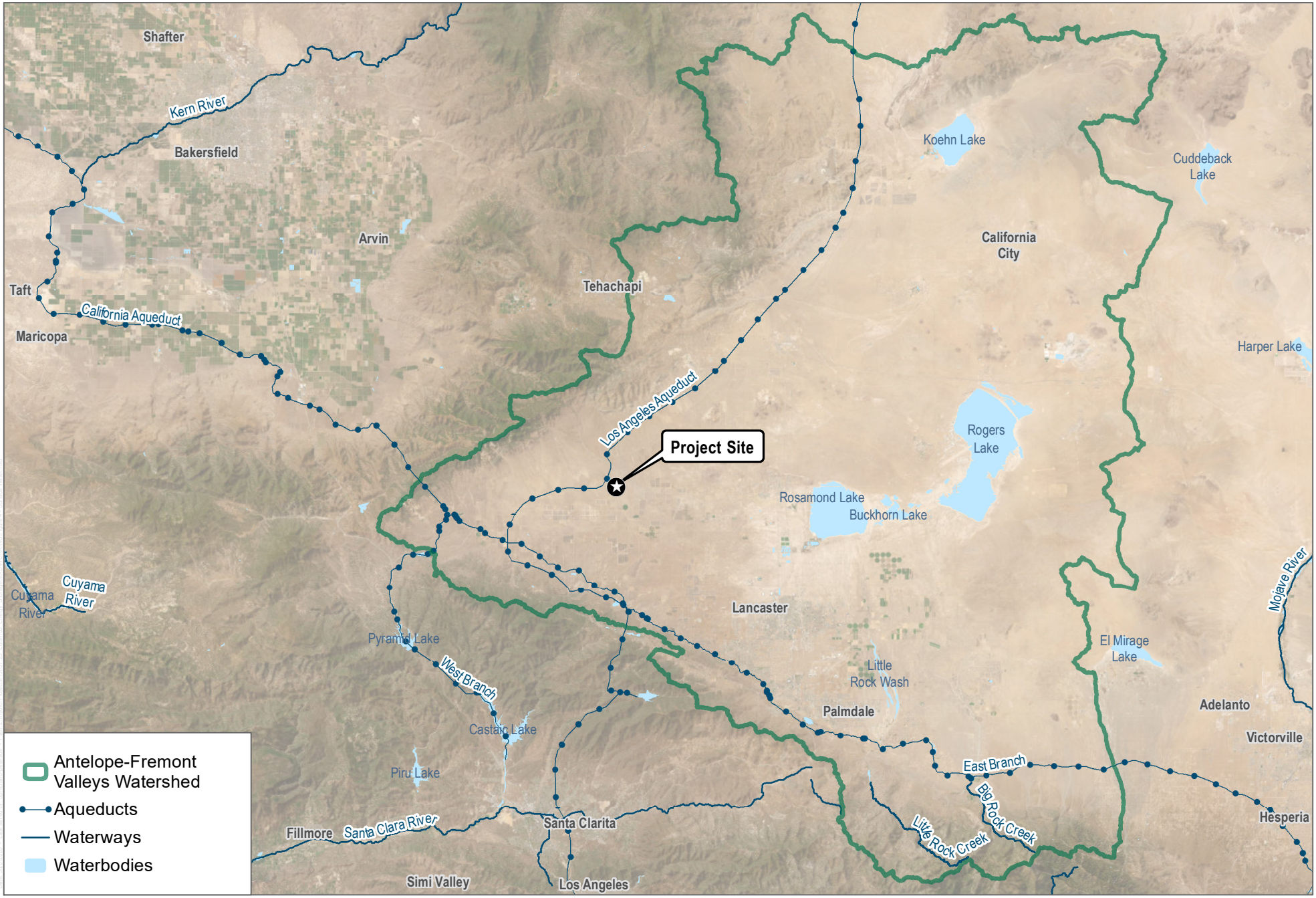
0 5 10 Miles

FIGURE 3

Groundwater Basins

Euismod Energy Storage Project

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SOURCE: ESRI; DWR; USGS

DUDEK

0 5 10 Miles

FIGURE 4

Watersheds and Surface Water Features

Euismod Energy Storage Project

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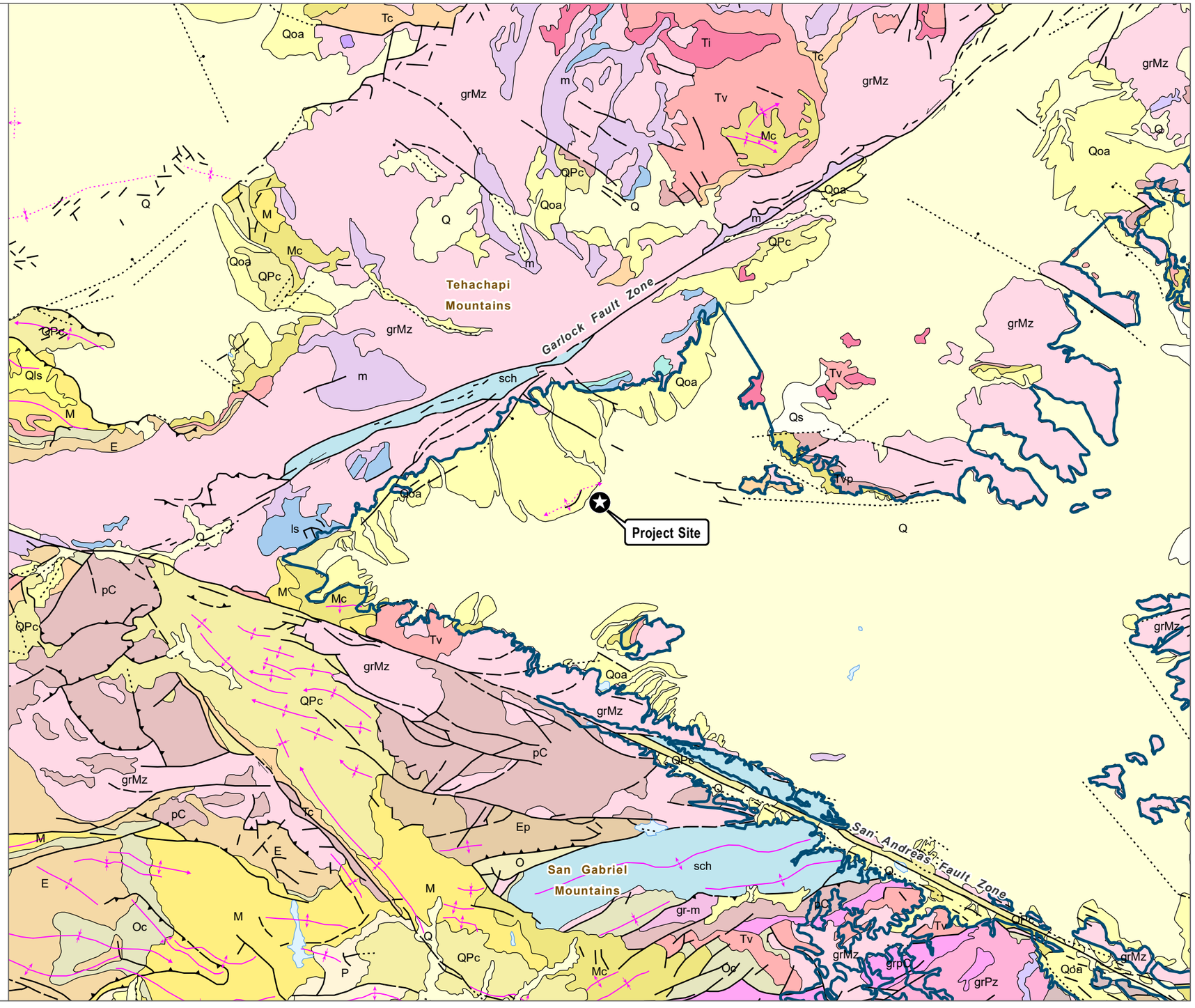
Antelope Valley Groundwater Basin

Structural Features

Contacts and Faults

Geologic Units

- Qs - Extensive marine and nonmarine sand deposits
- Q - Alluvium, lake, playa, and terrace deposits
- Qls - Selected large landslides
- Qoa - Older alluvium, lake, playa, and terrace deposits
- QPc - Pleistocene and/or Pliocene sandstone, shale, and gravels deposits
- Tc - Undivided Tertiary nonmarine sandstone, shale, conglomerate, breccia, and ancient lake deposits
- P - Pliocene marine sandstone, siltstone, shale, and conglomerate
- M - Miocene marine sandstone, shale, siltstone, conglomerate, and breccia
- Mc - Miocene nonmarine sandstone, shale, conglomerate, and fanglomerate
- O - Oligocene marine sandstone, shale, and conglomerate
- Oc - Oligocene nonmarine sandstone, shale, and conglomerate
- E - Eocene marine shale, sandstone, conglomerate, and minor limestone
- Ep - Paleocene marine sandstone, shale, and conglomerate
- Tv - Tertiary volcanic flow rocks
- Tvp - Tertiary pyroclastic and volcanic mudflow deposits
- Ti - Tertiary intrusive rocks; mostly shallow (hypabyssal) plugs and dikes
- Ku - Upper Cretaceous sandstone, shale, and conglomerate
- sch - Schists of various types; mostly Paleozoic or Mesozoic age; some Precambrian
- ls - Limestone, dolomite, and marble whose age is uncertain but probably Paleozoic or Mesozoic
- gr-m - Mesozoic to Precambrian granitic and metamorphic rocks; mostly gneiss and other metamorphic rocks injected by granitic rocks
- grMz - Mesozoic granite, quartz monzonite, granodiorite, and quartz diorite
- um - Ultramafic rocks, mostly serpentine. Minor peridotite, gabbro, and diabase; chiefly Mesozoic
- gb - Gabbro and dark dioritic rocks; chiefly Mesozoic
- Pz - Undivided Paleozoic metasedimentary rocks
- m - Undivided pre-Cenozoic metasedimentary and metavolcanic rocks of great variety
- grPz - Paleozoic and Permo-Triassic granitic rocks in the San Gabriel and Klamath Mountains
- pC - Conglomerate, shale, sandstone, limestone, dolomite, marble, gneiss, hornfels, and quartzite
- pCc - Complex of Precambrian igneous and metamorphic rocks
- grpC - Precambrian granite, syenite, anorthosite, and gabbroic rocks
- Water



SOURCE: DOC; DWR

DUDEK

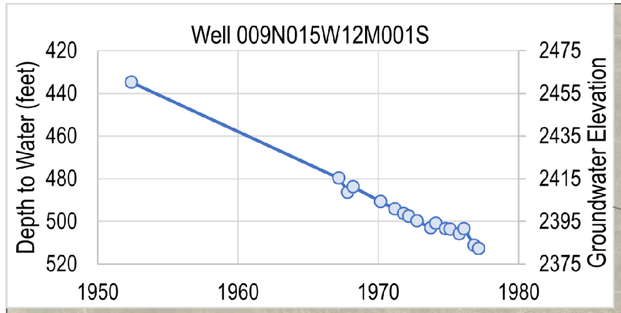
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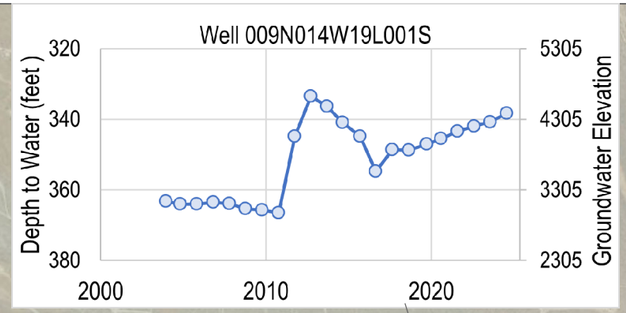
FIGURE 6

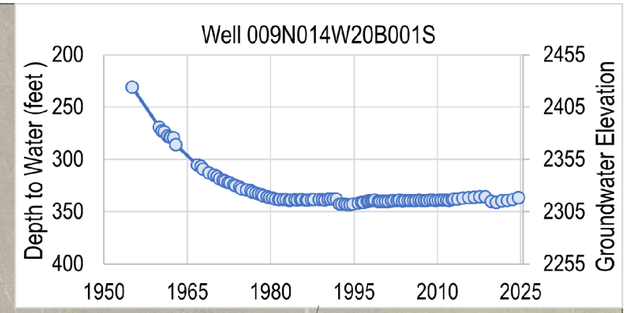
Geologic Setting

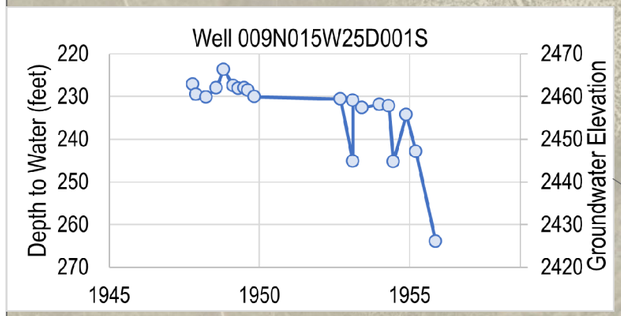
Euismod Energy Storage Project

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009N014W30K002S
009N014W29M001S
009N014W30N001S
009N014W31B001S
009N014W32D001S
009N014W32C001S

Project Boundary
NWIS Mapper Wells

SOURCE: ESRI; USGS

DUDEK

0 1,500 3,000 Feet

FIGURE 6

Groundwater Wells

Euismod Energy Storage Project

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Appendix A

Mojave Public Utility District Construction Water Permit Application

Mojave Public Utility District

CONSTRUCTION WATER PERMIT

(MARCH 2017 – 2018)

DATE: _____

LENGTH OF PERMIT: BEGINNING DATE_____

ENDING DATE _____

COMPANY NAME _____

CONTACT PERSON _____

STREET ADDRESS _____

BILLING ADDRESS _____

PHONE NUMBERS BILLING_____JOB SITE_____

OWNER OF JOB WHERE WATER IS USED_____

ADDRESS_____

PHONE NUMBER _____

WATER TANK SIZE _____AIRGAP _____YES _____NO

LICENSE # OF VEHICLES _____

FIRE HYDRANT WRENCH _____YES _____NO

LOCATION OF HYDRANT TO BE USED _____

_____

PERMIT VALID ONLY AT HYDRANT INDICATED AND PERMIT MUST BE KEPT IN VEHICLE

CONSTRUCTION WATER RATES:	$421.53per month $25.00 meter setting fee $20.00 new account charge $700.00 deposit
DEPOSIT AND FEES TOTAL:	**$1,166.53**

PRINT NAME _____

SIGNATURE _____DATE _____

(PLEASE PROVIDE A BUISNESS CARD)

NOTE: Water rate $1.25 per 1,000 gallons used. A surcharge of .18¢ is accessed for every 1,000 gallons used. (Total $1.43 per 1,000)

*****Any permit that has no usage for 30 days can be closed without notice.*****

15844 K STREET, MOJAVE, CA 93501 PHONE 661-824-4161 FAX 661-824-2361

Appendix B

Antelope Valley Groundwater Basin Adjudication Judgment

SUPERIOR COURT OF THE STATE OF CALIFORNIA

COUNTY OF LOS ANGELES - CENTRAL DISTRICT

Coordination Proceeding Special Title (Rule 1550(b))

ANTELOPE VALLEY GROUNDWATER CASES

Judicial Council Coordination Proceeding No. 4408

Santa Clara Case No.: 1-05-CV-049053

Judge: The Honorable Jack Komar, Dept. 17

[PROPOSED] JUDGMENT AND PHYSICAL SOLUTION

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Appendix A:	Non-Pumper Class Judgment.
Appendix B:	Non-Pumper Class Stipulation of Settlement.

A number of Parties have agreed and stipulated to entry of a Judgment consistent with the terms of this Judgment and Physical Solution (hereafter "this Judgment"). The stipulations of the Parties are conditioned upon further proceedings that will result in a Judgment binding all Parties to the Action. The Court, having considered the pleadings, the stipulations of the Parties, and the evidence presented, and being fully informed in the matter, approves the Physical Solution[1] contained herein. This Judgment is entered as a Judgment binding on all Parties served or appearing in this Action, including without limitation, those Parties which have stipulated to this Judgment, are subject to prior settlement(s) and judgment(s) of this Court, have defaulted or hereafter stipulate to this Judgment.

I. DESCRIPTION OF LITIGATION

1. PROCEDURAL HISTORY

1.1 Initiation of Litigation.

On October 29, 1999, Diamond Farming Company ("Diamond Farming") filed in the Riverside County Superior Court (Case No. RIC 344436) the first complaint in what would become these consolidated complex proceedings known as the Antelope Valley Groundwater Cases. Diamond Farming's complaint names as defendants the City of Lancaster, Palmdale Water District, Antelope Valley Water Company, Palm Ranch Irrigation District, Quartz Hill Water District, Rosamond Community Services District, and Mojave Public Utility District.

On February 22, 2000, Diamond Farming filed another complaint in the Riverside County Superior Court (Case No. RIC 344468). The two Diamond Farming actions were subsequently consolidated.

On January 25, 2001, Wm. Bolthouse Farms, Inc. ("Bolthouse") filed a complaint in the same Court against the same entities, as well as Littlerock Creek Irrigation District and Los Angeles Waterworks Districts Nos. 37 and 40 (Case No. RIC 353840).

[1] A "physical solution" describes an agreed upon or judicially imposed resolution of conflicting claims in a manner that advances the constitutional rule of reasonable and beneficial use of the state's water supply. (*City of Santa Maria v. Adam* (2012) 211 Cal. App. 4th 266, 288.) It is defined as "an equitable remedy designed to alleviate overdrafts and the consequential depletion of water resources in a particular area, consistent with the constitutional mandate to prevent waste and unreasonable water use and to maximize the beneficial use of this state's limited resource." (*California American Water v. City of Seaside* (2010) 183 Cal. App. 4th 471, 480.)

The Diamond Farming and Bolthouse complaints variously allege that unregulated pumping by these named public agencies (collectively the Public Water Suppliers) has irreparably harmed Diamond Farming and Bolthouse's rights to produce Groundwater from the Antelope Valley Groundwater Basin, and interfered with their rights to put that Groundwater to reasonable and beneficial uses on property they own or lease. Diamond Farming and Bolthouse's complaints seek a determination of their water rights and to quiet title as to the same.

In 2001, the Diamond Farming and Bolthouse actions were consolidated in the Riverside County Superior Court.

In August 2002, a Phase 1 trial commenced in the Riverside County Superior Court in the consolidated Diamond Farming/Bolthouse proceedings for the purpose of determining the geographic boundary of the area to be adjudicated. That Phase 1 trial was not concluded and the Court did not determine any issues or make any factual findings at that time.

1.2 General Adjudication Commenced.

In 2004, Los Angeles County Waterworks District No. 40 ("District No. 40") initiated a general Groundwater adjudication for the Antelope Valley Ground Water Basin by filing identical complaints for declaratory and injunctive relief in the Los Angeles and Kern County Superior Courts (Los Angeles County Superior Court Case No. BC 325201 and Kern County Superior Court Case No. S-1500-CV 254348). District No. 40's complaints sought a judicial determination of the respective rights of the Parties to produce Groundwater from the Antelope Valley Groundwater Basin.

On December 30, 2004, District No. 40 petitioned the Judicial Council of California for coordination of the above-referenced actions. On June 17, 2005, the Judicial Council of California granted the petition and assigned the "Antelope Valley Groundwater Cases" (Judicial Council Coordination Proceeding No. 4408) to this Court (Santa Clara County Superior Court Case No. 1-05-CV-049053 (Hon. Jack Komar)).

For procedural purposes, the Court requested that District No. 40 refile its complaint as a first amended cross-complaint in the now coordinated proceedings. Joined by the

other Public Water Suppliers, District No. 40 filed a first amended cross-complaint seeking declaratory and injunctive relief and an adjudication of the rights to all Groundwater within the Antelope Valley Groundwater Basin. The Public Water Suppliers' cross-complaint, as currently amended, requests an adjudication to protect the public's water supply, prevent water quality degradation, and stop land subsidence. Some of the Public Water Suppliers allege they have acquired prescriptive and equitable rights to the Groundwater in the Basin. They allege the Basin has been in overdraft for more than five consecutive Years and they have pumped water from the Basin for reasonable and beneficial purposes in an open, notorious, and continuous manner. They allege each non-public cross-defendant had actual or constructive notice of these activities, sufficient to establish prescriptive rights in their favor. In order to alleviate overdraft conditions and protect the Basin, the Public Water Suppliers also request a physical solution.

1.3 Other Actions

In response to the Public Water Suppliers first amended cross-complaint, numerous Parties filed cross-complaints seeking various forms of relief.

On August 30, 2006, Antelope Valley-East Kern Water Agency ("AVEK") filed a cross-complaint seeking declaratory and injunctive relief and claiming overlying rights and rights to pump the supplemental yield attributable to return flows from State Water Project water imported to the Basin.

On January 11, 2007, Rebecca Lee Willis filed a class action complaint in the Los Angeles County Superior Court (Case No. BC 364553) for herself and on behalf of a class of non-pumping overlying property owners ("Non-Pumper Class"), through which she sought declaratory relief and money damages from various public entities. Following certification, the Non-Pumper Class entered into a settlement agreement with the Public Water Suppliers concerning the matters at issue in the class complaint. On September 22, 2011, the Court approved the settlement through an amended final judgment.

On June 2, 2008, Richard A. Wood filed a class action complaint for himself and on behalf of a class of small property owners in this action ("Small Pumper Class"), *Wood v. Los*

Angeles Co. Waterworks Dist. 40, et al., (Case No.: BC 391869) through which he sought declaratory relief and money damages from various public entities. The Small Pumper Class was certified on September 2, 2008.

On February 24, 2010, following various orders of coordination, the Court granted the Public Water Suppliers' motion to transfer and consolidate all complaints and cross-complaints in this matter, with the exception of the complaint in Sheldon R. Blum, etc. v. Wm. Bolthouse Farms, Inc. (Santa Clara County Superior Court Case No. 1-05-CV-049053), which remains related and coordinated.

1.4 McCarran Amendment Issues

The Public Water Suppliers' cross-complaint names Edwards Air Force Base, California and the United States Department of the Air Force as cross-defendants, seeking the same declaratory and injunctive relief as sought against the other cross-defendants. This Judgment, or any other determination in this case regarding rights to water, is contingent on a Judgment satisfying the requirements of the McCarran Amendment, 43 U.S.C. §666. The United States reserves all rights to object or otherwise challenge any interlocutory judgment and reserves all rights to appeal a Judgment that does not satisfy the requirements of the McCarran Amendment.

1.5 Phased Trials

The Court has divided the trial in this matter into multiple phases, four of which have been tried.

Through the Phase 1 trial, the Court determined the geographical boundaries of the area adjudicated in this Action which is defined as the Basin. On November 3, 2006, the Court entered an order determining that issue.

Through the Phase 2 trial, the Court determined that all areas within the Basin are hydrologically connected and a single aquifer, and that there is sufficient hydraulic connection between the disputed areas and the rest of the Basin such that the Court must include the disputed areas within the adjudication area. The Court further determined that it would be premature to make

any determinations regarding, *inter alia*, claims that portions of the Basin should be treated as a separate area for management purposes. On November 6, 2008, the Court entered its Order after Phase Two Trial on Hydrologic Nature of Antelope Valley.

Through the Phase 3 trial, the Court determined the Basin is in a current state of overdraft and the safe yield is 110,000 acre-feet per Year. The Court found the preponderance of the evidence presented established that setting the safe yield at 110,000 acre-feet per Year will permit management of the Basin in such a way as to preserve the rights of the Parties in accordance with the California Constitution and California law. On July 13, 2011, the Court filed its Statement of Decision.

Through the Phase 4 trial, the Court determined the overall Production occurring in the Basin in calendar Years 2011 and 2012.

1.6 Defaults

Numerous Parties have failed to respond timely, or at all, to the Public Water Suppliers' cross-complaint, as amended, and their defaults have been entered. The Court has given the defaulted Parties notice of this Judgment and Physical Solution, together with the opportunity to be heard regarding this Judgment, and hereby enters default judgments against all such Parties and incorporates those default judgments into this Judgment. Pursuant to such default judgments a defaulted Party has no right to Produce Groundwater from the Basin. All Parties against which a default judgment has been entered are identified on Exhibit 1, attached hereto and incorporated herein by reference.

2. GENERAL ADJUDICATION DOES NOT APPLY TO SURFACE WATER.

Pursuant to California law, surface water use since 1914 has been governed by the Water Code. This Judgment does not apply to surface water as defined in the Water Code and is not intended to interfere with any State permitted or licensed surface water rights or pre-1914 surface water right. The impact of any surface water diversion should be considered as part of the State Water Resources Control Board permitting and licensing process and not as part of this Judgment.

II. DECREE

3. JURISDICTION, PARTIES, DEFINITIONS.

3.1 Jurisdiction. This Action is an *inter se* adjudication of all claims to the rights to Produce Groundwater from the Basin alleged between and among all Parties. This Court has jurisdiction over the subject matter and Parties herein to enter a Judgment declaring and adjudicating the rights to reasonable and beneficial use of water by the Parties in the Action pursuant to Article X, section 2 of the California Constitution.

3.2 Parties. The Court required that all Persons having or claiming any right, title or interest to the Groundwater within the Basin be notified of the Action. Notice has been given pursuant to the Court's order. All Public Water Suppliers, landowners, Non-Pumper Class and Small Pumper Class members and other Persons having or making claims have been or will be included as Parties to the Action. All named Parties who have not been dismissed have appeared or have been given adequate opportunity to appear.

3.3 Factual and Legal Issues. The complaints and cross-complaints in the Action frame many legal issues. The Action includes over 4,000 Parties, as well as the members of the Non-Pumper Class and the members of the Small Pumper Class. The Basin's entire Groundwater supply and Groundwater rights, extending over approximately 1390 square miles, have been brought to issue. The numerous Groundwater rights at issue in the case include, without limitation, overlying, appropriative, prescriptive, and federal reserved water rights to Groundwater, rights to return flows from Imported Water, rights to recycled water, rights to stored Imported Water subject to the Watermaster rules and regulations, and rights to utilize the storage space within the Basin. After several months of trial, the Court made findings regarding Basin characteristics and determined the Basin's Safe Yield. The Court's rulings and judgments in this case, including the Safe Yield determination, form the basis for this Judgment.

3.4 Need for a Declaration of Rights and Obligations for a Physical Solution. A Physical Solution for the Basin, based on a declaration of water rights and a formula for allocation of rights and obligations, is necessary to implement the mandate of Article X,

section 2 of the California Constitution and to protect the Basin and the Parties' rights to the Basin's water resources. The Physical Solution governs Groundwater, Imported Water and Basin storage space, and is intended to ensure that the Basin can continue to support existing and future reasonable and beneficial uses. A Physical Solution requires determining individual Groundwater rights for the Public Water Suppliers, landowners, Non-Pumper Class and Small Pumper Class members, and other Parties within the Basin. The Physical Solution set forth in this Judgment: (1) is a fair and reasonable allocation of Groundwater rights in the Basin after giving due consideration to water rights priorities and the mandate of Article X, section 2 of the California Constitution; (2) provides for a reasonable sharing of Imported Water costs; (3) furthers the mandates of the State Constitution and State water policy; and (4) is a remedy that gives due consideration to applicable common law rights and priorities to use Basin water and storage space without substantially impairing such rights. Combined with water conservation, water reclamation, water transfers, water banking, and improved conveyance and distribution methods within the Basin, present and future Imported Water sources are sufficient both in quantity and quality to assure implementation of a Physical Solution. This Judgment will facilitate water resource planning and development by the Public Water Suppliers and individual water users.

3.5 Definitions. As used in this Judgment, the following terms shall have the meanings set forth herein:

3.5.1 Action. The coordinated and consolidated actions included in the Antelope Valley Groundwater Cases, Judicial Council Coordination Proceeding No. 4408, Santa Clara Superior Court Case No. 1-05-CV-049053.

3.5.2 Adjusted Native Safe Yield. The Native Safe Yield minus (1) the Production Right allocated to the Small Pumper Class under Paragraph 5.1.3, (2) the Federal Reserved Water Right under Paragraph 5.1.4, and (3) the State of California Production Right under Paragraph 5.1.5. The Adjusted Native Safe Yield as of the date of entry of this Judgment is 70,686.6 acre-feet per year.

3.5.3 Administrative Assessment. The amount charged by the Watermaster for the costs incurred by the Watermaster to administer this Judgment.

3.5.4 Annual Period. The calendar Year.

3.5.5 Antelope Valley United Mutuals Group. The members of the Antelope Valley United Mutuals Group are Antelope Park Mutual Water Company, Aqua-J Mutual Water Company, Averydale Mutual Water Company, Baxter Mutual Water Company, Bleich Flat Mutual Water Company, Colorado Mutual Water Co., El Dorado Mutual Water Company, Evergreen Mutual Water Company, Land Projects Mutual Water Co., Landale Mutual Water Co., Shadow Acres Mutual Water Company, Sundale Mutual Water Company, Sunnyside Farms Mutual Water Company, Inc., Tierra Bonita Mutual Water Company, West Side Park Mutual Water Co. and White Fence Farms Mutual Water Co., together with the successor(s)-in-interest to any member thereof. Each of the members of the Antelope Valley United Mutuals Group was formed when the owner(s) of the lands that were being developed incorporated the mutual water company and transferred their water rights to the mutual water company in exchange for shares of common stock. The mutual water company owns, operates and maintains the infrastructure for the production, storage, distribution and delivery of water solely to its shareholders. The shareholders of each of these mutual water companies, who are the owners of the real property that is situated within the mutual water company's service area, have the right to have water delivered to their properties, a right appurtenant to their land. [*See, Erwin v. Gage Canal Company* (1964) 226 Cal.App.2d 189].

3.5.6 AVEK. The Antelope Valley–East Kern Water Agency.

3.5.7 Balance Assessment. The amount of money charged by the Watermaster on all Production Rights, excluding the United States' actual Production, to pay for the costs, not including infrastructure, to purchase, deliver, produce in lieu, or arrange for alternative pumping sources in the Basin.

3.5.8 Basin. The area adjudicated in this Action as shown on Exhibit 2, attached hereto and incorporated herein by reference, which lies within the boundaries of the line

labeled "Boundaries of the Adjudicated Area" and described therein. The Basin generally encompasses the Antelope Valley bordered on the West and South by the San Gabriel and Tehachapi Mountains, with the eastern boundary being the Los Angeles-San Bernardino County line, as determined by the Court.

3.5.9 Carry Over. The right to Produce an unproduced portion of an annual Production Right or a Right to Imported Water Return Flows in a Year subsequent to the Year in which the Production Right or Right to Imported Water Return Flows was originally available.

3.5.10 Conjunctive Use. A method of operation of a groundwater basin under which Imported Water is used or stored in the Basin in Years when it is available; allowing the Basin to refill, and more Groundwater is Produced in Years when Imported Water is less available.

3.5.11 Defaulting Party. A Party who failed to file a responsive pleading and against which a default judgment has been entered. A list of Defaulting Parties is attached as Exhibit 1.

3.5.12 Drought Program. The water management program in effect only during the Rampdown period affecting the operations and Replacement Water Assessments of the participating Public Water Suppliers.

3.5.13 Judgment. A judgment, consistent with Cal.C.C.P. §§ 577 and 1908(a)(1) and 43 U.S.C. § 666, determining all rights to Groundwater in the Basin, establishing a Physical Solution, and resolving all claims in the Action.

3.5.14 Groundwater. Water beneath the surface of the ground and within the zone of saturation, excluding water flowing through known and definite channels.

3.5.15 Imported Water. Water brought into the Basin from outside the watershed of the Basin as shown in Exhibit 9.

3.5.16 Imported Water Return Flows. Imported Water that net augments the Basin Groundwater supply after use.

3.5.17 In Lieu Production. The amount of Imported Water used by a Producer in a Year instead of Producing an equal amount of that Producer's Production Right**.**

3.5.18 Material Injury. Material Injury means impacts to the Basin caused by pumping or storage of Groundwater that:

3.5.18.1 Causes material physical harm to the Basin, any Subarea, or any Producer, Party or Production Right, including, but not limited to, Overdraft, degradation of water quality by introduction of contaminants to the aquifer by a Party and/or transmission of those introduced contaminants through the aquifer, liquefaction, land subsidence and other material physical injury caused by elevated or lowered Groundwater levels. Material physical harm does not include "economic injury" that results from other than direct physical causes, including any adverse effect on water rates, lease rates, or demand for water.

3.5.18.2 If fully mitigated, Material Injury shall no longer be considered to be occurring.

3.5.19 Native Safe Yield. Naturally occurring Groundwater recharge to the Basin, including "return flows" from pumping naturally occurring recharge, on an average annual basis. Imported Water Return Flows are not included in Native Safe Yield.

3.5.20 New Production. Any Production of Groundwater from the Basin not of right under this Judgment, as of the date of this Judgment.

3.5.21 Non-Overlying Production Rights. The rights held by the Parties identified in Exhibit 3, attached hereto and incorporated herein by reference.

3.5.22 Non-Pumper Class. All private (i.e., non-governmental) Persons and entities that own real property within the Basin, as adjudicated, that are not presently pumping water on their property and did not do so at any time during the five Years preceding January 18, 2006. The Non-Pumper Class includes the successors-in-interest by way of purchase, gift, inheritance, or otherwise of such Non-Pumper Class members' land within the Basin. The Non-Pumper Class excludes (1) all Persons to the extent their properties are connected to a municipal water system, public utility, or mutual water company from which they receive water

service, (2) all properties that are listed as "improved" by the Los Angeles County or Kern County Assessor's offices, unless the owners of such properties declare under penalty of perjury that they do not pump and have never pumped water on those properties, and (3) those who opted out of the Non-Pumper Class. The Non-Pumper Class does not include landowners who have been individually named under the Public Water Suppliers' cross-complaint, unless such a landowner has opted into such class.

3.5.23 Non-Pumper Class Judgment. The amended final Judgment that settled the Non-Pumper Class claims against the Public Water Suppliers approved by the Court on September 22, 2011.

3.5.24 Non-Stipulating Party. Any Party who had not executed a Stipulation for Entry of this Judgment prior to the date of approval of this Judgment by the Court.

3.5.25 Overdraft. Extractions in excess of the Safe Yield of water from an aquifer, which over time will lead to a depletion of the water supply within a groundwater basin as well as other detrimental effects, if the imbalance between pumping and extraction continues.

3.5.26 Overlying Production Rights. The rights held by the Parties identified in Exhibit 4, attached hereto and incorporated herein by reference.

3.5.27 Party (Parties). Any Person(s) that has (have) been named and served or otherwise properly joined, or has (have) become subject to this Judgment and any prior judgments of this Court in this Action and all their respective heirs, successors-in-interest and assigns. For purposes of this Judgment, a "Person" includes any natural person, firm, association, organization, joint venture, partnership, business, trust, corporation, or public entity.

3.5.28 Pre-Rampdown Production. The reasonable and beneficial use of Groundwater, excluding Imported Water Return Flows, at a time prior to this Judgment, or the Production Right, whichever is greater.

3.5.29 Produce(d). To pump Groundwater for existing and future reasonable beneficial uses.

3.5.30 Producer(s). A Party who Produces Groundwater.

3.5.31 Production. Annual amount of Groundwater Produced, stated in acre-feet of water.

3.5.32 Production Right. The amount of Native Safe Yield that may be Produced each Year free of any Replacement Water Assessment and Replacement Obligation. The total of the Production Rights decreed in this Judgment equals the Native Safe Yield. A Production Right does not include any right to Imported Water Return Flows pursuant to Paragraph 5.2.

3.5.33 Pro-Rata Increase. The proportionate increase in the amount of a Production Right, as provided in Paragraph 18.5.10, provided the total of all Production Rights does not exceed the Native Safe Yield.

3.5.34 Pro-Rata Reduction. The proportionate reduction in the amount of a Production Right, as provided in Paragraph 18.5.10, in order that the total of all Production Rights does not exceed the Native Safe Yield.

3.5.35 Public Water Suppliers. The Public Water Suppliers are Los Angeles County Waterworks District No. 40, Palmdale Water District, Quartz Hill Water District, Littlerock Creek Irrigation District, California Water Service Company, Desert Lake Community Services District, North Edwards Water District, City of Palmdale, City of Lancaster, Palm Ranch Irrigation District, Rosamond Community Services District, and West Valley County Water District.

3.5.36 Purpose of Use. The broad categories of type of water use including but not limited to municipal, irrigation, agricultural and industrial uses.

3.5.37 Rampdown. The period of time for Pre-Rampdown Production to be reduced to the Native Safe Yield in the manner described in this Judgment.

3.5.38 Recycled Water. Water that, as a result of treatment of waste, is suitable for a direct beneficial use or a controlled use that would not otherwise occur and is therefore considered a valuable resource.

3.5.39 Replacement Obligation. The obligation of a Producer to pay for Replacement Water for Production of Groundwater from the Basin in any Year in excess of the sum of such Producer's Production Right and Imported Water Return Flows.

3.5.40 Replacement Water. Water purchased by the Watermaster or otherwise provided to satisfy a Replacement Obligation.

3.5.41 Replacement Water Assessment. The amount charged by the Watermaster to pay for all costs incurred by the Watermaster related to Replacement Water.

3.5.42 Responsible Party. The Person designated by a Party as the Person responsible for purposes of filing reports and receiving notices pursuant to the provisions of this Judgment.

3.5.43 Safe Yield. The amount of annual extractions of water from the Basin over time equal to the amount of water needed to recharge the Groundwater aquifer and maintain it in equilibrium, plus any temporary surplus. [*City of Los Angeles v. City of San Fernando* (1975) 14 Cal. 3d 199, 278.]

3.5.44 Small Pumper Class. All private (i.e., non-governmental) Persons and entities that own real property within the Basin, as adjudicated, and that have been pumping less than 25 acre-feet per Year on their property during any Year from 1946 to the present. The Small Pumper Class excludes the defendants in *Wood v. Los Angeles Co. Waterworks Dist. 40, et al.*, any Person, firm, trust, corporation, or other entity in which any such defendants has a controlling interest or which is related to or affiliated with any such defendants, and the representatives, heirs, affiliates, successors-in-interest or assigns of any such excluded party. The Small Pumper Class also excludes all Persons and entities that are shareholders in a mutual water company**.** The Small Pumper Class does not include those who opted out of the Small Pumper Class.

3.5.45 Small Pumper Class Members. Individual members of the Small Pumper Class who meet the Small Pumper Class definition, and for purposes of this Judgment and any terms pertaining to water rights, where two or more Small Pumper Class Members reside

in the same household, they shall be treated as a single Small Pumper Class Member for purposes of determining water rights.

3.5.46 State of California. As used herein, State of California shall mean the State of California acting by and through the following State agencies, departments and associations: (1) The California Department of Water Resources; (2) The California Department of Parks and Recreation; (3) The California Department of Transportation; (4) The California State Lands Commission; (5) The California Department of Corrections and Rehabilitation; (6) The 50th District Agricultural Association; (7) The California Department of Veteran Affairs; (8) The California Highway Patrol; and, (9) The California Department of Military.

3.5.47 State Water Project. Water storage and conveyance facilities operated by the State of California Department of Water Resources from which it delivers water diverted from the Feather River and the Sacramento-San Joaquin Delta via the California Aqueduct to public agencies it has contracted with.

3.5.48 Stipulating Party. Any Party who has executed a Stipulation for Entry of this Judgment prior to the date of approval of this Judgment by the Court.

3.5.49 Stored Water. Water held in storage in the Basin, as a result of direct spreading or other methods, for subsequent withdrawal and use pursuant to agreement with the Watermaster and as provided for in this Judgment. Stored Water does not include Imported Water Return Flows.

3.5.50 Subareas. Portions of the Basin, as described in this document, divided for management purposes.

3.5.51 Total Safe Yield. The amount of Groundwater that may be safely pumped from the Basin on a long-term basis. Total Safe Yield is the sum of the Native Safe Yield plus the Imported Water Return Flows.

3.5.52 Watermaster. The Person(s) appointed by the Court to administer the provisions of this Judgment.

3.5.53 Watermaster Engineer. The engineering or hydrology expert or firm retained by the Watermaster to perform engineering and technical analysis and water administration functions as provided for in this Judgment.

3.5.54 District No. 40. Los Angeles County Waterworks District No. 40.

3.5.55 Year. Calendar year.

4. SAFE YIELD AND OVERDRAFT

4.1 Safe Yield: The Native Safe Yield of the Basin is 82,300 acre-feet per Year. With the addition of Imported Water Return Flows, the Total Safe Yield is approximately 110,000 acre-feet per Year, but will vary annually depending on the volume of Imported Water.

4.2 Overdraft: In its Phase 3 trial decision, the Court held that the Basin, defined by the Court's March 12, 2007 Revised Order After Hearing On Jurisdictional Boundaries, is in a state of overdraft based on estimate of extraction and recharge, corroborated by physical evidence of conditions in the Basin. Reliable estimates of the long-term extractions from the Basin have exceeded reliable estimates of the Basin's recharge by significant margins, and empirical evidence of overdraft in the Basin corroborates that conclusion. Portions of the aquifer have sustained a significant loss of Groundwater storage since 1951. The evidence is persuasive that current extractions exceed recharge and therefore that the Basin is in a state of overdraft. The Court's full Phase 3 trial decision is attached as Exhibit 5 and is incorporated herein by reference.

5. PRODUCTION RIGHTS

5.1 Allocation of Rights to Native Safe Yield. Consistent with the goals of this Judgment and to maximize reasonable and beneficial use of the Groundwater of the Basin pursuant to Article X, section 2 of the California Constitution, all the Production Rights established by this Judgment are of equal priority, except the Federal Reserved Water Right which is addressed in Paragraph 5.1.4, and with the reservation of the Small Pumper Class Members' right to claim a priority under Water Code section 106.

5.1.1 Overlying Production Rights. The Parties listed in Exhibit 4, attached hereto and incorporated herein by reference, have Overlying Production Rights. Exhibit 4 sets forth the following for each Overlying Production Right: (1) the Pre-Rampdown Production; (2) the Production Right; and (3) the percentage of the Production from the Adjusted Native Safe Yield.

5.1.1.1 The Parties listed on Exhibit 4 have the right to Produce Groundwater, on an annual basis, up to their Overlying Production Right set forth in Exhibit 4 for each Party. Each Party's Overlying Production Right is subject to the following conditions and limitations:

5.1.1.2 Pursuant to the terms of this Judgment, the Parties listed on Exhibit 4 have the right to Produce their Overlying Production Right for use on land they own or lease and without the need for Watermaster approval.

5.1.1.3 Overlying Production Rights may be transferred pursuant to the provisions of Paragraph 16 of this Judgment.

5.1.1.4 Overlying Production Rights are subject to Pro-Rata Reduction or Increase only pursuant to Paragraph 18.5.10.

5.1.2 Non-Pumper Class Rights. The Non-Pumper Class members claim the right to Produce Groundwater from the Native Safe Yield for reasonable and beneficial uses on their overlying land as provided for in this Judgment. On September 22, 2011, the Court approved the Non-Pumper Class Stipulation of Settlement through an amended final judgment that settled the Non-Pumper Class' claims against the Public Water Suppliers ("Non-Pumper Class Judgment"). A copy of the Non-Pumper Class Judgment and the Non-Pumper Class Stipulation of Settlement are attached for reference only as Appendices A and B. This Judgment is consistent with the Non-Pumper Class Stipulation of Settlement and Judgment. Future Production by a member of the Non-Pumper Class is addressed in the Physical Solution.

5.1.2.1 The Non-Pumper Class members shall have no right to transfer water pursuant to this Judgment.

5.1.3 Small Pumper Class Production Rights. Subject only to the closure of the Small Pumper Class membership, the Small Pumper Class's aggregate Production Right is 3806.4 acre-feet per Year. Allocation of water to the Small Pumper Class is set at an average Small Pumper Class Member amount of 1.2 acre-feet per existing household or parcel based upon the 3172 known Small Pumper Class Member parcels at the time of this Judgment. Any Small Pumper Class Member may Produce up to and including 3 acre-feet per Year per existing household for reasonable and beneficial use on their overlying land, and such Production will not be subject to Replacement Water Assessment. Production by any Small Pumper Class Member above 3 acre-feet per Year per household or parcel will be subject to Replacement Water Assessment, as set forth in this Judgment. Administrative Assessments for unmetered Production by Small Pumper Class Members shall be set based upon the allocation of 1.2 acre-feet per Year per household or parcel, whichever is the case; metered Production shall be assessed in accord with the actual Production. A Small Pumper Class Member who is lawfully, by permit, operating a shared well with an adjoining Small Pumper Class Member, shall have all of the same rights and obligations under this Judgment without regard to the location of the shared well, and such shared use is not considered a prohibited transfer of a pumping right under Paragraph 5.1.3.3.

5.1.3.1 The Production of Small Pumper Class Members of up to 3 acre-feet per Year of Groundwater per household or per parcel for reasonable and beneficial use shall only be subject to reduction if: (1) the reduction is based upon a statistically credible study and analysis of the Small Pumper Class' actual Native Safe Yield Production, as well as the nature of the use of such Native Safe Yield, over at least a three Year period; and (2) the reduction is mandated by Court order after notice to the Small Pumper Class Members affording a reasonable opportunity for the Court to hear any Small Pumper Class Member objections to such reduction, including a determination that Water Code section 106 may apply so as to prevent a reduction.

5.1.3.2 The primary means for monitoring the Small Pumper Class Members' Groundwater use under the Physical Solution will be based on physical inspection by

the Watermaster, including the use of aerial photographs and satellite imagery. All Small Pumper Class Members agree to permit the Watermaster to subpoena the electrical meter records associated with their Groundwater wells on an annual basis. Should the Watermaster develop a reasonable belief that a Small Pumper Class Member household is using in excess of 3 acre-feet per Year, the Watermaster may cause to be installed a meter on such Small Pumper Class Member's well at the Small Pumper Class Member's expense.

5.1.3.3 The pumping rights of Small Pumper Class Members are not transferable separately from the parcel of property on which the water is pumped, provided however a Small Pumper Class Member may move their water right to another parcel owned by that Small Pumper Class Member with approval of the Court. If a Small Pumper Class Member parcel is sold, absent a written contract stating otherwise and subject to the provisions of this Judgment, the water right for that Small Pumper Class Member parcel shall transfer to the new owners of that Small Pumper Class Member parcel. The pumping rights of Small Pumper Class Members may not be aggregated for use by a purchaser of more than one Small Pumper Class Member's property.

5.1.3.4 Defaults or default judgments entered against any Small Pumper Class Member who did not opt out of the Small Pumper Class are hereby deemed non-operative and vacated *nunc pro tunc*, but only with respect to their ownership of real property meeting the Small Pumper Class definition.

5.1.3.5 The Small Pumper Class shall be permanently closed to new membership upon issuance by the Court of its order granting final approval of the Small Pumper Class Settlement (the "Class Closure Date"), after the provision of notice to the Class of the Class Closure Date. Any Person or entity that does not meet the Small Pumper Class definition prior to the Class Closure Date is not a Member of the Small Pumper Class. Similarly, any additional household constructed on a Small Pumper Class Member parcel after the Class Closure Date is not entitled to a Production Right as set forth in Paragraphs 5.1.3 and 5.1.3.1.

5.1.3.6 Unknown Small Pumper Class Members are defined as: (1) those Persons or entities that are not identified on the list of known Small Pumper Class Members maintained by class counsel and supervised and controlled by the Court as of the Class Closure Date; and (2) any unidentified households existing on a Small Pumper Class Member parcel prior to the Class Closure Date. Within ten (10) Court days of the Class Closure Date, class counsel for the Small Pumper Class shall publish to the Court website and file with the Court a list of the known Small Pumper Class Members.

5.1.3.7 Given the limited number of additions to the Small Pumper Class during the more than five Years since the initial notice was provided to the Class, the Court finds that the number of potentially unknown Small Pumper Class Members and their associated water use is likely very low, and any Production by unknown Small Pumper Class Members is hereby deemed to be *de minimis* in the context of this Physical Solution and shall not alter the Production Rights decreed in this Judgment. However, whenever the identity of any unknown Small Pumper Class Member becomes known, that Small Pumper Class Member shall be bound by all provisions of this Judgment, including without limitation, the assessment obligations applicable to Small Pumper Class Members.

5.1.3.8 In recognition of his service as class representative, Richard Wood has a Production Right of up to five 5 acre-feet per Year for reasonable and beneficial use on his parcel free of Replacement Water Assessment. This Production Right shall not be transferable and is otherwise subject to the provisions of this Judgment.

5.1.4 Federal Reserved Water Right. The United States has a right to Produce 7,600 acre-feet per Year from the Native Safe Yield as a Federal Reserved Water Right for use for military purposes at Edwards Air Force Base and Air Force Plant 42. *See Cappaert v. United States*, 426 U.S. 128, 138 (1976); *United States v. New Mexico*, 438 U.S. 696, 700 (1978). Maps of the boundaries of Edwards Air Force Base and Plant 42 are attached hereto as Exhibits 6 and 7. The United States may Produce any or all of this water at any time for uses consistent with the purposes of its Federal Reserved Water Right. Water uses at Edwards Air Force Base and

Plant 42 as of the date of this Judgment are consistent with the military purposes of the facilities. The Federal Reserved Water Right to Produce 7,600 acre-feet per Year is not subject to Rampdown or any reduction including Pro-Rata Reduction due to Overdraft.

5.1.4.1 In the event the United States does not Produce its entire 7,600 acre-feet in any given Year, the unused amount in any Year will be allocated to the Non-Overlying Production Rights holders, except for Boron Community Services District and West Valley County Water District, in the following Year, in proportion to Production Rights set forth in Exhibit 3. This Production of unused Federal Reserved Water Right Production does not increase any Non-Overlying Production Right holder's decreed Non-Overlying Production Right amount or percentage, and does not affect the United States' ability to fully Produce its Federal Reserved Water Right as provided in Paragraph 5.1.4 in any subsequent Year. Upon entry of a judgment confirming its Federal Reserved Water Rights consistent with this Judgment, the United States waives any rights under State law to a correlative share of the Groundwater in the Basin underlying Edwards Air Force Base and Air Force Plant 42.

5.1.4.2 The United States is not precluded from acquiring State law based Production Rights in excess of its Federal Reserved Water Right through the acquisition of Production Rights in the Basin.

5.1.5 State of California Production Rights. The State of California shall have a Production Right of 207 acre-feet per Year from the Native Safe Yield and shall have the additional right to Produce Native Safe Yield as set forth in Paragraphs 5.1.5.3 and 5.1.5.4 below. This Production of Native Safe Yield shall not be subject to Pro-Rata Reduction. Any Production by the State of California above 207 acre-feet per Year that is not Produced pursuant to Paragraphs 5.1.5.3 and 5.1.5.4 below shall be subject to Replacement Assessments. All Production by the State of California shall also be subject to the Administrative Assessment and the Balance Assessment except in emergency situations as provided in Paragraph 5.1.5.4.3 below. Any Production of Native Safe Yield pursuant to Paragraphs 5.1.5.3 and 5.1.5.4 below shall not reduce any other Party's Production Rights pursuant to this Judgment.

5.1.5.1 The State of California's Production Right in the amount of 207 acre-feet per Year is allocated separately to each of the State agencies, departments, and associations as listed below in Paragraph 5.1.5.2. Notwithstanding the separate allocations, any Production Right, or portion thereof, of one of the State agencies, departments, and associations may be transferred or used by the other State agencies, departments, and associations on parcels within the Basin. This transfer shall be done by agreement between the State agencies, departments, or associations without a Replacement Water Assessment and without the need for Watermaster approval. Prior to the transfer of another State agency, department, or association's Production Right, the State agency, department, or association receiving the ability to use the Production Right shall obtain written consent from the transferor. Further, the State agency, department, or association receiving the Production Right shall notify the Watermaster of the transfer.

5.1.5.2 The Production Rights are allocated as follows and may be exercised by the following nine (9) State agencies:

5.1.5.2.1 The California Department of Water Resources-104 acre- feet per Year.

5.1.5.2.2 The California Department of Parks and Recreation-9 acre-feet per Year.

5.1.5.2.3 The California Department of Transportation -47 acre-feet per Year.

5.1.5.2.4 The California State Lands Commission-3 acre-feet per Year

5.1.5.2.5 The California Department of Corrections and Rehabilitation-3 acre-feet per Year.

5.1.5.2.6 The 50th District Agricultural Association-32 acre-feet per Year.

5.1.5.2.7 The California Department of Veteran Affairs-3 acre-feet per Year.

5.1.5.2.8 The California Highway Patrol -3 acre- feet per Year.

5.1.5.2.9 The California Department of Military-3 acre-feet per Year.

5.1.5.3 If at any time, the amount of water supplied to the State of California by District No. 40, AVEK, or Rosamond Community Service District is no longer available or no longer available at reasonable rates to the State of California, the State of California shall have the additional right to Produce Native Safe Yield to meet its reasonable and beneficial needs up to 787 acre-feet per Year, the amount provided by District No. 40, AVEK and Rosamond Community Services District to the State of California in the Year 2013.

5.1.5.4 The following provisions will also apply to each specific agency listed below:

5.1.5.4.1 California Department of Corrections & Rehabilitation (CDCR). In addition to its Production Right pursuant to Paragraphs 5.1.5.2.5 and 5.1.5.3, CDCR may also pump Groundwater: (1) to the extent necessary to conduct periodic maintenance of its well pumping equipment; and (2) as a supplementary source of drinking water or as an emergency back-up supply as set forth in Water Code section 55338.

5.1.5.4.2 California Department of Water Resources (DWR). In addition to its Production pursuant to Paragraphs 5.1.5.2.1 and 5.1.5.3 above, DWR may also pump Native Safe Yield from the area adjacent to and beneath the California Aqueduct and related facilities at a time and in an amount it determines is reasonably necessary to protect the physical integrity of the California Aqueduct and related facilities from high Groundwater. Further, notwithstanding provisions of this Judgment prohibiting the export of Native Safe Yield from the Basin, DWR may place the Native Safe Yield that it pumps for the protection of the California Aqueduct into the California Aqueduct, whether or not such Native Safe Yield is

ultimately returned to the Basin. However, DWR and AVEK shall use their best efforts to enter into an agreement allowing AVEK to recapture the Native Safe Yield DWR puts into the California Aqueduct and return it to the Basin.

5.1.5.4.3 Department of Military. The Department of Military may Produce additional Groundwater in an amount necessary to protect and promote public health and safety during an event deemed to be an emergency by the Department of Military pursuant to California Government Code sections 8567 and 8571, and California Military and Veterans Code sections 143 and 146. Such Production shall be free from any assessment, including any Administrative, Balance, or Replacement Water Assessment.

5.1.5.4.4 The California Department of Veterans Affairs. The California Department of Veteran Affairs has begun the expansion and increased occupancy project of the Veterans Home of California – Lancaster facility owned by the State of California by and on behalf of the California Department of Veterans Affairs. The California Department of Veterans Affairs fully expects that it will be able to purchase up to an additional 40 acre-feet per Year for use at this facility from District No. 40.

5.1.6 Non-Overlying Production Rights. The Parties listed in Exhibit 3 have Production Rights in the amounts listed in Exhibit 3. Exhibit 3 is attached hereto, and incorporated herein by reference. Non-Overlying Production Rights are subject to Pro-Rata Reduction or Increase only pursuant to Paragraph 18.5.10.

5.1.7 City of Lancaster. The City of Lancaster ("Lancaster") can Produce up to 500 acre-feet of Groundwater for reasonable and beneficial uses at its National Soccer Complex. Such production shall only be subject to Administrative Assessment and no other assessments. Lancaster will stop Producing Groundwater and will use Recycled Water supplied from District No. 40, when it becomes available, to meet the reasonable and beneficial water uses of the National Soccer Complex. Lancaster may continue to Produce up to 500 acre-feet of Groundwater until Recycled Water becomes available to serve the reasonable and beneficial water uses of the National Soccer Complex. Nothing in this paragraph shall be

construed as requiring Lancaster to have any responsibility for constructing, or in any way contributing to the cost of, any infrastructure necessary to deliver Recycled Water to the National Soccer Complex.

5.1.8 Antelope Valley Joint Union High School District. Antelope Valley Joint Union High School District is a public school entity duly organized and existing under the laws of the State of California. In addition to the amounts allocated to Antelope Valley Joint Union High School District ("AVJUHSD") and pursuant to Exhibit 4, AVJUHSD can additionally produce up to 29 acre-feet of Groundwater for reasonable and beneficial uses on its athletic fields and other public spaces. When recycled water becomes available to Quartz Hill High School (located at 6040 West Avenue L, Quartz Hill, CA 93535) which is a site that is part of AVJUHSD, at a price equal to or less than the lowest cost of any of the following: Replacement Obligation, Replacement Water, or other water that is delivered to AVJUHSD at Quartz Hill High School, AVJUHSD will stop producing the 29 acre-feet of Groundwater allocated to it and use recycled water as a replacement to its 29 acre-feet production. AVJUHSD retains its production rights and allocation pursuant to Exhibit 4 of this Judgment.

5.1.9 Construction of Solar Power Facilities. Any Party may Produce Groundwater in excess of its Production Right allocated to it in Exhibit 4 for the purpose of constructing a facility located on land overlying the Basin that will generate, distribute or store solar power through and including December 31, 2016 and shall not be charged a Replacement Water Assessment or incur a Replacement Obligation for such Production in excess of its Production Rights. Any amount of such production in excess of the Production Right through and including December 31, 2016 shall be reasonable to accomplish such construction but shall not exceed 500 acre-feet per Year for all Parties using such water.

5.1.10 Production Rights Claimed by Non-Stipulating Parties. Any claim to a right to Produce Groundwater from the Basin by a Non-Stipulating Party shall be subject to procedural or legal objection by any Stipulating Party. Should the Court, after taking evidence, rule that a Non-Stipulating Party has a Production Right, the Non-Stipulating Party

shall be subject to all provisions of this Judgment, including reduction in Production necessary to implement the Physical Solution and the requirements to pay assessments, but shall not be entitled to benefits provided by Stipulation, including but not limited to Carry Over pursuant to Paragraph 15 and Transfers pursuant to Paragraph 16. If the total Production by Non-Stipulating Parties is less than seven percent (7%) of the Native Safe Yield, such Production will be addressed when Native Safe Yield is reviewed pursuant to Paragraph 18.5.9. If the total Production by Non-Stipulating Parties is greater than seven percent (7%) of the Native Safe Yield, the Watermaster shall determine whether Production by Non-Stipulating Parties would cause Material Injury, in which case the Watermaster shall take action to mitigate the Material Injury, including, but not limited to, imposing a Balance Assessment, provided however, that the Watermaster shall not recommend any changes to the allocations under Exhibits 3 and 4 prior to the redetermination of Native Safe Yield pursuant to Paragraph 18.5.9. In all cases, however, whenever the Watermaster re-determines the Native Safe Yield pursuant to Paragraph 18.5.9, the Watermaster shall take action to prevent Native Safe Yield Production from exceeding the Native Safe Yield on a long-term basis.

5.2 Rights to Imported Water Return Flows.

5.2.1 Rights to Imported Water Return Flows. Return Flows from Imported Water used within the Basin which net augment the Basin Groundwater supply are not a part of the Native Safe Yield. Subject to review pursuant to Paragraph 18.5.11, Imported Water Return Flows from Agricultural Imported Water use are 34% and Imported Water Return Flows from Municipal and Industrial Imported Water use are 39% of the amount of Imported Water used.

5.2.2 Water Imported Through AVEK. The right to Produce Imported Water Return Flows from water imported through AVEK belongs exclusively to the Parties identified on Exhibit 8, attached hereto, and incorporated herein by reference. Each Party shown on Exhibit 8 shall have a right to Produce an amount of Imported Water Return Flows in any Year equal to the applicable percentage multiplied by the average amount of Imported Water used

by that Party within the Basin in the preceding five Year period (not including Imported Stored Water in the Basin). Any Party that uses Imported Water on lands outside the Basin but within the watershed of the Basin shall be entitled to Produce Imported Water Return Flows to the extent such Party establishes to the satisfaction of the Watermaster the amount that its Imported Water Return Flows augment the Basin Groundwater supply. This right shall be in addition to that Party's Overlying or Non-Overlying Production Right. Production of Imported Water Return Flows is not subject to the Replacement Water Assessment. All Imported Water Return Flows from water imported through AVEK and not allocated to Parties identified in Exhibit 8 belong exclusively to AVEK, unless otherwise agreed by AVEK. Notwithstanding the foregoing, Boron Community Services District shall have the right to Produce Imported Water Return Flows, up to 78 acre-feet annually, based on the applicable percentage multiplied by the average amount of Imported Water used by Boron Community Services District outside the Basin, but within its service area in the preceding five Year period (not including Imported Stored Water in the Basin) without having to establish that the Imported Water Return Flows augment the Basin Groundwater supply.

5.2.3 Water Not Imported Through AVEK. After entry of this Judgment, a Party other than AVEK that brings Imported Water into the Basin from a source other than AVEK shall notify the Watermaster each Year quantifying the amount and uses of the Imported Water in the prior Year. The Party bringing such Imported Water into the Basin shall have a right to Produce an amount of Imported Water Return Flows in any Year equal to the applicable percentage set forth above multiplied by the average annual amount of Imported Water used by that Party within the Basin in the preceding five Year period (not including Imported Stored Water in the Basin).

5.3 Rights to Recycled Water. The owner of a waste water treatment plant operated for the purpose of treating wastes from a sanitary sewer system shall hold the exclusive right to the Recycled Water as against anyone who has supplied the water discharged into the waste water collection and treatment system. At the time of this Judgment those Parties that

produce Recycled Water are Los Angeles County Sanitation Districts No. 14 and No. 20, Rosamond Community Services District, and Edwards Air Force Base. Nothing in this Judgment affects or impairs this ownership or any existing or future agreements for the use of Recycled Water within the Basin.

6. INJUNCTION

6.1 Injunction Against Unauthorized Production. Each and every Party, its officers, directors, agents, employees, successors, and assigns, except for the United States, is ENJOINED AND RESTRAINED from Producing Groundwater from the Basin except pursuant to this Judgment. Without waiving or foreclosing any arguments or defenses it might have, the United States agrees that nothing herein prevents or precludes the Watermaster or any Party from seeking to enjoin the United States from Producing water in excess of its 7,600 acre-foot per Year Reserved Water Right if and to the extent the United States has not paid the Replacement Assessments for such excess Production or entered into written consent to the imposition of Replacement Assessments as described in Paragraph 9.2.

6.2 Injunction Re Change in Purpose of Use Without Notice to The Watermaster. Each and every Party, its officers, directors, agents, employees, successors, and assigns, is ENJOINED AND RESTRAINED from changing its Purpose of Use of Groundwater at any time without notifying the Watermaster.

6.3 Injunction Against Unauthorized Capture of Stored Water. Each and every Party, its officers, directors, agents, employees, successors and assigns, is ENJOINED AND RESTRAINED from claiming any right to Produce the Stored Water that has been recharged in the Basin, except pursuant to a Storage Agreement with the Watermaster, and as allowed by this Judgment, or pursuant to water banking operations in existence and operating at the time of this Judgment as identified in Paragraph 14. This Paragraph does not prohibit Parties from importing water into the Basin for direct use, or from Producing or using Imported Water Return Flows owned by such Parties pursuant to Paragraph 5.2.

6.4 Injunction Against Transportation From Basin. Except upon further order of the Court, each and every Party, its officers, agents, employees, successors and assigns, is ENJOINED AND RESTRAINED from transporting Groundwater hereafter Produced from the Basin to areas outside the Basin except as provided for by the following. The United States may transport water Produced pursuant to its Federal Reserved Water Right to any portion of Edwards Air Force Base, whether or not the location of use is within the Basin. This injunction does not prevent Saint Andrew's Abbey, Inc., U.S. Borax and Tejon Ranchcorp/Tejon Ranch Company from conducting business operations on lands both inside and outside the Basin boundary, and transporting Groundwater Produced consistent with this Judgment for those operations and for use on those lands outside the Basin and within the watershed of the Basin as shown in Exhibit 9. This injunction also does not apply to any California Aqueduct protection dewatering Produced by the California Department of Water Resources. This injunction does not apply to the recovery and use of stored Imported Water by any Party that stores Imported Water in the Basin pursuant to Paragraph 14 of this Judgment.

6.4.1 Export by Boron and Phelan Piñon Hills Community Services Districts.

6.4.1.1 The injunction does not prevent Boron Community Services District from transporting Groundwater Produced consistent with this Judgment for use outside the Basin, provided such water is delivered within its service area.

6.4.1.2 The injunction does not apply to any Groundwater Produced within the Basin by Phelan Piñon Hills Community Services District and delivered to its service areas, so long as the total Production does not exceed 1,200 acre-feet per Year, such water is available for Production without causing Material Injury, and the District pays a Replacement Water Assessment pursuant to Paragraph 9.2, together with any other costs deemed necessary to protect Production Rights decreed herein, on all water Produced and exported in this manner.

6.5 Continuing Jurisdiction. The Court retains and reserves full jurisdiction, power and authority for the purpose of enabling the Court, upon a motion of a Party or Parties

noticed in accordance with the notice procedures of Paragraph 20.6 hereof, to make such further or supplemental order or directions as may be necessary or appropriate to interpret, enforce, administer or carry out this Judgment and to provide for such other matters as are not contemplated by this Judgment and which might occur in the future, and which if not provided for would defeat the purpose of this Judgment.

III. PHYSICAL SOLUTION

7. GENERAL

7.1 Purpose and Objective. The Court finds that the Physical Solution incorporated as part of this Judgment: (1) is a fair and equitable basis for satisfaction of all water rights in the Basin; (2) is in furtherance of the State Constitution mandate and the State water policy; and (3) takes into account water rights priorities, applicable public trust interests and the Federal Reserved Water Right. The Court finds that the Physical Solution establishes a legal and practical means for making the maximum reasonable and beneficial use of the waters of the Basin by providing for the long-term Conjunctive Use of all available water in order to meet the reasonable and beneficial use requirements of water users in the Basin. Therefore, the Court adopts, and orders the Parties to comply with this Physical Solution.

7.2 Need For Flexibility. This Physical Solution must provide flexibility and adaptability to allow the Court to use existing and future technological, social, institutional, and economic options in order to maximize reasonable and beneficial water use in the Basin.

7.3 General Pattern of Operations. A fundamental premise of the Physical Solution is that all Parties may Produce sufficient water to meet their reasonable and beneficial use requirements in accordance with the terms of this Judgment. To the extent that Production by a Producer exceeds such Producer's right to Produce a portion of the Total Safe Yield as provided in this Judgment, the Producer will pay a Replacement Water Assessment to the Watermaster and the Watermaster will provide Replacement Water to replace such excess production according to the methods set forth in this Judgment.

7.4 Water Rights. A Physical Solution for the Basin based upon a declaration of water rights and a formula for allocation of rights and obligations is necessary to implement the mandate of Article X, section 2 of the California Constitution. The Physical Solution requires quantifying the Producers' rights within the Basin in a manner which will reasonably allocate the Native Safe Yield and Imported Water Return Flows and which will provide for sharing Imported Water costs. Imported Water sources are or will be available in amounts which, when combined with water conservation, water reclamation, water transfers, and improved conveyance and distribution methods within the Basin, will be sufficient in quantity and quality to assure implementation of the Physical Solution. Sufficient information and data exists to allocate existing water supplies, taking into account water rights priorities, within the Basin and as among the water users. The Physical Solution provides for delivery and equitable distribution of Imported Water to the Basin.

8. RAMPDOWN

8.1 Installation of Meters. Within two (2) Years from the entry of this Judgment all Parties other than the Small Pumper Class shall install meters on their wells for monitoring Production. Each Party shall bear the cost of installing its meter(s). Monitoring or metering of Production by the Small Pumper Class shall be at the discretion of the Watermaster, subject to the provisions of Paragraph 5.1.3.2.

8.2 Rampdown Period. The "Rampdown Period" is seven Years beginning on the January 1 following entry of this Judgment and continuing for the following seven (7) Years.

8.3 Reduction of Production During Rampdown. During the first two Years of the Rampdown Period no Producer will be subject to a Replacement Water Assessment. During Years three through seven of the Rampdown Period, the amount that each Party may Produce from the Native Safe Yield will be progressively reduced, as necessary, in equal annual increments, from its Pre-Rampdown Production to its Production Right. Except as is determined to be exempt during the Rampdown period pursuant to the Drought Program provided for in

Paragraph 8.4, any amount Produced over the required reduction shall be subject to Replacement Water Assessment. The Federal Reserved Water Right is not subject to Rampdown.

8.4 Drought Program During Rampdown for Participating Public Water Suppliers. During the Rampdown period a drought water management program ("Drought Program") will be implemented by District No. 40, Quartz Hill Water District, Littlerock Creek Irrigation District, California Water Service Company, Desert Lake Community Services District, North Edwards Water District, City of Palmdale, and Palm Ranch Irrigation District, (collectively, "Drought Program Participants"), as follows:

8.4.1 During the Rampdown period, District No. 40 agrees to purchase from AVEK each Year at an amount equal to 70 percent of District No. 40's total annual demand if that amount is available from AVEK at no more than the then current AVEK treated water rate. If that amount is not available from AVEK, District No. 40 will purchase as much water as AVEK makes available to District No. 40 at no more than the then current AVEK treated water rate. Under no circumstances will District No. 40 be obligated to purchase more than 50,000 acre-feet of water annually from AVEK. Nothing in this Paragraph affects AVEK's water allocation procedures as established by its Board of Directors and AVEK's Act.

8.4.2 During the Rampdown period, the Drought Program Participants each agree that, in order to minimize the amount of excess Groundwater Production in the Basin, they will use all water made available by AVEK at no more than the then current AVEK treated water rate in any Year in which they Produce Groundwater in excess of their respective rights to Produce Groundwater under this Judgment. During the Rampdown period, no Production by a Drought Program Participant shall be considered excess Groundwater Production exempt from a Replacement Water Assessment under this Drought Program unless a Drought Program Participant has utilized all water supplies available to it including its Production Right to Native Safe Yield, Return Flow rights, unused Production allocation of the Federal Reserved Water Rights, Imported Water, and Production rights previously transferred from another party. Likewise, no Production by a Drought Program Participant will be considered excess

Groundwater Production exempt from a Replacement Water Assessment under this Drought Program in any Year in which the Drought Program Participant has placed water from such sources described in this Paragraph 8.4.2 into storage or has transferred such water to another Person or entity.

8.4.3 During the Rampdown period, the Drought Program Participants will be exempt from the requirement to pay a Replacement Water Assessment for Groundwater Production in excess of their respective rights to Produce Groundwater under this Judgment up to a total of 40,000 acre-feet over the Rampdown Period with a maximum of 20,000 acre-feet in any single Year for District No. 40 and a total of 5,000 acre-feet over the Rampdown Period for all other Drought Program Participants combined. During any Year that excess Groundwater is produced under this Drought Program, all Groundwater Production by the Drought Program Participants will be for the purpose of a direct delivery to customers served within their respective service areas and will not be transferred to other users within the Basin.

8.4.4 Notwithstanding the foregoing, the Drought Program Participants remain subject to the Material Injury limitation as provided in this Judgment.

8.4.5 Notwithstanding the foregoing, the Drought Program Participants remain subject to a Balance Assessment as provided in Paragraph 9.3 of this Judgment.

9. ASSESSMENTS.

9.1 Administrative Assessment. Administrative Assessments to fund the Administrative Budget adopted by the Watermaster shall be levied uniformly on an annual basis against (1) each acre foot of a Party's Production Right as described in Paragraph 5.1, (2) each acre foot of a Party's right to Produce Imported Water Return Flows as determined pursuant to Paragraph 5.2, (3) each acre foot of a Party's Production for which a Replacement Water Assessment has been imposed pursuant to Paragraph 9.2, and (4) during the Rampdown, each acre foot of a Party's Production in excess of (1)-(3), above, excluding Production from Stored Water and/or Carry Over water, except that the United States shall be subject to the Administrative Assessment only on the actual Production of the United States. During the

Rampdown the Administrative Assessment shall be no more than five (5) dollars per acre foot, or as ordered by the Court upon petition of the Watermaster. Non-Overlying Production Rights holders using the unused Production allocation of the Federal Reserved Water Right shall be subject to Administrative Assessments on water the Non-Overlying Production Rights holders Produce pursuant to Paragraph 5.1.4.1.

9.2 Replacement Water Assessment. In order to ensure that each Party may fully exercise its Production Right, there will be a Replacement Water Assessment. Except as is determined to be exempt during the Rampdown period pursuant to the Drought Program provided for in Paragraph 8.4, the Watermaster shall impose the Replacement Water Assessment on any Producer whose Production of Groundwater from the Basin in any Year is in excess of the sum of such Producer's Production Right and Imported Water Return Flow available in that Year, provided that no Replacement Water Assessment shall be imposed on the United States except upon the United States' written consent to such imposition based on the appropriation by Congress, and the apportionment by the Office of Management and Budget, of funds that are available for the purpose of, and sufficient for, paying the United States' Replacement Water Assessment. The Replacement Water Assessment shall not be imposed on the Production of Stored Water, In-Lieu Production or Production of Imported Water Return Flows. The amount of the Replacement Water Assessment shall be the amount of such excess Production multiplied by the cost to the Watermaster of Replacement Water, including any Watermaster spreading costs. All Replacement Water Assessments collected by the Watermaster shall be used to acquire Imported Water from AVEK, Littlerock Creek Irrigation District, Palmdale Water District, or other entities. AVEK shall use its best efforts to acquire as much Imported Water as possible in a timely manner. If the Watermaster encounters delays in acquiring Imported Water which, due to cost increases, results in collected assessment proceeds being insufficient to purchase all Imported Water for which the Assessments were made, the Watermaster shall purchase as much water as the proceeds will allow when the water becomes available. If available Imported Water is insufficient to fully meet the Replacement Water obligations under contracts, the Watermaster

shall allocate the Imported Water for delivery to areas on an equitable and practicable basis pursuant to the Watermaster rules and regulations.

9.2.1 The Non-Pumper Class Stipulation of Settlement, executed by its signatories and approved by the Court in the Non-Pumper Class Judgment, specifically provides for imposition of a Replacement Water Assessment on Non-Pumper Class members. This Judgment is consistent with the Non-Pumper Class Stipulation of Settlement and Judgment. The Non-Pumper Class members specifically agreed to pay a replacement assessment if that member produced "more than its annual share" of the Native Safe Yield less the amount of the Federal Reserved Right. (See Appendix B at paragraph V., section D. Replacement Water.) In approving the Non-Pumper Class Stipulation of Settlement this Court specifically held in its Order after Hearing dated November 18, 2010, that "the court determination of physical solution cannot be limited by the Class Settlement." The Court also held that the Non-Pumper Class Stipulation of Settlement "may not affect parties who are not parties to the settlement."

9.2.2 Evidence presented to the Court demonstrates that Production by one or more Public Water Suppliers satisfies the elements of prescription and that Production by overlying landowners during portion(s) of the prescriptive period exceeded the Native Safe Yield. At the time of this Judgment the entire Native Safe Yield is being applied to reasonable and beneficial uses in the Basin. Members of the Non-Pumper Class do not and have never Produced Groundwater for reasonable beneficial use as of the date of this Judgment. Pursuant to *Pasadena v. Alhambra* (1949) 33 Cal 2d 908, 931-32 and other applicable law, the failure of the Non-Pumper Class members to Produce any Groundwater under the facts here modifies their rights to Produce Groundwater except as provided in this Judgment. Because this is a comprehensive adjudication pursuant to the McCarran Amendment, consistent with the California Supreme Court decisions, including *In Re Waters of Long Valley Creek Stream System* (1979) 25 Cal. 3d 339, this Court makes the following findings: (1) certainty fosters reasonable and beneficial use of water and is called for by the mandate of Article X, section 2; (2) because of this mandate for certainty and in furtherance of the Physical Solution, any New Production, including that by a

member of the Non-Pumper Class must comply with the New Production Application Procedure specified in Paragraph 18.5.13; (3) as of this Judgment no member of the Non-Pumper Class has established a Production Right to the reasonable and beneficial use of Groundwater based on their unexercised claim of right to Produce Groundwater; (4) if in the future a member of the Non-Pumper Class proposes to Produce Groundwater for reasonable and beneficial use, the Watermaster as part of the New Production Application Procedure, has the authority to determine whether such a member has established that the proposed New Production is a reasonable and beneficial use in the context of other existing uses of Groundwater and then-current Basin conditions; and (5) the Watermaster's determinations as to the approval, scope, nature and priority of any New Production is reasonably necessary to the promotion of the State's interest in fostering the most reasonable and beneficial use of its scarce water resources. All provisions of this Judgment regarding the administration, use and enforcement of the Replacement Water Assessment shall apply to each Non-Pumper Class member that Produces Groundwater. Prior to the commencement of Production, each Producing Non-Pumper Class member shall install a meter and report Production to the Watermaster. The Court finds that this Judgment is consistent with the Non-Pumper Stipulation of Settlement and Judgment.

9.3 Balance Assessment. In order to ensure that after Rampdown each Party may fully exercise its Production Right, there may be a Balance Assessment imposed by the Watermaster. The Balance Assessment shall be assessed on all Production Rights, excluding the United States' actual Production, but including that portion of the Federal Reserved Right Produced by other Parties, in an amount determined by the Watermaster. A Balance Assessment may not be imposed until after the end of the Rampdown. In determining whether to adopt a Balance Assessment, and in what amount, the Watermaster Engineer shall consider current Basin conditions as well as then-current pumping existing after Rampdown exclusive of any consideration of an effect on then-current Basin conditions relating to Production of Groundwater pursuant to the Drought Program which occurred during the Rampdown, and shall only assess a

Balance Assessment or curtail a Party's Production under section 9.3.4 below, to avoid or mitigate Material Injury that is caused by Production after the completion of the Rampdown.

9.3.1 Any proceeds of the Balance Assessment will be used to purchase, deliver, produce in lieu, or arrange for alternative pumping sources of water in the Basin, but shall not include infrastructure costs.

9.3.2 The Watermaster Engineer shall determine and collect from any Party receiving direct benefit of the Balance Assessment proceeds an amount equal to that Party's avoided Production costs.

9.3.3 The Balance Assessment shall not be used to benefit the United States unless the United States participates in paying the Balance Assessment.

9.3.4 The Watermaster Engineer may curtail the exercise of a Party's Production Right under this Judgment, except the United States' Production, if it is determined necessary to avoid or mitigate a Material Injury to the Basin and provided that the Watermaster provides an equivalent quantity of water to such Party as a substitute water supply, with such water paid for from the Balance Assessment proceeds.

10. SUBAREAS. Subject to modification by the Watermaster the following Subareas are recognized:

10.1 Central Antelope Valley Subarea. The Central Antelope Valley Subarea is the largest of the five Subareas and underlies Rosamond, Quartz Hill, Lancaster, Edwards AFB and much of Palmdale. This Subarea also contains the largest amount of remaining agricultural land use in the Basin. The distinctive geological features of the Central Antelope Valley Subarea are the presence of surficial playa and pluvial lake deposits; the widespread occurrence of thick, older pluvial lake bed deposits; and alluvial deposits from which Groundwater is produced above and below the lake bed deposits. The Central Antelope Valley Subarea is defined to be east of the largely buried ridge of older granitic and tertiary rocks exposed at Antelope Buttes and extending beyond Little Buttes and Tropico Hill. The Central Subarea is defined to be southwest and

northeast of the extension of the Buttes Fault, and northwest of an unnamed fault historically identified from Groundwater level differences, as shown on Exhibit 10.

10.2 **West Antelope Valley Subarea**. The West Antelope Valley Subarea is the second largest subarea. The area is characterized by a lack of surficial lake bed deposits, and little evidence of widespread subsurface lake beds, and thick alluvial deposits. The Western Antelope Valley Subarea is defined to be south of the Willow Springs-Cottonwood Fault and west of a largely buried ridge of older granitic and tertiary rocks that are exposed at Antelope Buttes and Little Buttes, and continue to Tropico Hill, as shown on Exhibit 10.

10.3 **South East Subarea**. The South East Subarea is characterized by granitic buttes to the north, shallow granitic rocks in the southwest, and a lack of lake bed deposits. The South East Subarea is defined to encompass the remainder of the Basin from the unnamed fault between the Central and South East subareas, to the county-line boundary of the Basin. Notably, this area contains Littlerock and Big Rock creeks that emanate from the mountains to the south and discharge onto the valley floor.

10.4 **Willow Springs Subarea.** The Willow Springs Subarea is separated from the West Antelope Subarea primarily because the Willow Springs fault shows some signs of recent movement and there is substantial Groundwater hydraulic separation between the two adjacent areas, suggesting that the fault significantly impedes Groundwater flow from the Willow Springs to the lower West Antelope Subarea. Otherwise, the Willow Springs Subarea is comparable in land use to the West Antelope Subarea, with some limited agricultural land use and no municipal development, as shown on Exhibit 10.

10.5 **Rogers Lake Subarea**. The Rogers Lake Subarea is characterized by surficial pluvial Lake Thompson and playa deposits, and a narrow, fault-bound, central trough filled with alluvial deposits. The area is divided into north and south subareas on opposite sides of a buried ridge of granite rock in the north lake, as shown on Exhibit 10.

11. INCREASE IN PRODUCTION BY THE UNITED STATES.

11.1 Notice of Increase of Production Under Federal Reserved Water Right. After the date of entry of this Judgment, the United States shall provide the Watermaster with at least ninety (90) days advanced notice if Production by the United States is reasonably anticipated to increase more than 200 acre-feet per Year in a following 12 month period.

11.2 Water Substitution to Reduce Production by United States. The United States agrees that maximizing Imported Water is essential to improving the Basin's health and agrees that its increased demand can be met by either increasing its Production or by accepting deliveries of Imported Water of sufficient quality to meet the purpose of its Federal Reserved Water Right under the conditions provided for herein. Any Party may propose a water substitution or replacement to the United States to secure a reduction in Groundwater Production by the United States. Such an arrangement would be at the United States' sole discretion and subject to applicable federal law, regulations and other requirements. If such a substitution or replacement arrangement is agreed upon, the United States shall reduce Production by the amount of Replacement Water provided to it, and the Party providing such substitution or replacement of water to the United States may Produce a corresponding amount of Native Safe Yield free from Replacement Water Assessment in addition to their Production Right.

12. MOVEMENT OF PUBLIC WATER SUPPLIERS PRODUCTION FACILITIES.

12.1 No Requirement to Move Public Water Suppliers' Production Wells. One or more of the Public Water Suppliers intend to seek Federal or State legislation to pay for all costs related to moving the Public Water Suppliers Production wells to areas that will reduce the impact of Public Water Supplier Production on the United States' current Production wells. The Public Water Suppliers shall have no responsibility to move any Production wells until Federal or State legislation fully funding the costs of moving the wells is effective or until required to do so by order of this Court which order shall not be considered or made by this Court until the seventeenth (17th) Year after entry of this Judgment. The Court may only make such an order if it finds that the Public Water Supplier Production from those wells is causing Material

Injury. The Court shall not impose the cost of moving the Public Water Supplier Production Facilities on any non-Public Water Supplier Party to this Judgment.

13. FEDERAL APPROVAL. This Judgment is contingent on final approval by the Department of Justice. Such approval will be sought upon final agreement of the terms of this Judgment by the settling Parties. Nothing in this Judgment shall be interpreted or construed as a commitment or requirement that the United States obligate or pay funds in contravention of the Anti-Deficiency Act, 31 U.S.C. § 1341, or any other applicable provision of law. Nothing in this Judgment, specifically including Paragraphs 9.1, 9.2 and 9.3, shall be construed to deprive any federal official of the authority to revise, amend, or promulgate regulations. Nothing in this Judgment shall be deemed to limit the authority of the executive branch to make recommendations to Congress on any particular piece of legislation. Nothing in this Judgment shall be construed to commit a federal official to expend federal funds not appropriated by Congress. To the extent that the expenditure or advance of any money or the performance of any obligation of the United States under this Judgment is to be funded by appropriation of funds by Congress, the expenditure, advance, or performance shall be contingent upon the appropriation of funds by Congress that are available for this purpose and the apportionment of such funds by the Office of Management and Budget and certification by the appropriate Air Force official that funding is available for this purpose, and an affirmative obligation of the funds for payment made by the appropriate Air Force official. No breach of this Judgment shall result and no liability shall accrue to the United States in the event such funds are not appropriated or apportioned.

14. STORAGE. All Parties shall have the right to store water in the Basin pursuant to a Storage Agreement with the Watermaster. If Littlerock Creek Irrigation District or Palmdale Water District stores Imported Water in the Basin it shall not export from its service area that Stored Water. AVEK, Littlerock Creek Irrigation District or Palmdale Water District may enter into exchanges of their State Water Project "Table A" Amounts. Nothing in this Judgment limits or modifies operation of preexisting banking projects (including AVEK, District No. 40, Antelope Valley Water Storage LLC, Tejon Ranchcorp and Tejon Ranch Company, Sheep Creek Water

Co., Rosamond Community Services District and Palmdale Water District) or performance of preexisting exchange agreements of the Parties. The Watermaster shall promptly enter into Storage Agreements with the Parties at their request. The Watermaster shall not enter into Storage Agreements with non-Parties unless such non-Parties become expressly subject to the provisions of this Judgment and the jurisdiction of the Court. Storage Agreements shall expressly preclude operations which will cause a Material Injury on any Producer. If, pursuant to a Storage Agreement, a Party has provided for pre-delivery or post-delivery of Replacement Water for the Party's use, the Watermaster shall credit such water to the Party's Replacement Water Obligation at the Party's request. Any Stored Water that originated as State Water Project water imported by AVEK, Palmdale Water District or Littlerock Creek Irrigation District may be exported from the Basin for use in a portion of the service area of any city or public agency, including State Water Project Contractors, that are Parties to this action at the time of this Judgment and whose service area includes land outside the Basin. AVEK may export any of its Stored State Project Water to any area outside its jurisdictional boundaries and the Basin provided that all water demands within AVEK's jurisdictional boundaries are met. Any Stored Water that originated as other Imported Water may be exported from the Basin, subject to a requirement that the Watermaster make a technical determination of the percentage of the Stored Water that is unrecoverable and that such unrecoverable Stored Water is dedicated to the Basin.

15. CARRY OVER

15.1 In Lieu Production Right Carry Over. Any Producer identified in Paragraph 5.1.1, 5.1.5 and 5.1.6 can utilize In Lieu Production by purchasing Imported Water and foregoing Production of a corresponding amount of the annual Production of Native Safe Yield provided for in Paragraph 5 herein. In Lieu Production must result in a net reduction of annual Production from the Native Safe Yield in order to be entitled to the corresponding Carry Over benefits under this paragraph. In Lieu Production does not make additional water from the Native Safe Yield available to any other Producer. If a Producer foregoes pumping and uses Imported Water In Lieu of Production, the Producer may Carry Over its right to the unproduced portion of

its Production Right for up to ten (10) Years. A Producer must Produce its full current Year's Production Right before any Carry Over water is Produced. Carry Over water will be Produced on a first-in, first-out basis. At the end of the Carry Over period, the Producer may enter into a Storage Agreement with the Watermaster to store unproduced portions, subject to terms and conditions in the Watermaster's discretion. Any such Storage Agreements shall expressly preclude operations, including the rate and amount of extraction, which will cause a Material Injury to another Producer or Party, any subarea or the Basin. If not converted to a Storage Agreement, Carry Over water not Produced by the end of the tenth Year reverts to the benefit of the Basin and the Producer no longer has a right to the Carry Over water. The Producer may transfer any Carry Over water or Carry Over water stored pursuant to a Storage Agreement.

15.2 Imported Water Return Flow Carry Over. If a Producer identified in Paragraph 5.1.1, 5.1.5 and 5.1.6 fails to Produce its full amount of Imported Water Return Flows in the Year following the Year in which the Imported Water was brought into the Basin, the Producer may Carry Over its right to the unproduced portion of its Imported Water Return Flows for up to ten (10) Years. A Producer must Produce its full Production Right before any Carry Over water, or any other water, is Produced. Carry Over water will be Produced on a first-in, first-out basis. At the end of the Carry Over period, the Producer may enter into a Storage Agreement with the Watermaster to store unproduced portions, subject to terms and conditions in the Watermaster's discretion. Any such Storage Agreements shall expressly preclude operations, including the rate and amount of extraction, which will cause a Material Injury to another Producer or Party, any subarea or the Basin. If not converted to a Storage Agreement, Carry Over water not Produced by the end of the tenth Year reverts to the benefit of the Basin and the Producer no longer has a right to the Carry Over water. The Producer may transfer any Carry Over water or Carry Over water stored pursuant to a Storage Agreement.

15.3 Production Right Carry Over. If a Producer identified in Paragraph 5.1.1, 5.1.5 and 5.1.6 fails to Produce its full Production Right in any Year, the Producer may Carry Over its right to the unproduced portion of its Production Right for up to ten (10) Years. A

Producer must Produce its full Production Right before any Carry Over water, or any other water, is Produced. Carry Over water will be Produced on a first-in, first-out basis. At the end of the Carry Over period, the Producer may enter into a Storage Agreement with the Watermaster to store unproduced portions, subject to terms and conditions in the Watermaster's discretion. Any such Storage Agreements shall expressly preclude operations, including the rate and amount of extraction, which will cause a Material Injury to another Producer or Party, any subarea or the Basin. If not converted to a Storage Agreement, Carry Over water not Produced by the end of the tenth Year reverts to the benefit of the Basin and the Producer no longer has a right to the Carry Over water. The Producer may transfer any Carry Over water or Carry Over water stored pursuant to a Storage Agreement.

16. TRANSFERS.

16.1 When Transfers are Permitted. Pursuant to terms and conditions to be set forth in the Watermaster rules and regulations, and except as otherwise provided in this Judgment, Parties may transfer all or any portion of their Production Right to another Party so long as such transfer does not cause Material Injury. All transfers are subject to hydrologic review by the Watermaster Engineer.

16.2 Transfers to Non-Overlying Production Right Holders. Overlying Production Rights that are transferred to Non-Overlying Production Right holders shall remain on Exhibit 4 and be subject to adjustment as provided in Paragraph 18.5.10, but may be used anywhere in the transferee's service area.

16.3 Limitation on Transfers of Water by Antelope Valley United Mutuals Group. After the date of this Judgment, any Overlying Production Rights pursuant to Paragraph 5.1.1, rights to Imported Water Return Flows pursuant to Paragraph 5.2, rights to Recycled Water pursuant to Paragraph 5.3 and Carry Over water pursuant to Paragraph 15 (including any water banked pursuant to a Storage Agreement with the Watermaster) that are at any time held by any member of the Antelope Valley United Mutuals Group may only be transferred to or amongst other members of the Antelope Valley United Mutuals Group, except as provided in Paragraph

16.3.1. Transfers amongst members of the Antelope Valley United Mutuals Group shall be separately reported in the Annual Report of the Watermaster pursuant to Paragraphs 18.4.8 and 18.5.17. Transfers amongst members of the Antelope Valley United Mutuals Group shall not be deemed to constitute an abandonment of any member's non-transferred rights.

16.3.1 Nothing in Paragraph 16.3 shall prevent Antelope Valley United Mutuals Group members from transferring Overlying Production Rights to Public Water Suppliers who assume service of an Antelope Valley United Mutuals Group member's shareholders.

16.4 Notwithstanding section 16.1, the Production Right of Boron Community Services District shall not be transferable. If and when Boron Community Services District permanently ceases all Production of Groundwater from the Basin, its Production Right shall be allocated to the other holders of Non-Overlying Production Rights, except for West Valley County Water District, in proportion to those rights.

17. CHANGES IN POINT OF EXTRACTION AND NEW WELLS. Parties may change the point of extraction for any Production Right to another point of extraction so long as such change of the point of extraction does not cause Material Injury. A replacement well for an existing point of extraction which is located within 300 feet of a Party's existing well shall not be considered a change in point of extraction.

17.1 Notice of New Well. Any Party seeking to construct a new well in order to change the point of extraction for any Production Right to another point of extraction shall notify the Watermaster at least 90 days in advance of drilling any well of the location of the new point of extraction and the intended place of use of the water Produced.

17.2 Change in Point of Extraction by the United States. The point(s) of extraction for the Federal Reserved Water Right may be changed, at the sole discretion of the United States, and not subject to the preceding limitation on Material Injury, to any point or points within the boundaries of Edwards Air Force Base or Plant 42. The point(s) of extraction for the Federal Reserved Water Right may be changed to points outside the boundaries of

Edwards Air Force Base or Plant 42, provided such change in the point of extraction does not cause Material Injury. In exercising its discretion under this Paragraph 17.2, the United States shall consider information in its possession regarding the effect of Production from the intended new point of extraction on the Basin, and on other Producers. Any such change in point(s) of extraction shall be at the expense of the United States. Nothing in this Paragraph is intended to waive any monetary claim(s) another Party may have against the United States in federal court based upon any change in point of extraction by the United States.

18. WATERMASTER

18.1 Appointment of Initial Watermaster.

18.1.1 Appointment and Composition: The Court hereby appoints a Watermaster. The Watermaster shall be a five (5) member board composed of one representative each from AVEK and District No. 40, a second Public Water Supplier representative selected by District No. 40, Palmdale Water District, Quartz Hill Water District, Littlerock Creek Irrigation District, California Water Service Company, Desert Lake Community Services District, North Edwards Water District, City of Palmdale, City of Lancaster, Palm Ranch Irrigation District, and Rosamond Community Services District, and two (2) landowner Parties, exclusive of public agencies and members of the Non-Pumper and Small Pumper Classes, selected by majority vote of the landowners identified on Exhibit 4 (or their successors in interest) based on their proportionate share of the total Production Rights identified in Exhibit 4. The United States may also appoint a non-voting Department of Defense (DoD) Liaison to the Watermaster committee to represent DoD interests. Participation by the DoD Liaison shall be governed by Joint Ethics Regulation 3-201. The opinions or actions of the DoD liaison in participating in or contributing to Watermaster proceedings cannot bind DoD or any of its components.

18.1.2 Voting Protocol for Watermaster Actions:

18.1.2.1 The Watermaster shall make decisions by unanimous vote for the purpose of selecting or dismissing the Watermaster Engineer.

18.1.2.2 The Watermaster shall determine by unanimous vote, after consultation with the Watermaster Engineer, the types of decisions that shall require unanimous vote and those that shall require only a simple majority vote.

18.1.2.3 All decisions of the Watermaster, other than those specifically designated as being subject to a simple majority vote, shall be by a unanimous vote.

18.1.2.4 All board members must be present to make any decision requiring a unanimous vote.

18.1.3 In carrying out this appointment, the Watermaster shall segregate and separately exercise in all respects the Watermaster powers delegated by the Court under this Judgment. All funds received, held, and disbursed by the Watermaster shall be by way of separate Watermaster accounts, subject to separate accounting and auditing. Meetings and hearings held by the Watermaster shall be noticed and conducted separately.

18.1.4 Pursuant to duly adopted Watermaster rules, Watermaster staff and administrative functions may be accomplished by AVEK, subject to strict time and cost accounting principles so that this Judgment does not subsidize, and is not subsidized by AVEK.

18.2 Standard of Performance. The Watermaster shall carry out its duties, powers and responsibilities in an impartial manner without favor or prejudice to any Subarea, Producer, Party, or Purpose of Use.

18.3 Removal of Watermaster. The Court retains and reserves full jurisdiction, power, and authority to remove any Watermaster for good cause and substitute a new Watermaster in its place, upon its own motion or upon motion of any Party in accordance with the notice and hearing procedures set forth in Paragraph 20.6. The Court shall find good cause for the removal of a Watermaster upon a showing that the Watermaster has: (1) failed to exercise its powers or perform its duties; (2) performed its powers in a biased manner; or (3) otherwise failed to act in the manner consistent with the provisions set forth in this Judgment or subsequent order of the Court.

18.4 Powers and Duties of the Watermaster. Subject to the continuing supervision and control of the Court, the Watermaster shall have and may exercise the following express powers and duties, together with any specific powers and duties set forth elsewhere in this Judgment or ordered by the Court:

18.4.1 Selection of the Watermaster Engineer. The Watermaster shall select the Watermaster Engineer with the advice of the Advisory Committee described in Paragraph 19.

18.4.2 Adoption of Rules and Regulations. The Court may adopt appropriate rules and regulations prepared by the Watermaster Engineer and proposed by the Watermaster for conduct pursuant to this Judgment. Before proposing rules and regulations, the Watermaster shall hold a public hearing. Thirty (30) days prior to the date of the hearing, the Watermaster shall send to all Parties notice of the hearing and a copy of the proposed rules and regulations or amendments thereto. All Watermaster rules and regulations, and any amendments to the Watermaster rules and regulations, shall be consistent with this Judgment and are subject to approval by the Court, for cause shown, after consideration of the objections of any Party.

18.4.3 Employment of Experts and Agents. The Watermaster may employ such administrative personnel, engineering, legal, accounting, or other specialty services, and consulting assistants as appropriate in carrying out the terms of this Judgment.

18.4.4 Notice List. The Watermaster shall maintain a current list of Parties to receive notice. The Parties have an affirmative obligation to provide the Watermaster with their current contact information. For Small Pumper Class Members, the Watermaster shall initially use the contact information contained in the list of Small Pumper Class members filed with the Court by class counsel.

18.4.5 Annual Administrative Budget. The Watermaster shall prepare a proposed administrative budget for each Year. The Watermaster shall hold a public hearing regarding the proposed administrative budget and adopt an administrative budget. The administrative budget shall set forth budgeted items and Administrative Assessments in sufficient

detail to show the allocation of the expense among the Producers. Following the adoption of the budget, the Watermaster may make expenditures within budgeted items in the exercise of powers herein granted, as a matter of course.

18.4.6 Investment of Funds. The Watermaster may hold and invest any funds in investments authorized from time to time for public agencies in the State of California. All funds shall be held in separate accounts and not comingled with the Watermaster's personal funds.

18.4.7 Borrowing. The Watermaster may borrow in anticipation of receipt of proceeds from any assessments authorized in Paragraph 9 in an amount not to exceed the annual amount of assessments.

18.4.8 Transfers. On an annual basis, the Watermaster shall prepare and maintain a report or record of any transfer of Production Rights among Parties. Upon reasonable request, the Watermaster shall make such report or record available for inspection by any Party. A report or records of transfer of Production Rights under this Paragraph shall be considered a ministerial act.

18.4.9 New Production Applications. The Watermaster shall consider and determine whether to approve applications for New Production after consideration of the recommendation of the Watermaster Engineer.

18.4.10 Unauthorized Actions. The Watermaster shall bring such action or motion as is necessary to enjoin any conduct prohibited by this Judgment.

18.4.11 Meetings and Records. Watermaster shall provide notice of and conduct all meetings and hearings in a manner consistent with the standards and timetables set forth in the Ralph M. Brown Act, Government Code sections 54950, et seq. Watermaster shall make its files and records available to any Person consistent with the standards and timetables set forth in the Public Records Act, Government Code sections 6200, et seq.

18.4.12 Assessment Procedure. Each Party hereto is ordered to pay the assessments authorized in Paragraph 9 of this Judgment, which shall be levied and collected in

accordance with the procedures and schedules determined by the Watermaster. Any assessment which becomes delinquent, as defined by rules and regulations promulgated by the Watermaster shall bear interest at the then current real property tax delinquency rate for the county in which the property of the delinquent Party is located. The United States shall not be subject to payment of interest absent congressional waiver of immunity for the imposition of such interest. This interest rate shall apply to any said delinquent assessment from the due date thereof until paid. The delinquent assessment, together with interest thereon, costs of suit, attorneys fees and reasonable costs of collection, may be collected pursuant to (1) motion by the Watermaster giving notice to the delinquent Party only; (2) Order to Show Cause proceeding, or (3) such other lawful proceeding as may be instituted by the Watermaster or the Court. The United States shall not be subject to costs and fees absent congressional waiver of immunity for such costs and fees. The delinquent assessment shall constitute a lien on the property of the Party as of the same time and in the same manner as does the tax lien securing county property taxes. The property of the United States shall not be subject to any lien. The Watermaster shall annually certify a list of all such unpaid delinquent assessments. The Watermaster shall include the names of those Parties and the amounts of the liens in its list to the County Assessor's Office in the same manner and at the same time as it does its Administrative Assessments. Watermaster shall account for receipt of all collections of assessments collected pursuant to this Judgment, and shall pay such amounts collected pursuant to this Judgment to the Watermaster. The Watermaster shall also have the ability to seek to enjoin Production of those Parties, other than the United States, who do not pay assessments pursuant to this Judgment.

18.5 **Watermaster Engineer.** The Watermaster Engineer shall have the following duties:

18.5.1 **Monitoring of Safe Yield.** The Watermaster Engineer shall monitor all the Safe Yield components and include them in the annual report for Court approval. The annual report shall include all relevant data for the Basin.

18.5.2 Reduction in Groundwater Production. The Watermaster Engineer shall ensure that reductions of Groundwater Production to the Native Safe Yield (Rampdown) take place pursuant to the terms of this Judgment and any orders by the Court.

18.5.3 Determination of Replacement Obligations. The Watermaster Engineer shall determine Replacement Obligations for each Producer, pursuant to the terms of this Judgment.

18.5.4 Balance Obligations. The Watermaster Engineer shall determine Balance Assessment obligations for each Producer pursuant to the terms of this Judgment. In addition, the Watermaster Engineer shall determine the amount of water derived from the Balance Assessment that shall be allocated to any Producer to enable that Producer to fully exercise its Production Right.

18.5.5 Measuring Devices, Etc. The Watermaster Engineer shall propose, and the Watermaster shall adopt and maintain, rules and regulations regarding determination of Production amounts and installation of individual water meters. The rules and regulations shall set forth approved devices or methods to measure or estimate Production. Producers who meter Production on the date of entry of this Judgment shall continue to meter Production. The Watermaster rules and regulations shall require Producers who do not meter Production on the effective date of entry of this Judgment, except the Small Pumper Class, to install water meters within two Years.

18.5.6 Hydrologic Data Collection. The Watermaster Engineer shall (1) operate, and maintain such wells, measuring devices, and/or meters necessary to monitor stream flow, precipitation, Groundwater levels, and Basin Subareas, and (2) to obtain such other data as may be necessary to carry out this Judgment.

18.5.7 Purchases of and Recharge with Replacement Water. To the extent Imported Water is available, the Watermaster Engineer shall use Replacement Water Assessment proceeds to purchase Replacement Water, and deliver such water to the area deemed most appropriate as soon as practicable. The Watermaster Engineer may pre-purchase

Replacement Water and apply subsequent assessments towards the costs of such pre-purchases. The Watermaster Engineer shall reasonably and equitably actively manage the Basin to protect and enhance the health of the Basin.

18.5.8 Water Quality. The Watermaster Engineer shall take all reasonable steps to assist and encourage appropriate regulatory agencies to enforce reasonable water quality regulations affecting the Basin, including regulation of solid and liquid waste disposal, and establishing Memorandums of Understanding with Kern and Los Angeles Counties regarding well drilling ordinances and reporting.

18.5.9 Native Safe Yield. Ten (10) Years following the end of the seven Year Rampdown period, in the seventeenth (17th) Year, or any time thereafter, the Watermaster Engineer may recommend to the Court an increase or reduction of the Native Safe Yield. The Watermaster Engineer shall initiate no recommendation to change Native Safe Yield prior to the end of the seventeenth (17th) Year. In the event the Watermaster Engineer recommends in its report to the Court that the Native Safe Yield be revised based on the best available science, the Court shall conduct a hearing regarding the recommendations and may order a change in Native Safe Yield. Watermaster shall give notice of the hearing pursuant to Paragraph 20.3.2. The most recent Native Safe Yield shall remain in effect until revised by Court order according to this paragraph. If the Court approves a reduction in the Native Safe Yield, it shall impose a Pro-Rata Reduction as set forth herein, such reduction to be implemented over a seven (7) Year period. If the Court approves an increase in the Native Safe Yield, it shall impose a Pro-Rata Increase as set forth herein, such increase to be implemented immediately. Only the Court can change the Native Safe Yield.

18.5.10 Change in Production Rights in Response to Change in Native Safe Yield. In the event the Court changes the Native Safe Yield pursuant to Paragraph 18.5.9, the increase or decrease will be allocated among the Producers in the agreed percentages listed in Exhibits 3 and 4, except that the Federal Reserved Water Right of the United States is not subject to any increase or decrease.

18.5.11 Review of Calculation of Imported Water Return Flow Percentages. Ten (10) Years following the end of the Rampdown, in the seventeenth (17th) Year, or any time thereafter, the Watermaster Engineer may recommend to the Court an increase or decrease of Imported Water Return Flow percentages. The Watermaster Engineer shall initiate no recommendation to change Imported Water Return Flow percentages prior to end of the seventeenth (17th) Year. In the event the Watermaster Engineer recommends in its report to the Court that Imported Water Return Flow percentages for the Basin may need to be revised based on the best available science, the Court shall conduct a hearing regarding the recommendations and may order a change in Imported Water Return Flow percentages. Watermaster shall give notice of the hearing pursuant to Paragraph 20.6. The Imported Water Return Flow percentages set forth in Paragraph 5.2 shall remain in effect unless revised by Court order according to this Paragraph. If the Court approves a reduction in the Imported Water Return Flow percentages, such reduction shall be implemented over a seven (7) Year period. Only the Court can change the Imported Water Return Flow percentages.

18.5.12 Production Reports. The Watermaster Engineer shall require each Producer, other than unmetered Small Pumper Class Members, to file an annual Production report with the Watermaster. Producers shall prepare the Production reports in a form prescribed by the rules and regulations. The Production reports shall state the total Production for the reporting Party, including Production per well, rounded off to the nearest tenth of an acre foot for each reporting period. The Production reports shall include such additional information and supporting documentation as the rules and regulations may reasonably require.

18.5.13 New Production Application Procedure. The Watermaster Engineer shall determine whether a Party or Person seeking to commence New Production has established the reasonableness of the New Production in the context of all other uses of Groundwater in the Basin at the time of the application, including whether all of the Native Safe Yield is then currently being used reasonably and beneficially. Considering common law water rights and priorities, the mandate of certainty in Article X, section 2, and all other relevant

factors, the Watermaster Engineer has authority to recommend that the application for New Production be denied, or approved on condition of payment of a Replacement Water Assessment. The Watermaster Engineer shall consider, investigate and recommend to the Watermaster whether an application to commence New Production of Groundwater may be approved as follows:

18.5.13.1 All Parties or Person(s) seeking approval from the Watermaster to commence New Production of Groundwater shall submit a written application to the Watermaster Engineer which shall include the following:

18.5.13.1.1 Payment of an application fee sufficient to recover all costs of application review, field investigation, reporting, and hearing, and other associated costs, incurred by the Watermaster and Watermaster Engineer in processing the application for New Production;

18.5.13.1.2 Written summary describing the proposed quantity, sources of supply, season of use, Purpose of Use, place of use, manner of delivery, and other pertinent information regarding the New Production;

18.5.13.1.3 Maps identifying the location of the proposed New Production, including Basin Subarea;

18.5.13.1.4 Copy of any water well permits, specifications and well-log reports, pump specifications and testing results, and water meter specifications associated with the New Production;

18.5.13.1.5 Written confirmation that the applicant has obtained all applicable Federal, State, County, and local land use entitlements and other permits necessary to commence the New Production;

18.5.13.1.6 Written confirmation that the applicant has complied with all applicable Federal, State, County, and local laws, rules and regulations, including but not limited to, the California Environmental Quality Act (Public Resources Code §§ 21000, et. seq.);

18.5.13.1.7 Preparation of a water conservation plan, approved and stamped by a California licensed and registered professional civil engineer, demonstrating that the New Production will be designed, constructed and implemented consistent with California best water management practices.

18.5.13.1.8 Preparation of an analysis of the economic impact of the New Production on the Basin and other Producers in the Subarea of the Basin;

18.5.13.1.9 Preparation of an analysis of the physical impact of the New Production on the Basin and other Producers in the Subarea of the Basin;

18.5.13.1.10 A written statement, signed by a California licensed and registered professional civil engineer, determining that the New Production will not cause Material Injury;

18.5.13.1.11 Written confirmation that the applicant agrees to pay the applicable Replacement Water Assessment for any New Production.

18.5.13.1.12 Other pertinent information which the Watermaster Engineer may require.

18.5.13.2 Finding of No Material Injury. The Watermaster Engineer shall not make recommendation for approval of an application to commence New Production of Groundwater unless the Watermaster Engineer finds, after considering all the facts and circumstances including any requirement that the applicant pay a Replacement Water Assessment required by this Judgment or determined by the Watermaster Engineer to be required under the circumstances, that such New Production will not cause Material Injury. If the New Production is limited to domestic use for one single-family household, the Watermaster Engineer has the authority to determine the New Production to be *de minimis* and waive payment of a Replacement Water Assessment; *provided*, the right to Produce such *de minimis* Groundwater is not transferable, and shall not alter the Production Rights decreed in this Judgment.

18.5.13.3 New Production. No Party or Person shall commence New Production of Groundwater from the Basin absent recommendation by the Watermaster Engineer and approval by the Watermaster.

18.5.13.4 Court Review. Court review of a Watermaster decision on a New Production application shall be pursuant to Paragraph 20.3.

18.5.14 Storage Agreements. The Watermaster shall adopt uniformly applicable rules for Storage Agreements. The Watermaster Engineer shall calculate additions, extractions and losses of water stored under Storage Agreements and maintain an Annual account of all such water. Accounting done by the Watermaster Engineer under this Paragraph shall be considered ministerial.

18.5.15 Diversion of Storm Flow. No Party may undertake or cause the construction of any project within the Watershed of the Basin that will reduce the amount of storm flows that would otherwise enter the Basin and contribute to the Native Safe Yield, without prior notification to the Watermaster Engineer. The Watermaster Engineer may seek an injunction or to otherwise impose restrictions or limitations on such project in order to prevent reduction to Native Safe Yield. The Party sought to be enjoined or otherwise restricted or limited is entitled to notice and an opportunity for the Party to respond prior to the imposition of any restriction or limitation. Any Person may take emergency action as may be necessary to protect the physical safety of its residents and personnel and its structures from flooding. Any such action shall be done in a manner that will minimize any reduction in the quantity of Storm Flows.

18.5.16 Data, Estimates and Procedures. The Watermaster Engineer shall rely on and use the best available science, records and data to support the implementation of this Judgment. Where actual records of data are not available, the Watermaster Engineer shall rely on and use sound scientific and engineering estimates. The Watermaster Engineer may use preliminary records of measurements, and, if revisions are subsequently made, may reflect such revisions in subsequent accounting.

18.5.17 Filing of Annual Report. The Watermaster Engineer shall prepare an Annual Report for filing with the Court not later than April 1 of each Year, beginning April 1 following the first full Year after entry of this Judgment. Prior to filing the Annual Report with the Court, Watermaster shall notify all Parties that a draft of the Annual Report is available for review by the Parties. Watermaster shall provide notice to all Parties of a public hearing to receive comments and recommendations for changes in the Annual Report. The public hearing shall be conducted pursuant to rules and regulations promulgated by the Watermaster. The notice of public hearing may include such summary of the draft Annual Report as Watermaster may deem appropriate. Watermaster shall distribute the Annual Report to any Parties requesting copies.

18.5.18 Annual Report to Court. The Annual Report shall include an Annual fiscal report of the preceding Year's operation; details regarding the operation of each of the Subareas; an audit of all Assessments and expenditures; and a review of Watermaster activities. The Annual Report shall include a compilation of at least the following:

18.5.18.1 Replacement Obligations;

18.5.18.2 Hydrologic Data Collection;

18.5.18.3 Purchase and Recharge of Imported Water;

18.5.18.4 Notice List;

18.5.18.5 New Production Applications

18.5.18.6 Rules and Regulations;

18.5.18.7 Measuring Devices, etc;

18.5.18.8 Storage Agreements;

18.5.18.9 Annual Administrative Budget;

18.5.18.10 Transfers;

18.5.18.11 Production Reports;

18.5.18.12 Prior Year Report;

18.5.18.13 Amount of Stored Water owned by each Party;

18.5.18.14 Amount of Stored Imported Water owned by each Party;

18.5.18.15 Amount of unused Imported Water Return Flows owned by each Party;

18.5.18.16 Amount of Carry Over Water owned by each Party;

18.5.18.17 All changes in use.

18.6 Recommendations of the Watermaster Engineer. Unless otherwise determined pursuant to Paragraph 18.1.2.2, all recommendations of the Watermaster Engineer must be approved by unanimous vote of all members of the Watermaster. If there is not unanimous vote among Watermaster members, Watermaster Engineer recommendations must be presented to the Court for action and implementation.

18.7 Interim Approvals by the Court. Until the Court approves rules and regulations proposed by the Watermaster, the Court, upon noticed motion, may take or approve any actions that the Watermaster or the Watermaster Engineer otherwise would be authorized to take or approve under this Judgment.

19. ADVISORY COMMITTEE

19.1 Authorization. The Producers are authorized and directed to cause a committee of Producer representatives to be organized and to act as an Advisory Committee.

19.2 Compensation. The Advisory Committee members shall serve without compensation.

19.3 Powers and Functions. The Advisory Committee shall act in an advisory capacity only and shall have the duty to study, review, and make recommendations on all discretionary determinations by Watermaster. Parties shall only provide input to the Watermaster through the Advisory Committee.

19.4 Advisory Committee Meetings. The Advisory Committee shall 1) meet on a regular basis; 2) review Watermaster's activities pursuant to this Judgment on at least a semi-annual basis; and 3) receive and make advisory recommendations to Watermaster. Advisory Committee Meetings shall be open to all members of the public. Edwards Air Force

Base and the State of California shall be ex officio members of the committee. The United States may also appoint a DoD Liaison to the Watermaster pursuant to Joint Ethics Regulation 3-201.

19.5 Subarea Advisory Management Committees. Subarea Advisory Management Committees will meet on a regular basis and at least semi-annually with the Watermaster Engineer to review Watermaster activities pursuant to this Judgment and to submit advisory recommendations.

19.5.1 Authorization. The Producers in each of the five Management Subareas are hereby authorized and directed to cause committees of Producer representatives to be organized and to act as Subarea Management Advisory Committees.

19.5.2 Composition and Election. Each Management Subarea Management Advisory Committee shall consist of five (5) Persons who shall be called Management Advisors. In the election of Management Advisors, every Party shall be entitled to one vote for every acre-foot of Production Right for that Party in that particular subarea. Parties may cumulate their votes and give one candidate a number of votes equal to the number of advisors to be elected, multiplied by the number of votes to which the Party is normally entitled, or distribute the Party's votes on the same principle among as many candidates as the Party thinks fit. In any election of advisors, the candidates receiving the highest number of affirmative votes of the Parties are elected. Elections shall be held upon entry of this Judgment and thereafter every third Year. In the event a vacancy arises, a temporary advisor shall be appointed by unanimous decision of the other four advisors to continue in office until the next scheduled election. Rules and regulations regarding organization, meetings and other activities shall be at the discretion of the individual Subarea Advisory Committees, except that all meetings of the committees shall be open to the public.

19.5.3 Compensation. The Subarea Management Advisory Committee shall serve without compensation.

19.5.4 Powers and Functions. The Subarea Management Advisory Committee for each subarea shall act in an advisory capacity only and shall have the duty to

study, review and make recommendations on all discretionary determinations made or to be made hereunder by Watermaster Engineer which may affect that subarea.

20. MISCELLANEOUS PROVISIONS.

20.1 Water Quality. Nothing in this Judgment shall be interpreted as relieving any Party of its responsibilities to comply with State or Federal laws for the protection of water quality or the provisions of any permits, standards, requirements, or orders promulgated thereunder.

20.2 Actions Not Subject to CEQA Regulation. Nothing in this Judgment or the Physical Solution, or in the implementation thereof, or the decisions of the Watermaster acting under the authority of this Judgment shall be deemed a "project" subject to the California Environmental Quality Act (CEQA). See e.g., *California American Water v. City of Seaside* (2010) 183 Cal.App.4th 471, and *Hillside Memorial Park & Mortuary v. Golden State Water Co*. (2011) 205 Cal.App.4th 534. Neither the Watermaster, the Watermaster Engineer, the Advisory Committee, any Subarea Management Committee, nor any other Board or committee formed pursuant to the Physical Solution and under the authority of this Judgment shall be deemed a "public agency" subject to CEQA. (See Public Resources Code section 21063.)

20.3 Court Review of Watermaster Actions. Any action, decision, rule, regulation, or procedure of Watermaster or the Watermaster Engineer pursuant to this Judgment shall be subject to review by the Court on its own motion or on timely motion by any Party as follows:

20.3.1 Effective Date of Watermaster Action. Any order, decision or action of Watermaster or Watermaster Engineer pursuant to this Judgment on noticed specific agenda items shall be deemed to have occurred on the date of the order, decision or action.

20.3.2 Notice of Motion. Any Party may move the Court for review of an action or decision pursuant to this Judgment by way of a noticed motion. The motion shall be served pursuant to Paragraph 20.7 of this Judgment. The moving Party shall ensure that the Watermaster is served with the motion under that Paragraph 20.7 or, if electronic service of the

Watermaster is not possible, by overnight mail with prepaid next-day delivery. Unless ordered by the Court, any such petition shall not operate to stay the effect of any action or decision which is challenged.

20.3.3 Time for Motion. A Party shall file a motion to review any action or decision within ninety (90) days after such action or decision, except that motions to review assessments hereunder shall be filed within thirty (30) days of Watermaster mailing notice of the assessment.

20.3.4 De Novo Nature of Proceeding. Upon filing of a motion to review a decision or action, the Watermaster shall notify the Parties of a date for a hearing at which time the Court shall take evidence and hear argument. The Court's review shall be *de novo* and the Watermaster's decision or action shall have no evidentiary weight in such proceeding.

20.3.5 Decision. The decision of the Court in such proceeding shall be an appealable supplemental order in this case. When the Court's decision is final, it shall be binding upon Watermaster and the Parties.

20.4 Multiple Production Rights. A Party simultaneously may be a member of the Small Pumper Class and hold an Overlying Production Right by virtue of owning land other than the parcel(s) meeting the Small Pumper Class definition. The Small Pumper Class definition shall be construed in accordance with Paragraph 3.5.44 and 3.5.45.

20.5 Payment of Assessments. Payment of assessments levied by Watermaster hereunder shall be made pursuant to the time schedule developed by the Watermaster, notwithstanding any motion for review of Watermaster actions, decisions, rules or procedures, including review of assessments implemented by the Watermaster.

20.6 Designation of Address for Notice and Service. Each Party shall designate a name and address to be used for purposes of all subsequent notices and service herein, either by its endorsement on this Judgment or by a separate designation to be filed within thirty (30) days after judgment has been entered. A Party may change its designation by filing a written notice of such change with Watermaster. A Party that desires to be relieved of receiving notices

of Watermaster activity may file a waiver of notice in a form to be provided by Watermaster. At all times, Watermaster shall maintain a current list of Parties to whom notices are to be sent and their addresses for purpose of service. Watermaster shall also maintain a full current list of said names and addresses of all Parties or their successors, as filed herein. Watermaster shall make copies of such lists available to any requesting Person. If no designation is made, a Party's designee shall be deemed to be, in order of priority: (1) the Party's attorney of record; (2) if the Party does not have an attorney of record, the Party itself at the address on the Watermaster list; (3) for Small Pumper Class Members, after this Judgment is final, the individual Small Pumper Class Members at the service address maintained by the Watermaster.

20.7 Service of Documents. Unless otherwise ordered by the Court, delivery to or service to any Party by the Court or any Party of any document required to be served upon or delivered to a Party pursuant to this Judgment shall be deemed made if made by e-filing on the Court's website at www.scefiling.org. All Parties agree to waive service by mail if they receive notifications via electronic filing at the above identified website.

20.8 No Abandonment of Rights. In the interest of the Basin and its water supply, and the principle of reasonable and beneficial use, no Party shall be encouraged to Produce and use more water in any Year than is reasonably required. Failure to Produce all of the Groundwater to which a Party is entitled shall not, in and of itself, be deemed or constitute an abandonment of such Party's right, in whole or in part, except as specified in Paragraph 15.

20.9 Intervention After Judgment. Any Person who is not a Party or successor to a Party and who proposes to Produce Groundwater from the Basin, to store water in the Basin, to acquire a Production Right or to otherwise take actions that may affect the Basin's Groundwater is required to seek to become a Party subject to this Judgment through a noticed motion to intervene in this Judgment prior to commencing Production. Prior to filing such a motion, a proposed intervenor shall consult with the Watermaster Engineer and seek the Watermaster's stipulation to the proposed intervention. A proposed intervenor's failure to consult

with the Watermaster Engineer may be grounds for denying the intervention motion. Thereafter, if approved by the Court, such intervenor shall be a Party bound by this Judgment.

20.10 Judgment Binding on Successors, etc. Subject to specific provisions hereinbefore contained, this Judgment applies to and is binding upon, and inures to the benefit of the Parties to this Action and all their respective heirs, successors-in-interest and assigns.

20.11 Costs. Except subject to any existing court orders, each Party shall bear its own costs and attorneys fees arising from the Action.

20.12 Headings; Paragraph References. Captions and headings appearing in this Judgment are inserted solely as reference aids for ease and convenience; they shall not be deemed to define or limit the scope or substance of the provisions they introduce, nor shall they be used in construing the intent or effect of such provisions.

20.13 No Third Party Beneficiaries. There are no intended third party beneficiaries of any right or obligation of the Parties.

20.14 Severability. Except as specifically provided herein, the provisions of this Judgment are not severable.

20.15 Cooperation; Further Acts. The Parties shall fully cooperate with one another, and shall take any additional acts or sign any additional documents as may be necessary, appropriate or convenient to attain the purposes of this Judgment.

20.16 Exhibits and Other Writings. Any and all exhibits, documents, instruments, certificates or other writings attached hereto or required or provided for by this Judgment, if any, shall be part of this Judgment and shall be considered set forth in full at each reference thereto in this Judgment.

Dated: _____

_____
JUDGE OF THE SUPERIOR COURT

SUPERIOR COURT OF THE STATE OF CALIFORNIA

FOR THE COUNTY OF LOS ANGELES

ANTELOPE VALLEY GROUNDWATER CASES This Pleading Relates to Included Action: REBECCA LEE WILLIS, on behalf of herself and all others similarly situated, Plaintiff, vs. LOS ANGELES COUNTY WATERWORKS DISTRICT NO. 40; CITY OF LANCASTER; CITY OF PALMDALE; PALMDALE WATER DISTRICT; LITTLEROCK CREEK IRRIGATION DISTRICT; PALM RANCH IRRIGATION DISTRICT; QUARTZ HILL WATER DISTRICT; ANTELOPE VALLEY WATER CO.; ROSAMOND COMMUNITY SERVICE DISTRICT; PHELAN PINON HILL COMMUNITY SERVICE DISTRICT; and DOES 1 through 1,000; Defendants.	JUDICIAL COUNCIL COORDINATION PROCEEDING NO. 4408 CASE NO. BC 364553 ~~[PROPOSED]~~ **AMENDED FINAL JUDGMENT APPROVING WILLIS CLASS ACTION SETTLEMENT** Date: Time: Dept: Judge: Hon. Jack Komar Coordination Trial Judge

This matter has come before the Court on the Motion of Plaintiff Rebecca Lee Willis (Willis) for Final Approval of the Proposed Class Action Settlement between and among Rebecca Lee Willis and the Willis Class, on the one hand; and Los Angeles County Waterworks District No. 40, City of Palmdale Water District, Littlerock Creek Irrigation District, Palm Ranch Irrigation District, Quartz Hill Water District, California Water Service Company,

Rosamond Community Service District, Phelan Pinon Hills Community Services District, Desert Lake Community Services District, and North Edwards Water District (collectively, the "Settling Defendants"), on the other hand.

By Order dated November 18, 2010, this Court granted Plaintiff's Motion for Preliminary Approval of the Proposed Settlement of this action and directed the sending of Notice to the Willis Class. After considering all arguments and submissions for and against final approval of the proposed settlement, and being fully advised of the premises, **IT IS HEREBY ORDERED, ADJUDGED AND DECREED AS FOLLOWS, PURSUANT TO SECTIONS 382 AND 664.6 OF THE CODE OF CIVIL PROCEDURE.**

1. For over 10 years, a number of actions have been pending in the Los Angeles County Superior Court and other California courts seeking an adjudication of the various parties' respective rights to the groundwater underlying the Antelope Valley Groundwater Basin (the "Basin").

2. A number of cases raising such issues were coordinated by a July 11, 2005 order of Judicial Council and assigned to the Honorable Jack Komar of the Superior Court for the County of Santa Clara (the "Court").

3. The Court held an initial phase of the trial on October 3006 with respect to the boundaries of the Basin and issued an Order on November 3, 2006 defining the Basin for purposes of the litigation.

4. The Willis Class Action was filed on or about January 11, 2007 to contest certain public entities' claims that those entities had obtained prescriptive rights to a portion of the Basin's groundwater. The Willis case was subsequently coordinated with the Coordinated Cases.

5. By Order dated September 11, 2007, the Court certified the Willis Class. As amended by Orders dated May 22, 2008 and September 2, 2008, the Willis Class is defined as follows:

"All private (i.e., non-governmental) persons and entities that own real property within the Basin, as adjudicated, that are not presently pumping water on their property and have not done so at any prior time ("the Class"). The Class includes the successors-in-interest by way of purchase, gift, inheritance, or otherwise of such landowners.

The Class excludes the defendants herein, any person, firm, trust, corporation, or other entity with which any defendant has a controlling interest or which is related to or affiliated with any of the defendants, and the representatives, heirs, affiliates, successors-in-interest or assigns of any such excluded party. The Class also excludes all persons to the extent their properties are connected and receive service from a municipal water system, public utility, or mutual water company. The Class shall [further] exclude Kern County Assessor's' office, unless the owners of such properties declare under penalty of perjury that they do not pump and have never pumped water on those properties."

6. Notice of the Pendency of this action was sent to the Willis Class in or about January 1, 2009 and the opt-out period (as extended) expired on August 30, 2009. Certain persons who opted out were subsequently permitted to rejoin the Class.

7. The persons listed on Exhibit 1 hereto validly excluded themselves from the Class in accordance with this Court's prior Orders (and have not re-joined the Class) and are not bound by the Settlement or this Judgment.

8. Counsel for the Willis Class engaged in settlement discussions with Defendants' counsel during mid 2009. On September 2, 2009, counsel participated in mediation session before the Honorable Ronald Robie. That mediation resulted in an agreement in principle among counsel for the Settling Parties to settle the litigation between and among their respective clients, subject to appropriate approvals.

9. By Order dated October 28, 2009, the Court stated its intent to consolidate the various Actions that were coordinated as part of JCCP No. 4408, including the Willis action. On February 19, 2010, the Court entered an Order Transferring and Consolidating [the Coordinated] Actions for All Purposes. As provided in the Consolidation Order, this Final Judgment shall not be construed to prejudice the rights of any of the Non-Settling Parties in the Consolidated Actions nor shall it prejudice the claims and defenses that the Settling Parties may assert with respect to such Non-Settling Parties.

10. By Order dated November 18, 2010, this Court granted preliminary approval to

the proposed settlement of this action and directed that Notice of the Proposed Settlement be sent to the Class.

11. Notice of the Proposed Settlement has been sent to the Willis Class by first class mail in accordance with the Court's Preliminary Approval Order. Such Notice fully and accurately informed the Class of all material terms of the proposed settlement and the opportunity to object to or comment on the Settlement. The Notice was given in an adequate and sufficient manner, constituted the best notice practicable under the circumstances, and satisfied due process.

12. The Settling Parties and each class member have irrevocably submitted to the jurisdiction of this Court for any suit, action, proceeding or dispute arising out of the Settlement Agreement.

13. It is in the best interest of the parties and the Class Members and consistent with principles of judicial economy that any dispute between any class member (including any dispute as to whether any person is a class member) and any Settling Defendant which is in any way related to the applicability or scope of the Settlement Agreement or the Final Judgment should be presented to this Court for resolution.

14. The Stipulation of Settlement submitted by the Settling Parties is hereby finally approved as fair, reasonable, and in the best interests of the Class, and the parties are directed to consummate the Settlement in accordance with its terms.

15. The Complaint in the Willis Action shall be deemed dismissed with prejudice as soon as the Final Judgment becomes effective under the terms of the Settlement Stipulation.

16. For purposes of this Final Judgment, "Released Parties" means Plaintiff Rebecca Lee Willis and the Willis Class, as well as Defendants Los Angeles County Waterworks District No. 40; The City of Palmdale; Palmdale Water District; Littlerock Creek Irrigation District; Palm Ranch Irrigation District; Quartz Hill Water District; California Water Service Company; Rosamond Community Services District; Phelan Pinon Hills Community Services District; Desert Lake Community Services District; and North Edwards Water District.

17. The Court hereby orders that the Released Parties are released and forever

discharged from the Released Claims as more specifically provided in the Stipulation of Settlement.

18. The Class members and their heirs, executors, administrators, successors, and assigns are hereby permanently barred and enjoined from instituting, commencing, prosecuting, or continuing to prosecute, either directly or indirectly, any Released Claim against any of the Released Parties in any form, other than claims to enforce the terms of the Settlement. Each Class member may hereafter discover facts other than or different from those which he or she knows or believes to be true with respect to the Released Claims. Nevertheless, each member of the Class (except those who timely opted out) waive and fully, finally and forever settle and release, upon the Settlement Agreement becoming final, any known or unknown, suspected or unsuspected, contingent or noncontingent Released Claim, whether or not concealed or hidden, without regard to the subsequent discovery or existence of such different or additional facts.

19. The Settling Defendants and their heirs, executors, administrators, successors, and assigns are hereby permanently barred and enjoined from instituting, commencing, prosecuting, or continuing to prosecute, either directly or indirectly, any Released Claim against any of the Class Members in any forum, other than claims to enforce the terms of the Settlement. Each Settling Defendant may hereafter discover facts other than or different from those which he or she knows or believes to be true with respect to the Released Claims. Nevertheless, each Settling Defendant waives and fully, finally and forever settles and releases, upon the Settlement Agreement becoming final, any known or unknown, suspected or unsuspected, contingent or noncontingent Released Claim, whether or not concealed or hidden, without regard to the subsequent discovery or existence of such different or additional facts.

20. Without affecting the finality of this Judgment, the Court hereby reserves and retains jurisdiction over this Settlement, including the administration and consummation of the Settlement, as well as any action or proceeding brought to enforce the Settlement. In addition, without affecting the finality of this Judgment, the Court retains jurisdiction over the Parties for purposes of incorporating and merging this Judgment into a physical solution or other Judgment that may ultimately be entered in the Consolidated Actions. The Settling Parties are hereby

deemed to have submitted irrevocably to the exclusive jurisdiction of this Court for any suit, action, proceeding or dispute arising out of or relating to this Judgment or the Settlement.

21. The Court after considering the pleadings on file herein, and the arguments of counsel, awards the Willis Class attorneys fees in the amount of $1,839,494, an incentive award for Ms. Rebecca Willis in the amount of $10,000, costs in the amount of $65,057.68, and supplemental attorneys fees in the amount of $160,622.50. Judgment in the amount of $2,075,174.18 is hereby entered for the Willis Class against Los Angeles County Waterworks District No. 40, City of Palmdale, Palmdale Water District, Littlerock Creek Irrigation District, Palm Ranch Irrigation District, Quartz Hill Water District, California Water Service Company, Rosamond Community Service District, Phelan Pinon Hills Community Services District, Desert Lake Community Services District, and North Edwards Water District.

Dated: 9-22-2011

Judge of the Superior Court
Honorable Jack Komar

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Superior Court of the State of California

County of Los Angeles

ANTELOPE VALLEY GROUNDWATER CASES This Pleading Relates to Included Action: REBECCA LEE WILLIS, on behalf of herself and all others similarly situated, Plaintiff, v. LOS ANGELES COUNTY WATERWORKS DISTRICT NO. 40; CITY OF LANCASTER; CITY OF LOS ANGELES; CITY OF PALMDALE; PALMDALE WATER DISTRICT; LITTLEROCK CREEK IRRIGATION DISTRICT; PALM RANCH IRRIGATION DISTRICT; PALM RANCH IRRIGATION DISTRICT; QUARTZ HILL WATER DISTRICT; ANTELOPE VALLEY WATER CO.; ROSAMOND COMMUNITY SERVICES DISTRICT; and DOES 1 through 1,000; Defendants.	JUDICIAL COUNCIL COORDINATION PROCEEDING NO. 4408 Case No. BC 364553 **WILLIS CLASS STIPULATION OF SETTLEMENT**

This Stipulation of Settlement (the "Stipulation" or "Agreement") is entered into this 13th day of July 2010 by and between California Water Service Company, City of Palmdale, Littlerock Creek Irrigation District, Los Angeles Waterworks District No. 40 ("District 40"), Palmdale Water District, Palm Ranch Irrigation District, Phelan Pinon Hills Community Services District, Quartz Hill Water District, and Rosamond Community Services District, Desert Lake Community Services District and North Edwards Water District (collectively, "Settling Defendants"), on the one hand, and Rebecca Lee Willis and the Willis Class (as more fully defined below), which consists of certain persons who own property(ies) that overly the Antelope Valley Groundwater Basin (the "Basin") on which they do not and have not pumped groundwater, on the other hand. Settling Defendants, Rebecca Lee Willis, and the Willis Class are collectively referred to as the "Settling Parties," or individually a "Settling Party." This Stipulation and the Exhibits hereto set forth the terms of a settlement (the "Settlement") between and among the Settling Parties compromising and dismissing the claims and defenses they have asserted in the above-captioned action. The Settlement is subject to approval by the Superior Court of California for Los Angeles County; in the event such approval is denied, cannot be obtained, or is reversed on appeal, this Stipulation shall have no further force or effect, and the Settling Parties shall be returned to their respective positions in the litigation prior to execution of this Stipulation.

I. THE SETTLING PARTIES

A. The Settling Plaintiffs are Rebecca Lee Willis and the members of the Willis Class, as defined in paragraph II, D below.

B. The Settling Defendants are as follows:

1. California Water Service Company is a California corporation which extracts groundwater from the Basin to serve customers within the Basin.

2. The City of Palmdale is a municipal corporation in the County of Los Angeles which receives water from the Basin.

3. Littlerock Creek Irrigation District is a public agency which produces groundwater from the Basin to serve customers within the Basin.

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4. Los Angeles County Waterworks District No. 40 ("District 40") is a public agency governed by the Los Angeles County Board of Supervisors. District 40 has been lawfully organized to perform various functions, including producing water from the Basin, which it provides to more than 65,000 residential and commercial customers in the Basin.

5. Palmdale Water District is an irrigation district organized and operating under Division 11 of the California Water Code, which produces groundwater from the Basin to serve customers within the Basin.

6. Palm Ranch Irrigation District is a public agency which produces groundwater from the Basin to serve customers within the Basin.

7. Rosamond Community Services District is a public agency which produces water from the Basin which it provides to customers within the Basin.

8. Quartz Hill Water District is a county water district organized and operating under Division 12 of the California Water Code. It produces water from the Basin.

9. Phelan Pinon Hills Community Services District is a public water supplier which produces water from the Basin.

10. Desert Lake Community Services District is a public agency which produces groundwater from the Basin.

11. North Edwards Water district is a public agency which produces groundwater from the Basin.

II. RECITALS

A. On or about November 29, 2004, District 40 commenced a civil action against Overlying Owners (more specifically defined in III. M) in the Basin, which is now pending in the Superior Court for Los Angeles County, seeking, inter alia, an adjudication of their respective rights to produce groundwater from the Basin. On or about July 11, 2005, that case was coordinated with several quiet title actions that had been brought by Basin landowners, which also sought a declaration of the parties' rights to produce and use the Basin's groundwater. Antelope Valley Groundwater Cases, No. 1-05-CV049053 (JCCP 4408) (hereinafter the "Coordinated Actions"). The Coordinated Actions are pending before the Honorable Jack Komar.

B. On or about October 10, 2006, the Court held an initial phase of trial with respect to the boundaries of the Basin. The Court issued an Order on November 3, 2006, defining the Basin for purposes of this litigation.

C. On or about January 11, 2007 Plaintiff, Rebecca Lee Willis ("Willis"), filed a class action complaint in the Superior Court of the State of California for Los Angeles County (No. BC 364553) (the "Willis Action") in which she alleged that certain Public Water Suppliers had wrongfully claimed prescriptive rights to the Basin's groundwater. Willis sought, inter alia, a declaration that the Settling Defendants had not obtained prescriptive rights as to her or Willis Class Members (more specifically defined in III.X). On or about April 10, 2007, the Willis Action was coordinated as part of the Coordinated Actions.

D. By Order dated September 11, 2007 (as amended by Orders dated May 22, 2008 and September 2, 2008), the Court certified Willis as the representative of a Class of certain Overlying Owners (more specifically defined in if III.M. below) pursuant to Section 382 of the California Code of Civil Procedure and Division 7, Chapter 6 of the Rules of Court.

E. In early January 2009, Notice of the Pendency of the Willis Action was sent by first class mail to all Willis Class Members (more specifically defined in III.X below) who could be identified with reasonable effort and a summary notice was published. The deadline for putative Willis Class Members to exclude themselves (as extended) expired on August 30, 2009. The Court has made various orders allowing certain parties to rejoin the Willis Class.

F. The Settling Parties have actively discussed potential settlement for much of this year. On or about September 2, 2009, the Settling Parties engaged in mediation before the Honorable Ronald Robie during the course of which counsel for most of the parties reached an agreement in principle to settle the Willis Action, subject to the negotiation of a final settlement agreement, client approvals, and approval by the Court.

G. On or about February 19, 2010, the Court entered an Order Transferring and Consolidating Actions for All Purposes (hereinafter the "Consolidated Actions").

H. Over the course of the last three years, the Settling Plaintiffs' counsel have conducted a thorough investigation of the facts and law relating to the matters at issue in the

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Consolidated Actions and have evaluated the merits of all Settling Parties' contentions and the impact this Settlement will have on the Willis Class Members. After evaluating the foregoing, the Settling Plaintiffs and counsel are satisfied that the terms and conditions of this Stipulation are fair, reasonable, and adequate, and that the Settlement is in the best interest of the Willis Class Members.

I. The Settling Defendants contend that they have prescriptive rights to substantially more than 15% of the Basin's Native Safe Yield. The Settling Plaintiffs contend that the Settling Defendants have no such prescriptive rights as to them. This Settlement reflects a compromise between the Settling Parties and shall not (1) be construed as an admission or concession by any Settling Party of the truth of any allegation or the validity of any claim or defense asserted in any of the pleadings, (2) be construed to prejudice the rights, claims, or defenses of any persons who are not Settling Parties, or (3) be construed to prejudice the rights, claims, or defenses (whether asserted or potential) of any Settling Party vis-à-vis any non-settling party.

J. The United States owns property within the Basin as to which it claims a Federal Reserved Right to produce groundwater.

III. DEFINITIONS

The following terms used in this Stipulation shall have the meanings set forth below:

A. "Assessments" means any monetary or other levy or charge imposed as part of a Physical Solution.

B. "Basin" means the Antelope Valley Groundwater Basin as defined in the Court's Order of November 3, 2006.

C. "Consolidated Actions" means all actions that have been or subsequently were coordinated as part of Judicial Council Coordination Proceeding No. 4408 and all actions that have been or subsequently were consolidated pursuant to the Court's Order from February 19, 2010.

D. "Correlative Rights" means the principle of California law, articulated in Katz v. Walkinshaw (1903) 141 Cal. 116 and subsequent cases, that Overlying Owners may make reasonable and beneficial use of the water in a Basin and that, if the supply of water is insufficient

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for all reasonable and beneficial needs, each Overlying Owner is entitled to a fair and just proportion of the water available to the Overlying Owners.

E. "Court" means the Honorable Jack Komar, sitting by designation as a Judge of the Superior Court of Los Angeles County or such other Judge as may be designated by the Judicial Conference to hear JCCP No. 4408.

F. "Effective Date" means the date on which the Court's Judgment granting final approval to the Settlement becomes final and not subject to further appeal.

G. "Federal Reserved Right" is the principle originally articulated in Winters v. United States (1908) 207 U.S. 564 and more recently in *Cappaert v. United States* (1976) 426 U.S. 128, which holds that when the Federal Government reserves land from the public domain, it impliedly reserves sufficient water to serve the purposes for which the lands were reserved, and the quantity of reserved water is limited to the amount necessary to fulfill the purposes of the reserved land. The United States contends that the Federal Reserved Right entitles the United States to a prior and paramount right to a portion of the Native Safe Yield.

H. "Federally Adjusted Native Safe Yield" for any given year means the Basin's Native Safe Yield less the actual annual production of the United States' during the prior year pursuant to its Federal Reserved Right.

I. "Final Judgment" means a final judgment to be entered by the Court in the above matter, which approves the terms and provisions of this Stipulation, and is substantially in the form attached hereto as Exhibit A.

J. "Imported Water" means water that enters the Basin and that originates outside the Basin that is not part of the Basin's Native Safe Yield, and that, absent human intervention, would not recharge or be used in the Basin. Imported Water does not include water purchased by the Watermaster with Replacement Assessments or bottled water.

K. "Native Safe Yield" means the amount of pumping, which under a given set of land use and other prevailing cultural conditions, generates Return Flows that, when combined with naturally occurring groundwater recharge to the Basin, results in no long-term depletion of

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Basin groundwater storage. Pumping of the Settling Parties' share of Native Safe Yield is not subject to any Replacement Assessment.

L. "Overlying Right" means the appurtenant right of an Overlying Owner to use groundwater from the Native Safe Yield for overlying reasonable and beneficial use.

M. "Overlying Owners" means owners of land overlying the Basin who hold an Overlying Right.

N. "Physical Solution" means a mechanism that comprehensively resolves the competing claims to the Basin's water and provides for the management of the Basin. The Settling Parties anticipate that this Settlement will later be incorporated into a Physical Solution.

O. "Preliminary Approval Order" means the Court's Order granting preliminary approval to the Settlement set forth herein, directing the manner in which notice of the Settlement shall be provided to the Willis Class, and scheduling a final Hearing for the Court to consider whether to approve the Settlement. The Settling Parties will submit a proposed Preliminary Approval Order in the form appended as Exhibit B hereto.

P. "Recycled Water" means water which, as a result of treatment of waste, is suitable for a direct beneficial use or a controlled use that would not otherwise occur and is therefore considered a valuable resource..

Q. "Replacement Assessment" means the charge imposed on any Settling Party by the Watermaster for producing more water than it is entitled to produce from the Basin under the terms of this Settlement or pursuant to such further orders as the Court may enter in the Coordinated Actions.

R. "Replacement Water" means water purchased by the Watermaster to offset production in excess of a Settling Party's share of Total Safe Yield.

S. "Return Flows" means the amount of water that is put to reasonable and beneficial agricultural, municipal or other use and thereafter returns to the Basin and is part of the Basin's Total Safe Yield.

T. "Settlement" means this Stipulation, including the Exhibits appended hereto.

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U. "Total Safe Yield" means the amount of pumping, which under a given set of land use and other prevailing cultural conditions generates Return Flows that, when combined with naturally occurring groundwater recharge to the Basin and Return Flows derived from Imported Water, results in no long-term depletion of Basin groundwater storage.

V. "Transition Period" means the period of time provided for in the Physical Solution during which the parties' right to produce water from the Native Safe Yield free from Replacement Assessment will decrease to amounts that total no more than that party's share of Native Safe Yield.

W. "Watermaster" means the person or entity appointed by the Court to monitor and manage the Basin's groundwater, subject to oversight by the Court.

X. "Willis Class" or "Willis Class Members" means the Willis Class as defined in the Court's Order of September 11, 2007, as amended by the Court's Orders of May 22, 2008, and September 2, 2008, but shall exclude all persons who timely excluded themselves from the Willis Class and have not rejoined the Willis Class. The Willis Class consists of the following:

> "All private (i.e., non-governmental) persons and entities that own real property within the Basin, as adjudicated, that are not presently pumping water on their property and have not done so at any prior time ("the Class"). The Class includes the successors-in-interest by way of purchase, gift, inheritance, or otherwise of such landowners.
>
> The Class excludes the defendants herein, any person, firm, trust, corporation, or other entity in which any defendant has a controlling interest or which is related to or affiliated with any of the defendants, and the representatives, heirs, affiliates, successors-in-interest or assigns of any such excluded party. The Class also excludes all persons to the extent their properties are connected and receive service from a municipal water system, public utility, or mutual water company. The Class shall [further] exclude all property(ies) that are listed as `improved' by the Los Angeles County or Kern County Assesor's' office, unless the owners of such properties declare under penalty of perjury that they do not pump and have never pumped water on those properties."

IV. SETTLEMENT TERMS

In consideration of the covenants and agreements set forth herein, and of the releases and dismissals described below, the Settling Parties agree to settle and compromise the claims that have been asserted or that could have been asserted between and among the Willis Class and the

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Settling Defendants, subject to Court approval, on the following terms and conditions:

A. Native Safe Yield.

Settling Defendants and the United States contend that the best estimate of the Basin's Native Safe Yield is 82,300 acre-feet per year. The Willis Class agrees not to challenge or otherwise contest the Native Safe Yield proposed by the Settling Defendants as long as it is at least 82,300 acre-feet per year. The Settling Parties understand and agree that, in the absence of stipulation by all parties in the Coordinated Actions, the Court will decide the Basin's Native Safe Yield following trial, and the Settling Parties agree to be bound by the Court's determination in that regard even if some or all of them do not participate in such a trial.

B. Total Safe Yield.

The Settling Defendants contend that the best estimate of the Basin's Total Safe Yield is 110,500 acre-feet per year. The Willis Class agrees not to challenge or otherwise contest that estimate. The Settling Parties understand and agree that, in the absence of stipulation by all parties in the Coordinated Actions, the Court will decide the Basin's Total Safe Yield following trial, and the Settling Parties agree to be bound by the Court's determination in that regard even if some or all of them do not participate in such a trial.

C. Federal Reserved Right.

The United States contends that it is entitled to a Federal Reserved Right. The Settling Parties agree that the Federal Government has a Federal Reserved Right to use a portion of the Native Safe Yield. The Settling Parties agree that the Court will decide the amount of the Federal Reserved Right and they agree to be bound by the Court's determination.

D. Allocation Of Federally Adjusted Native Safe Yield.

The Settling Parties agree to be bound by the Court's determination of the amounts of the Basin's Native Safe Yield and the United States' Federal Reserved Right. The Basin's Federally Adjusted Native Safe Yield shall be the Basin's Native Safe Yield less the prior year's production of water by the United States (not to exceed the Federal Reserved Right). The Settling Parties agree that the Settling Defendants and the Willis Class Members each have rights to produce groundwater from the Basin's Federally Adjusted Native Safe Yield.

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1. Settling Defendants' Water Rights

Settling Defendants have asserted in the Coordinated Actions that they have obtained prescriptive rights to the Basin's Native Safe Yield. This Stipulation shall neither be construed to recognize prescriptive rights nor to limit the Settling Defendants' prescriptive claims vis-a-vis the Basin or any non-settling parties, but rather as an agreement to fairly allocate the Settling Parties' respective rights to use the Basin's water. The Settling Parties agree that the Settling Defendants collectively have the right to produce up to 15% of the Basin's Federally Adjusted Native Safe Yield free of any Replacement Assessment. The Willis Class will not take any positions or enter into any agreements that are inconsistent with the exercise of the Settling Defendants' rights.

2. Willis Class Members' Pumping Rights

The Settling Parties agree that the Willis Class Members have an Overlying Right to a correlative share of 85% of the Federally Adjusted Native Safe Yield for reasonable and beneficial uses on their overlying land free of any Replacement Assessment. The Settling Defendants will not take any positions or enter into any agreements that are inconsistent with the exercise of the Willis Class Members' Overlying Right to produce and use their correlative share of 85% of the Basin's Federally Adjusted Native Safe Yield.

a. Safe Harbor.

The Willis Class Members acknowledge that the Settling Defendants may at trial prove prescriptive rights against all groundwater pumping in the Basin during a prior prescriptive period. If the Settling Defendants do prove prescriptive rights, Settling Defendants shall not exercise their prescriptive rights to diminish the Willis Class Members' Overlying Right below a correlative share of 85% of the Basin's Federally Adjusted Native Safe Yield. If the Settling Defendants fail to prove any prescriptive rights, this Agreement shall not diminish at all the rights of Willis Class Members to make reasonable and beneficial use of a correlative share of the Basin's Federally Adjusted Native Safe Yield. In no event shall this Agreement require the Willis Class Members to give to the Settling Defendants more than 15% of any rights to use the Basin's groundwater that they may obtain by way of settlement or judgment. If there is a subsequent Court decision whereby the Court determines that the Willis Class Members do not

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have Overlying Rights, this Agreement shall not require Settling Defendants to give the Willis Class Members any right to pump from the Native Safe Yield.

3. Correlative Rights Of Overlying Landowners

The Willis Class Members recognize that other Overlying Owners may have the right to pump correlatively with them 85% of the Federally Adjusted Native Safe Yield of the Basin for reasonable and beneficial uses on their overlying land.

4. Return Flows From Imported Water

a. The Settling Parties acknowledge and agree that they all have the right to recapture Return Flows from Imported Water that they put to reasonable and beneficial use in the Basin, consistent with California law. The Settling Parties will not be subject to any Replacement Assessment for their production of an amount equal to the Return Flows from Imported Water that they put to reasonable and beneficial use in the Basin.

b. Settling Defendants believe that the best estimates of Return Flows from Imported Water are (a) 25% of the water used for agricultural purposes and (b) 28% of the water used for municipal and industrial purposes. Settling Defendants further believe that the best estimate of total annual Return Flows from Imported Water is 28,200 acre-feet of which 25,100 acre-feet is from municipal and industrial use and 3,100 acre-feet is from agricultural use. The Willis Class agrees not to contest those estimates, and all Settling Parties agree to be bound by any findings that may later be made by the Court with respect thereto.

V. MANAGEMENT OF THE BASIN

A. General

The Settling Parties agree that the Basin has limited water resources and that they should use their best efforts to conserve and maximize reasonable and beneficial use. The Settling Parties further agree that there is a need to create a groundwater management plan to ensure that pumping from the Basin does not exceed the Basin's Total Safe Yield and that the Court should appoint a Watermaster to oversee the management of the Basin's water resources.

B. Physical Solution

The Settling Parties expect and intend that this Stipulation will become part of a Physical

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Solution entered by the Court to manage the Basin and that the Court will retain jurisdiction in the Coordinated Actions. The Settling Parties agree to be part of such a Physical Solution to the extent it is consistent with the terms of this Stipulation and to be subject to Court-administered rules and regulations consistent with California and Federal law and the terms of this Stipulation. The Settling Parties agree that the Physical Solution may require installation of a meter on any groundwater pump by a Willis Class Member before a Willis Class Member may produce groundwater. The responsibility for the cost of such meters will be determined by the Court.

C. Transition Period.

The Settling Parties agree that net groundwater production from the Basin needs to be reduced over a period of time from current levels to no more than the Basin's Total Safe Yield. This can be accomplished by reducing pumping and/or purchasing Replacement Water. The Settling Parties agree that the Transition Period should begin at the date of entry of Final Judgment in the Coordinated Actions and should last seven years. During the first two years of the Transition Period no effort will be made to curtail groundwater pumping and no Replacement Assessments will be made. By the end of the seventh year of the Transition Period, groundwater pumping from the Basin without Replacement Assessment for Replacement Water will not exceed the Native Safe Yield.

D. Replacement Water.

The Settling Parties recognize the right of any Settling Party to produce groundwater from the Basin above their share of the Native Safe Yield, subject to the Physical Solution and to any Replacement Assessment. The Settling Parties agree to provide or purchase Imported Water for all groundwater pumping that exceeds a Settling Party's share of the Federally Adjusted Native Safe Yield. The Settling Parties agree that any Settling Party who produces more than its annual share of the Federally Adjusted Native Safe Yield in any year will be responsible to provide Replacement Water or pay a Replacement Assessment to the Watermaster so that the Watermaster can purchase Imported Water to recharge the Basin.

E. Water Storage

The Settling Parties agree that water storage in the Basin offers significant benefits and

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should be encouraged. The Settling Parties further recognize that there is a limit on the Basin's available storage space and that the storage of water for uses within the Basin should have priority over storage for use outside the Basin. Subject to those general principles, the Settling Parties agree that water storage should be permitted and encouraged and agree to support appropriate provisions in the Physical Solution.

F. Recycled Water

The Settling Parties agree that it is important to encourage the treatment and use of Recycled Water. The Willis Class agrees not to challenge or otherwise contest Settling Defendants' claims to Return Flows from Recycled Water that was reclaimed by the Sanitation Districts of Los Angeles County.

VI. PROCEDURES FOR CLASS NOTICE AND HEARING ON MOTIONS FOR PRELIMINARY AND FINAL APPROVAL OF STIPULATION

A. Preliminary Approval Motion and Settlement Notice.

Settling Plaintiffs shall file a motion for preliminary approval ("Preliminary Approval Motion") of the terms of the Settlement as soon as practicable following execution of this Stipulation by all Settling Parties. The Preliminary Approval Motion will seek entry of an Order Preliminarily Approving Class Action Settlement. The Preliminary Approval Motion shall include a proposed form of notice describing this Stipulation (the "Settlement Notice") to be disseminated to the Willis Class as well as a description of the procedures to be used in disseminating the Settlement Notice. The Settlement Notice shall be disseminated to all Willis Class Members by or under the supervision of counsel for District 40, with the expenses to be borne by District 40. The Settling Parties will attempt to agree upon the language for the Settlement Notice, but agree to be bound by the Court's determination in the event they have any disputes or disagreements in that regard. The Settling Parties agree to use their best efforts to have the Preliminary Approval Motion heard as promptly as is practical.

B. Final Approval Hearing.

The Settlement Notice will advise Willis Class Members of the date and time set for a Hearing on the Settling Plaintiffs' Motion for Final Approval of the Stipulation, including

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advising them of their rights to submit statements in support of or opposition to the Stipulation. The Final Approval Motion shall request that this Court find that the Stipulation and Proposed Final Judgment are fair, reasonable, and adequate to the Willis Class and shall seek entry of a Final Judgment substantially in the form attached hereto as Exhibit A.

VII. RELEASES AND DISMISSALS

A. Release By Settling Plaintiffs

1. In addition to the effect of any Final Judgment entered in accordance with this Stipulation, upon this Stipulation becoming final as set out in Section VIII, Paragraph G of this Stipulation, and in consideration for the settlement consideration set forth above, and for other valuable consideration, the Settling Plaintiffs shall completely release, acquit and forever discharge the Settling Defendants from any and all claims, demands, actions, suits, causes of action, whether class, individual, or otherwise in nature that Settling Plaintiffs, or each of them, ever had, now has, or hereafter can, shall, or may have on account of or in any way arising out of, any and all known or unknown, foreseen or unforeseen, suspected or unsuspected injuries, damages, and the consequences thereof in any way arising out of or relating in any way to the matters at issue in the Willis Action ("Released Claims"). Each Settling Plaintiff may hereafter discover facts other than or different from those which he, she, or it knows or believes to be true with respect to the claims which are the subject matter of this Stipulation, but each Settling Plaintiff hereby expressly waives and fully, finally, and forever, settles and releases, upon this Stipulation becoming final, any known or unknown, suspected or unsuspected, contingent or non-contingent claim with respect to the subject matter of the Stipulation, whether or not concealed or hidden, without regard to the subsequent discovery or existence of such different or additional facts. As provided in the Release set forth above, the Settling Plaintiffs, including any of Settling Plaintiffs' representatives, successors, agents, affiliates, employees, supervisors, officers, directors, or shareholders, agree to waive and release all rights and benefits which they might otherwise have pursuant to Section 1542 of the California Civil Code with regard to the release of such unknown, unanticipated or misunderstood claims, causes of action, liabilities, indebtedness and obligations.

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2. The Release set forth in Paragraph VII.A, above, does not include claims by any of the Settling Plaintiffs other than the claims set forth therein. In particular, the Settling Parties recognize that many persons own more than one parcel of land within the Basin. The foregoing Release only binds Willis Class Members and only with respect to those properties within the Basin on which they have not pumped water.

B. Release By Settling Defendants

In addition to the effect of any Final Judgment entered in accordance with this Stipulation, upon this Stipulation becoming final as set out in Paragraph VIII.G of this Stipulation, and in consideration of the settlement consideration set forth above, and for other valuable consideration, the Settling Defendants completely release, acquit and forever discharge Settling Plaintiffs and the Willis Class Members from any and all claims, demands, actions, suits, causes of action, whether class, individual, or otherwise in nature that Settling Defendants, or any of them, ever had, now has, or hereafter can, shall, or may have arising from or relating in any way to the matters at issue in the Willis Action ("Released Claims"). Each Settling Defendant may hereafter discover facts other than or different from those which he, she, or it knows or believes to be true with respect to the claims which are the subject matter of this Stipulation, but each Settling Defendant hereby waives any right to relief from the provisions of this Stipulation in such event, and fully, finally, and forever, settles and releases, upon this Stipulation becoming final, any known or unknown, suspected or unsuspected, contingent or non-contingent claim with respect to the subject matter of the Stipulation, whether or not concealed or hidden, and without regard to the subsequent discovery or existence of such different or additional facts.

1. As provided in the Release set forth in Paragraph VII.B, above, the Settling Defendants, including any of Settling Defendants' representatives, successors, agents, affiliates, employees, supervisors, officers, directors, or shareholders, agree to waive and release all rights and benefits which they might otherwise have pursuant to Section 1542 of the California Civil Code with regard to the release of such unknown, unanticipated or misunderstood claims, causes of action, liabilities, indebtedness and obligations.

VIII. MISCELLANEOUS PROVISIONS

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A. No Concession By Any Settling Party

It is understood and agreed that this Stipulation represents the compromise of disputed positions with respect to the relevant facts and law. This Stipulation shall not be deemed a concession by any Settling Party as to any fact or the validity or invalidity of any claim or defense.

B. Best Efforts and Mutual Cooperation.

Settling Plaintiffs and Settling Defendants shall use their best efforts to effectuate this Stipulation and its purpose, and secure the prompt, complete, and final dismissal with prejudice of the Willis Action. The Settling Parties agree to take any and all reasonable steps that may be necessary in that regard, as long as those steps do not require any material deviations from the terms of this Stipulation or impose material new obligations beyond those contemplated by this Stipulation.

The Settling Parties recognize that not all parties to the Coordinated Actions have entered into this Stipulation and that a trial may be necessary as against non-settling parties. The Settling Parties agree to cooperate and coordinate their efforts in any such trial or hearing so as to obtain entry of judgment consistent with the terms of this Stipulation; this provision, however, will not require Willis Class counsel to participate in any such trial or render any efforts absent written agreement of Settling Defendants to compensate them for such efforts. Nor shall this Stipulation preclude Settling Plaintiffs from participating in any further proceedings that may affect their rights.

C. Adjustments Of Settling Parties' Estimates

In the event that the Court enters findings of fact that vary from the estimated amounts that the Settling Parties have agreed to for purposes of this Stipulation (including the length of the Transition Period described in Paragraph V.C.), the Court's findings will be determinative and will supplant the amounts set forth in this Stipulation. For example, if the Court should determine following trial that the Basin's Total Safe Yield is, in fact, 120,000 acre-feet per year (or some other amount), the Court's findings will control.

D. Fees And Costs Of Settling Plaintiff's Counsel

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The Settling Parties understand that Willis Class counsel intend to seek an award of their fees and costs from the Court. Any such awards will be determined by the Court unless agreed to by the Settling Parties. Settling Defendants will likely oppose the motion for fees and costs. If Willis Class Counsel obtain an award of fees, Settling Defendants agree to exercise their best efforts to pay any fee award within a reasonable period of time or as required pursuant to Court order. Willis Class Counsel agree that they will not seek any attorneys' fees and/or costs from Settling Defendants for any efforts Willis Class Counsel undertake after the Court's entry of Final Judgment approving the Settlement, except with respect to the following: (a) any reasonable and appropriate efforts by Willis Class Counsel to enforce the terms of this Stipulation against Settling Defendants in the event Settling Defendants fail to comply with a provision of this Stipulation; (b) any reasonable and appropriate efforts by Willis Class Counsel to defend against any new or additional claims or causes of action asserted by Settling Defendants against the Willis Class in pleadings or motions filed in the Consolidated Actions; (c) any reasonable and appropriate efforts by Willis Class Counsel that are undertaken in response to a written Court order stating that, pursuant to this provision, Class counsel may seek additional fees for specified efforts from Settling Defendants pursuant to Code of Civil Procedure section 1021.5; (d) any reasonable and appropriate efforts by Willis Class Counsel that are undertaken in response to a written request by Settling Defendants executed by counsel for all Settling Defendants that Class Counsel participate in future aspects of the Consolidated Actions (e.g., the negotiation of a Physical Solution); or (e) any reasonable and appropriate efforts that Willis Class Counsel render to defend a fee award in their favor in the event the Settling Defendants appeal such a fee award and the Court of Appeal affirms the fee award in the amount of 75 percent or more of the fees awarded by the Superior Court. Willis Class Counsel remain free to seek an award of fees from other parties to the litigation.

E. Retention Of Jurisdiction

The Superior Court of the State of California for Los Angeles County shall retain jurisdiction over the implementation, enforcement, and performance of this Stipulation, and shall have exclusive jurisdiction over any suit, action, proceeding, or dispute arising out of or relating

to this Stipulation or the applicability of this Stipulation.

F. Choice Of Law

This Stipulation shall be governed and construed by the substantive laws of the State of California.

G. Finality

a. This Stipulation shall be effective on the Effective Date, which shall occur when the Court has entered a Final Judgment approving this Stipulation and one of the following events occurs; (i) if an appeal is taken, the date of final affirmance of the Final Judgment, or if petition for review is granted by California Supreme Court or writ of certiorari is granted by United States Supreme Court, the date of final affirmance of the Final Judgment following review pursuant to such grant; or (ii) the date of final dismissal of any appeal from Final Judgment or the final dismissal of any proceedings on petition to review the Final Judgment; or (iii) if no appeal is filed, the expiration date of the time for filing or noticing of any appeal from the Final Judgment, i.e., sixty (60) days after notice of entry of the Final Judgment.

b. In the event that the Court refuses to approve this Stipulation, or any material part hereof, or if such approval is materially modified or set aside on appeal, or if the Final Judgment is not entered in accordance with this Stipulation, appellate review is sought, and on such review, such Final Judgment is not affirmed as to all material parts, then any of the Settling Parties to the Stipulation have the option to rescind this Stipulation in its entirety. Written notice of the exercise of any such right to rescind shall be made according to the terms of this Paragraph VIII.L below within thirty (30) days of the triggering event.

H. Integrated Agreement

This Stipulation constitutes the entire, complete and integrated agreement among the Settling Parties, and supersedes all prior or contemporaneous undertakings of the Settling Parties in connection herewith. This Stipulation may not be modified or amended except in writing executed by the Settling Parties and approved by the Court. It shall be construed and interpreted to effectuate the intent of the Settling Parties which is to provide, through this Stipulation, for a complete resolution of the relevant claims between the Settling Parties on the terms provided in

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this Stipulation. Notwithstanding the foregoing, the Settling Parties intend and agree that this Stipulation will later be incorporated into a Physical Solution, as defined above, which is consistent with the terms of this Stipulation.

I. Waiver

The waiver by any Settling Party of its rights under any provision of this Stipulation or of any breach of this Stipulation shall not be deemed a waiver of any other provision or subsequent breach of this Stipulation.

J. Intended Beneficiaries

This Stipulation shall be binding upon, and inure to the benefit of, the heirs, successors and assigns of the Settling Plaintiffs and Settling Defendants. Without limiting the generality of the foregoing, this Stipulation shall bind each and every subsequent property owner who acquires property in the Basin from a Willis Class Member as well as persons who subsequently acquire such properties.

K. Interpretation and Construction

The terms of this Stipulation have been arrived at by negotiation and mutual agreement, with consideration of and participation by all Settling Parties and with the advice of counsel. Neither Settling Plaintiffs nor Settling Defendants shall be considered to be the drafter of this Stipulation or any of its provisions for the purpose of any statute, case law, or rule of interpretation or construction that would or might cause any provision to be construed against the drafter of this Stipulation (including but not limited to Civil Code Section 1654). The descriptive headings of any paragraphs or sections of this Stipulation are inserted for convenience only and do not constitute a part of this Stipulation.

L. Notices

Where this Stipulation requires either party to provide notice or any other communication or document to the other, such notice shall be in writing, and such notice, communication, or document shall be provided by personal delivery, facsimile transmission, overnight delivery, or letter sent by United States mail with delivery confirmation. Notice may be provided to the Settling Parties through their counsel of record at the following addresses:

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California Water Service Company:	Attn: President California Water Service Company 1720 North First Street San Jose, California 95112
with a copy to:	John Tootle California Water Service Company 2632 West 237th Street Torrance, California 90505
City of Palmdale:	Attn: City Manager 38300 Sierra Highway Palmdale, California 93550
with a copy to:	James Markman Richards, Watson & Gerson 355 South Grand Avenue, 40th Floor Los Angeles, California 90071
Littlerock Creek Irrigation District:	Attn: General Manager 35141 87th Street East Littlerock, California 93543
with a copy to:	Wayne Lemieux Lemieux & O'Neill 2393 Townsgate Rd., Suite 201 Westlake Village, California 91361
Los Angeles County Waterworks District No. 40:	Attn: Director 260 East Avenue K-8 Lancaster, California 93535
with a copy to:	Michael Moore Los Angeles county Counsel Office 648 Kenneth Hahn Hall of Administration 500 West Temple Street Los Angeles, California 90012
with a copy to:	Eric L. Garner

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	Best Best & Krieger LLP 3750 University Avenue P.O.B 1028 Riverside, California 92502
Palmdale Water District:	Attn: General Manager 2029 E. Avenue Q Palmdale, California 93550
with a copy to:	Thomas Bunn III Lagerlof, Senecal, Gosney & Kruse, LLP 301 North Lake Avenue, 10th floor Pasadena, California 91101-4108
Palm Ranch Irrigation District:	Attn: General Manger 4871 West Avenue M. (Colombia Way) Quartz Hill, California 93536
with copy to:	Wayne Lemieux Lemieux & O'Neill 2393 Townsgate Rd., Suite 201 Westlake Village, California 91361
Quartz Hill Water District:	Attn: General Manager 42141 N. 50th Street West Quartz Hill, California 93536
with copy to:	Bradley Weeks Charlton Weeks LLP 107 West Avenue M-14, Suite A Palmdale, California 93551
Phelan Pinon Hills Community Services District:	Attn: General Manager 4037 Phelan Road, Suite C-1 Phelan, California 92371
with copy to:	Francis Logan Law Office of Susan Trager 19712 MacArthur Blvd. #120 Irvine, California 92612
Rosamond Community Services District:	Attn: General Manager

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RIVERSIDE, CA 92502

	3179 35th Street W Rosamond California 93560
with a copy to:	Eric L. Garner Best Best & Krieger LLP 3750 University Avenue P.O.Box 1028 Riverside, California 92502
Willis Class:	Rebecca Lee Willis
With a copy to:	Ralph Kalfayan Krause Kalfayan Benink & Slavens LLP 625 Broadway, Ste. 635 San Diego, CA 92101

or to such other address as any Settling Party shall, from time to time, specify in the manner provided herein.

M. No Admissions

Neither this Stipulation, nor any act performed or document executed pursuant to or in furtherance of this Stipulation is or may be deemed to be or may be used as an admission of, or evidence of, (i) the validity of any claim or defense; or (ii) the appropriateness or inappropriateness of any Willis Class Member or other representational capacity, whether contemporaneously with this Stipulation or at any time in the future.

N. Execution

This Stipulation may be executed in counterparts by Settling Plaintiffs and Settling Defendants, and a facsimile signature shall be deemed an original signature for purposes of executing this Stipulation. Each of the undersigned persons represents that he or she is fully authorized to enter into the terms and conditions of and to execute this Stipulation by the party for which he or she has signed the Stipulation.

IN WITNESS HEREOF, the undersigned being duly authorized, have executed this Stipulation on the dates shown below.

Rebecca Lee Willis

Approved as to form by: Ralph Kalfayan

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P.O. BOX 1028
RIVERSIDE, CA 92502

By: Rebecca Lee Willis

By: Rachel Kaffaga

California Water Service

Approved as to form by: John Tootle

By: _____

By: _____

City of Palmdale

Approved as to form by: James Markman

By: _____

By: _____

Littlerock Creek Irrigation District

Approved as to form by: Wayne Lemieux

By: _____

By: _____

Los Angeles County Waterworks District No. 40

Approved as to form by:
Andrea Sheridan Ordin, County Counsel

By: _____
Chair, Board of Supervisors

By: _____
Warren R. Wellen, Principal Deputy
County Counsel

Approved as to form by: Eric L. Garner

By: _____

Attest:
Sachi A. Hamai,
Executive Officer-Clerk Of the Board of Supervisors

By: LaChelle Smitherman
DEPUTY

Palmdale Water District

Approved as to form by: Tom Bunn

By: _____

By: _____

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By: _____

By: _____

California Water Service

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By: _____

By: _____

City of Palmdale

Approved as to form by: James Markman

By: James J. Markman

By: James J. Markman

Littlerock Creek Irrigation District

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By: _____

By: _____

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By: _____
Chair, Board of Supervisors

By: _____
Warren R. Wellen, Principal Deputy County Counsel

Approved as to form by: Eric L. Garner

By: _____

Attest:
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Executive Officer-Clerk Of the Board of Supervisors

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Palmdale Water District

Approved as to form by: Tom Bunn

By: _____

By: _____

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By: _____

By: _____

California Water Service

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By: _____

By: _____

City of Palmdale

Approved as to form by: James Markman

By: _____

By: _____

Littlerock Creek Irrigation District

Approved as to form by: Wayne Lemieux

By: BJ Bones

By: Wayne Lemieux

Los Angeles County Waterworks District No. 40

Approved as to form by:
Andrea Sheridan Ordin, County Counsel

By: _____
Chair, Board of Supervisors

By: _____
Warren R. Wellen, Principal Deputy County Counsel

Approved as to form by: Eric L. Garner

By: _____

Attest:
Sachi A. Hamai,
Executive Officer-Clerk Of the Board of Supervisors

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Palmdale Water District

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By: _____

By: _____

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California Water Service

By: _____

City of Palmdale

By: _____

Littlerock Creek Irrigation District

By: _____

Los Angeles County Waterworks
District No. 40

By: _____
Chair, Board of Supervisors

Attest:
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Executive Officer-Clerk Of the Board of Supervisors

By: _____
DEPUTY

Palmdale Water District

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By: _____

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By: _____

Approved as to form by: James Markman

By: _____

Approved as to form by: Wayne Lemieux

By: _____

Approved as to form by:
Andrea Sheridan Ordin, County Counsel

By: _____
Warren R. Wellen, Principal Deputy
County Counsel

Approved as to form by: Eric L. Garner

By: _____

Approved as to form by: Tom Bunn

By: _____

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Palm Ranch Irrigation District

By: _____

Approved as to form by: Wayne Lemieux

By: _____

Phelan Pinon Hills Community Services District

By: _____

Approved as to form by: Francis Logan

By: _____

Quartz Hill Water District

By: _____

Approved as to form by: Brad Weeks

By: _____

Rosamond Community Services Districts

By: _____

Approved as to form by: Eric L. Garner

By: _____

Desert Lake Community Services District

By: _____

Approved as to form by: Wayne Lemieux

By: _____

North Edwards Water District

By: _____

Approved as to form by: Wayne Lemieux

By: _____

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By: _____

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Rosamond Community Services Districts

By: _____

Approved as to form by: Eric L. Garner

By: _____

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Palm Ranch Irrigation District

By: _____

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Approved as to form by: Francis Logan

By: _____

Quartz Hill Water District

By: _____

Approved as to form by: Brad Weeks

By: _____

Rosamond Community Services Districts

By: _____

Approved as to form by: Eric L. Garner

By: _____

Desert Lake Community Services District

By: Sallie A. Kyriakopoulos

Approved as to form by: Wayne Lemieux

By: Wayne Lemieux

North Edwards Water District

By: _____

Approved as to form by: Wayne Lemieux

By: Wayne Lemieux

Palm Ranch Irrigation District

By: _____

Approved as to form by: Wayne Lemieux

By: _____

Phelan Pinon Hills Community Services District

By: _____

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By: _____

Quartz Hill Water District

By: _____

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By: _____

Rosamond Community Services Districts

By: _____

Approved as to form by: Eric L. Garner

By: _____

Desert Lake Community Services District

By: _____

Approved as to form by: Wayne Lemieux

By: _____

North Edwards Water District

By: Dallis D. Kostopoulos

Approved as to form by: Wayne Lemieux

By: Wayne Lemieux

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DEFAULTS ENTERED

Doe/Roe No.	Name of Roe Cross-Defendant	Default Entered	Default Posted
3	Jacqueline Ackermann	3/23/2012	5/8/2013
4	ADVINCULA, CENON S	3/23/2012	5/8/2013
5	ADVINCULA, OLIVA M	3/23/2012	5/8/2013
6	ALDAIS, MARWAN M.	3/23/2012	5/8/2013
7	AGUSTINES, ANTONIO U	3/23/2012	5/8/2013
7	Allen Alevy	3/23/2012	5/8/2013
8	ARCHER, GEORGINE J.	3/23/2012	5/8/2013
8	Allen Alevy and Alevy Family Trust	3/23/2012	5/8/2013
9	ARCHER GEORGINE J as Trustee for the Georgine J. Archer Trust	3/23/2012	5/8/2013
10	BARKS, GUSS A. JR.	3/23/2012	5/8/2013
11	BRONSTON, LEROY DANIEL	3/23/2012	5/8/2013
12	BAYANI, ILDEFONSO S.	3/23/2012	5/8/2013
13	Castle Butte Dev. Corp	3/23/2012	5/8/2013
13	BAYANI, NILDA V.	3/23/2012	5/8/2013
16	FUNK, JOAN A	3/23/2012	5/8/2013
19	GENUS L P	3/23/2012	5/8/2013
24	Illy King	3/23/2012	5/8/2013
24	Melinda E Cameron	3/23/2012	5/8/2013
25	Illy King Family Trust	3/23/2012	5/8/2013
25	Catellus Development Corporation	3/23/2012	5/8/2013
26	KUTU INVESTMENT CO - Suspended	3/23/2012	5/8/2013

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DEFAULTS ENTERED

Doe/Roe No.	Name of Roe Cross-Defendant	Default Entered	Default Posted
26	Bong S. Chang	3/23/2012	
27	LAI, EVA	3/23/2012	5/8/2013
27	CHANG, JEANNA Y.	3/23/2012	5/8/2013
28	LAI, PAUL	3/23/2012	5/8/2013
29	CHETRIT, JACOB	3/23/2012	5/8/2013
31	Pei Chi Lin	3/23/2012	5/8/2013
31	Lee Shiow Chiou	3/23/2012	5/8/2013
32	CHUNG, M S	3/23/2012	5/8/2013
35	COLE, C.C. THELMA -	3/23/2012	5/8/2013
36	COLE, J.	3/23/2012	5/8/2013
37	RUDNICK, REBECCA -	3/23/2012	5/8/2013
37	J. & C. C. Thelma Cole and T. J. Cole Trust (J. Cole as Trustee for the T. J. Cole Trust)	3/23/2012	5/8/2013
43	DAVIS, CATHARINE M	3/23/2012	5/8/2013
44	Milton S. Davis	3/23/2012	5/8/2013
46	Sarkis Djanibekyan	3/23/2012	5/8/2013
47	DONG, HONG	3/23/2012	5/8/2013
48	DONG, YING X.	3/23/2012	5/8/2013
53	Lewis Friedrichsen	3/23/2012	5/8/2013
54	Lewis Friedrichsen as Trustee of the Friedrichsen Family Trust	3/23/2012	5/8/2013
55	Aurora P Gabuya	3/23/2012	5/8/2013
58	Betty Gluckstein	3/23/2012	5/8/2013
60	GLUCKSTEIN,MORRIS -	3/23/2012	5/8/2013
61	GLUCKSTEIN, ROSE -	3/23/2012	5/8/2013
66	GORRINDO, L. -	3/23/2012	5/8/2013
71	HAUKE,ANDREAS	3/23/2012	5/8/2013
72	HAUKE, MARILYN	3/23/2012	5/8/2013
75	HIGELMIRE,DONNA	3/23/2012	5/8/2013

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DEFAULTS ENTERED

Doe/Roe No.	Name of Roe Cross-Defendant	Default Entered	Default Posted
76	Michael N. Higelmire	3/23/2012	5/8/2013
78	Hooshpack Dev Inc	3/23/2012	5/8/2013
79	Chi S Huang	3/23/2012	5/8/2013
80	HUANG, SUCHU T.	3/23/2012	5/8/2013
81	Hypericum Interest LLC	3/23/2012	5/8/2013
82	IRANINEZHAD, DARYUSH	3/23/2012	5/8/2013
83	IRANINEZHAD, MINOO	3/23/2012	5/8/2013
84	KADIVAR,ESFANDIAR -	3/23/2012	5/8/2013
85	KADIVAR FAMILY TRUST (Esfandiar Kadivar as Trustee of the Kadivar Family Trust) -	3/23/2012	5/8/2013
88	Cheng Lin Kang	3/23/2012	5/8/2013
94	YOSHIMATSU, KAZUKO	3/23/2012	5/8/2013
95	Billy H. Kim (AND YING X AND HONG DONG ?)	3/23/2012	5/8/2013
106	LAWRENCE, CHARLES TRUST	3/23/2012	5/8/2013
108	Light Andrew & Youngnam	3/23/2012	5/8/2013
109	Man C Lo	3/23/2012	5/8/2013
110	SHIUNG, RU	3/23/2012	5/8/2013
111	Lyman C. Miles	3/23/2012	5/8/2013
112	Lyman C. Miles as Trustee for the Miles Family Trust	3/23/2012	5/8/2013
114	Mission Bell Ranch Development	3/23/2012	5/8/2013
118	M R Nasir	3/23/2012	5/8/2013
119	Souad R Nasir	3/23/2012	5/8/2013
121	Simin C. Neman	3/23/2012	5/8/2013

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DEFAULTS ENTERED

Doe/Roe No.	Name of Roe Cross-Defendant	Default Entered	Default Posted
123	Frank T. Nguyen	3/23/2012	5/8/2013
124	Juanita R Nichols	3/23/2012	5/8/2013
125	Oliver Nichols	3/23/2012	5/8/2013
126	Oliver Nichols as Trustee of the Nichols Family Trust	3/23/2012	5/8/2013
128	POULSEN,NORMAN L	3/23/2012	5/8/2013
130	Victoria Rahimi	3/23/2012	5/8/2013
132	Veronika Reinelt	3/23/2012	5/8/2013
133	Reinelt Rosenloecher Corp PSP	3/23/2012	5/8/2013
140	Rosemount Equities LLC Series	3/23/2012	5/8/2013
141	Royal Investors Group	3/23/2012	5/8/2013
142	ROYAL WESTERN PROPERTIES LLC - ACTIVE	3/23/2012	5/8/2013
145	Daniel Saparzadeh	3/23/2012	5/8/2013
149	SCHWARTZ, MARTIN	3/23/2012	5/8/2013
151	SEVEN STAR UNITED LLC	3/23/2012	5/8/2013
155	Donna L Simpson	3/23/2012	5/8/2013
156	Gareth L Simpson	3/23/2012	5/8/2013
157	Simpson Family Trust (Gareth L. Simpson as Trustee of the Simpson Family Trust)	3/23/2012	5/8/2013
164	GEORGE L STIMSON JR TRUST (George L. Stimson, Jr. as Trustee of the George L. Stimson, Jr. Trust) -	3/23/2012	5/8/2013
167	TIU TIONG D.	3/23/2012	5/8/2013
172	Wilma D. Trueblood	3/23/2012	5/8/2013
173	Wilma D. Trueblood as Trustee of the Trueblood Family Trust	3/23/2012	5/8/2013
177	WALES, KEITH E.	3/23/2012	5/8/2013
180	Alex Wodchis	3/23/2012	5/8/2013

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Doe/Roe No.	Name of Roe Cross-Defendant	Default Entered	Default Posted
181	WONG, ELIZABETH -	3/23/2012	5/8/2013
182	WONG, MARY	3/23/2012	5/8/2013
183	WU, MIKE M.	3/23/2012	5/8/2013
184	WU FAMILY (MIKE M. WU AS TRUSTEE OF THE WU FAMILY TRUST)	3/23/2012	5/8/2013
202	GREEN GROVE MUTUAL WATER COMPANY, INC.	3/23/2012	5/8/2013
206	LLANO FARMS MUTUAL WATER COMPANY	3/23/2012	5/8/2013
208	PIUTE MUTUAL WATER COMPANY	3/23/2012	5/8/2013
210	Wilsona Gardens Mutual Water Company	3/23/2012	5/8/2013
211	Edgemont Acres Mutual Water Company	3/23/2012	5/8/2013
213	ROSAMOND MUTUAL WATER COMPANY	3/23/2012	5/8/2013
Roe 234	Aceh Capital LLC	3/23/2012	5/8/2013
Roe 235	Ehsan Afaghi	3/23/2012	5/8/2013
Roe 237	Bruce Allen	3/23/2012	5/8/2013
Roe 238	Ana Verde Canyon Limited	3/23/2012	5/8/2013
Roe 240	Clinton Edwards Andrews	3/23/2012	5/8/2013
Roe 244	AV Foothills LLC	3/23/2012	5/8/2013
Roe 246	C and P Lancaster Properties, L.L.C.	3/23/2012	5/8/2013
Roe 248	California Springs Land & Development, Inc.	3/23/2012	5/8/2013
Roe 250	Capital Pacific Homes	3/23/2012	5/8/2013
Roe 254	Theodore His-En and Wen-Hui C. Chen, as Co-Trustees of the Chen Family Trust (Established October 27, 1989)	3/23/2012	5/8/2013
Roe 255	Andrew J. Chitiea	3/23/2012	5/8/2013

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Doe/Roe No.	Name of Roe Cross-Defendant	Default Entered	Default Posted
Roe 256	Joan K Chitiea	3/23/2012	5/8/2013
Roe 257	Myron Z. Chlavin, Trustee	3/23/2012	5/8/2013
Roe 259	Richard L. Clark and Elaine M. Clark, Trs.	3/23/2012	5/8/2013
Roe 260	Menandro M. Marcelo and Ofelia or their Successors, as Trustees of the Menandro and Ofelia Marcelo Family Trust Dated June 2, 2006	3/23/2012	5/8/2013
Roe 261	CPH Tehachapi 280 LLC	3/23/2012	5/8/2013
Roe 264	Cyrstalaire Country Club	3/23/2012	5/8/2013
Roe 266	Kristeen Cua	3/23/2012	5/8/2013
Roe 267	Lita Davies	3/23/2012	5/8/2013
Roe 268	Richard Daniel De La Matyr	3/23/2012	5/8/2013
Roe 269	Long Deng	3/23/2012	5/8/2013
Roe 270	Dr Horton Los Angeles Holding, Inc.	3/23/2012	5/8/2013
Roe 272	Discountland Inc.	3/23/2012	5/8/2013
Roe 273	Dowhen Family	3/23/2012	5/8/2013
Roe 274	Mohammed Naji Elhayek	3/23/2012	5/8/2013
Roe 276	Farhad Alnd	3/23/2012	5/8/2013
Roe 277	Vera V. Farwell	3/23/2012	5/8/2013
Roe 279	Hersell Alnd	3/23/2012	5/8/2013
Roe 281	James H. Gisbrecht and Mary L. Gisbrecht, Trustees	3/23/2012	5/8/2013
Roe 282	Harry C. Godshall, Trustee	3/23/2012	5/8/2013
Roe 284	Sam Haskins	3/23/2012	5/8/2013
Roe 285	Yoram Hassid and Yael Hassid, Trustees	3/23/2012	5/8/2013
Roe 286	David J. Hester, Trustee	3/23/2012	5/8/2013

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DEFAULTS ENTERED

Doe/Roe No.	Name of Roe Cross-Defendant	Default Entered	Default Posted
Roe 287	Jack D. Hilton	3/23/2012	5/8/2013
Roe 288	Rita Hilton	3/23/2012	5/8/2013
Roe 289	Clement L. Hirsch, Jr., Trustee	3/23/2012	5/8/2013
Roe 290	Carol A. Hooper	3/23/2012	5/8/2013
Roe 291	Thomas J. Hooper	3/23/2012	5/8/2013
Roe 292	David W. Hopkins	3/23/2012	5/8/2013
Roe 293	Gerald P Hopkins	3/23/2012	5/8/2013
Roe 294	Sumei P Hsi Trust	3/23/2012	5/8/2013
Roe 295	Ja Bin Hsu, Co-Trustee	3/23/2012	5/8/2013
Roe 296	Kangle Huang	3/23/2012	5/8/2013
Roe 297	Yiling Lin	3/23/2012	5/8/2013
Roe 299	James A. Hunter	3/23/2012	5/8/2013
Roe 300	Cyrus Serry	3/23/2012	5/8/2013
Roe 301	J and J General Partnership	3/23/2012	5/8/2013
Roe 302	J P Eliopulos Enterprises Inc.	3/23/2012	5/8/2013
Roe 303	Jensen Trust	3/23/2012	5/8/2013
Roe 304	Thomas Jones, Trustee	3/23/2012	5/8/2013
Roe 305	Joshua Ranch Development Inc	3/23/2012	5/8/2013
Roe 309	Kathryn T. Karlakis	3/23/2012	5/8/2013
Roe 310	James Kim	3/23/2012	5/8/2013
Roe 311	Glenn K. Kim Family LLC	3/23/2012	5/8/2013
Roe 312	Rose M Kolstad	3/23/2012	5/8/2013
Roe 313	Korda	3/23/2012	5/8/2013
Roe 314	Sarah Korda	3/23/2012	5/8/2013
Roe 315	Lancaster and 120 111 LLC	3/23/2012	5/8/2013

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DEFAULTS ENTERED

Doe/Roe No.	Name of Roe Cross-Defendant	Default Entered	Default Posted
Roe 317	George R. Lazenby	3/23/2012	5/8/2013
Roe 318	Samuel Lee	3/23/2012	5/8/2013
Roe 319	Youngsin Lee	3/23/2012	5/8/2013
Roe 320	Leona Valley Hunting Club	3/23/2012	5/8/2013
Roe 321	Sue Levine	3/23/2012	5/8/2013
Roe 322	Phillip W. Lewis, Co-Trustee	3/23/2012	5/8/2013
Roe 323	David H. Li	3/23/2012	5/8/2013
Roe 325	Michael Lin	3/23/2012	5/8/2013
Roe 326	Linda L. Yang	3/23/2012	5/8/2013
Roe 330	Lucky 360 Investments LLC	3/23/2012	5/8/2013
Roe 331	Janet L Lyman	3/23/2012	5/8/2013
Roe 332	S. K. Madan	3/23/2012	5/8/2013
Roe 333	Laurie F. Magbanua	3/23/2012	5/8/2013
Roe 339	Lim S Mov	3/23/2012	5/8/2013
Roe 340	MRN Family Limited Partnership	3/23/2012	5/8/2013
Roe 341	Gay E Naiditch	3/23/2012	5/8/2013
Roe 343	Chester Nigra, Co-Trustee	3/23/2012	5/8/2013
Roe 344	Richard J. Nigra, Sr., Custodian	3/23/2012	
Roe 345	Neil Nissing	3/23/2012	5/8/2013
Roe 346	Masaaki Okamoto	3/23/2012	5/8/2013
Roe 347	Keiko Okamoto	3/23/2012	5/8/2013
Roe 348	Noriyuki Okamoto	3/23/2012	5/8/2013
Roe 349	Shoji Okamoto	3/23/2012	5/8/2013
Roe 350	Pacific American Inv Ltd Inc	3/23/2012	5/8/2013
Roe 352	Palmdale 1000 Associates LLC	3/23/2012	5/8/2013

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Doe/Roe No.	Name of Roe Cross-Defendant	Default Entered	Default Posted
Roe 354	Marvin R Perriseau	3/23/2012	5/8/2013
Roe 355	Karen L. Perriseau	3/23/2012	5/8/2013
Roe 356	Frank W. Pritchard	3/23/2012	5/8/2013
Roe 357	Margaret F Pritchard	3/23/2012	5/8/2013
Roe 358	Petersen Properties	3/23/2012	5/8/2013
Roe 359	Thang D Pham	3/23/2012	5/8/2013
Roe 361	John W. Phelps	3/23/2012	5/8/2013
Roe 362	James S. Phelps	3/23/2012	5/8/2013
Roe 365	Efren Reyes	3/23/2012	5/8/2013
Roe 366	RMG Property Holding Two LLC	3/23/2012	5/8/2013
Roe 367	Steffany J Rohn	3/23/2012	5/8/2013
Roe 369	Melvin K. Rust, Trustee	3/23/2012	5/8/2013
Roe 370	San Ho Huang	3/23/2012	5/8/2013
Roe 371	Chi Shiou Huang	3/23/2012	5/8/2013
Roe 373	SCS Family Limited Partnership	3/23/2012	5/8/2013
Roe 374	Thomas P. Sherrill	3/23/2012	5/8/2013
Roe 375	Rachel M. Sherrill	3/23/2012	5/8/2013
Roe 376	Patricia C. Simi, Trustee	3/23/2012	5/8/2013
Roe 379	Columbia M. Stenberg, Trustee	3/23/2012	5/8/2013
Roe 382	Christopher S. Sun, Trustee	3/23/2012	5/8/2013
Roe 383	John S. Sun, Trustee	3/23/2012	5/8/2013

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DEFAULTS ENTERED

Doe/Roe No.	Name of Roe Cross-Defendant	Default Entered	Default Posted
Roe 385	Alyce A Togonotti	3/23/2012	5/8/2013
Roe 389	USA Golden Land Investment LLC	3/23/2012	5/8/2013
Roe 392	Roy C. Wang	3/23/2012	5/8/2013
Roe 393	Lucy B. Wang	3/23/2012	5/8/2013
Roe 394	Warm Springs Investments Ltd.	3/23/2012	5/8/2013
Roe 398	West Coast Land Corporation	3/23/2012	5/8/2013
Roe 399	Laurie S. Whicher	3/23/2012	5/8/2013
Roe 400	Joyce P. Whiteside, Trustee	3/23/2012	5/8/2013
Roe 401	Harry Z. Wilson	3/23/2012	5/8/2013
Roe 403	ABC Diamonds Inc.	3/23/2012	5/8/2013
Roe 404	Alesso Lawrence V & Mardean Trust	3/23/2012	5/8/2013
Roe 405	Charles A. Amento	3/23/2012	5/8/2013
Roe 406	Sheila D. Amento	3/23/2012	
Roe 407	Sigitas F. Babusis	3/23/2012	5/8/2013
Roe 408	Banducci Enterprises	3/23/2012	5/8/2013
Roe 409	Banducci Land, L.L.C.	3/23/2012	5/8/2013
Roe 410	Janet Starr Berkey	3/23/2012	5/8/2013
Roe 411	Leslie C. Blenkhorn	3/23/2012	5/8/2013
Roe 412	Cherilyn M. Blenkhorn	3/23/2012	5/8/2013
Roe 414	Mark F. Bramlett	3/23/2012	5/8/2013
Roe 422	Sallie Lynne Chatterton	3/23/2012	5/8/2013
Roe 423	Michael C. Cheiky	3/23/2012	5/8/2013

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DEFAULTS ENTERED

Doe/Roe No.	Name of Roe Cross-Defendant	Default Entered	Default Posted
Roe 424	Charity S. Cheiky	3/23/2012	5/8/2013
Roe 427	Vivian A. Chitiea	3/23/2012	5/8/2013
Roe 428	Yong See Cho	3/23/2012	5/8/2013
Roe 429	CJH Real Properties LLC	3/23/2012	5/8/2013
Roe 431	William Cordova	3/23/2012	5/8/2013
Roe 432	Virginia C. Cordova	3/23/2012	5/8/2013
Roe 433	Eric M Coyle	3/23/2012	5/8/2013
Roe 434	CPH Rosamond LP	3/23/2012	5/8/2013
Roe 435	Susan Elise Simonelli Crockett	3/23/2012	5/8/2013
Roe 438	Jeannette Damron	3/23/2012	5/8/2013
Roe 439	De Pietro Limited	3/23/2012	5/8/2013
Roe 441	Dora Land	3/23/2012	5/8/2013
Roe 442	Duncan M.B. Separate Prop Trust	3/23/2012	5/8/2013
Roe 443	Carol A. Durst, Trustee	3/23/2012	5/8/2013
Roe 444	Eagle Meadows of No Edwards 435 LLC	3/23/2012	5/8/2013
Roe 445	East Kern Prop LLC	3/23/2012	5/8/2013
Roe 446	East West Land Invs. Inc.	3/23/2012	5/8/2013
Roe 449	Sammy L. Edwards	3/23/2012	5/8/2013
Roe 450	Linda D. Edwards	3/23/2012	5/8/2013
Roe 454	Nancy H Evans	3/23/2012	5/8/2013
Roe 455	Juanita Eyherabide, Trustee	3/23/2012	5/8/2013
Roe 456	Raymond Eyherabide Jr	3/23/2012	5/8/2013
Roe 457	Eyherabide Sheep Co.	3/23/2012	5/8/2013
Roe 459	Farm Estates of the World	3/23/2012	5/8/2013

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DEFAULTS ENTERED

Doe/Roe No.	Name of Roe Cross-Defendant	Default Entered	Default Posted
Roe 460	Fernandez Family Liv Trust	3/23/2012	5/8/2013
Roe 462	Fischer Grandchildrens Trust	3/23/2012	5/8/2013
Roe 463	Fogler, Ronald & Irene P. Trust	3/23/2012	5/8/2013
Roe 468	Mansoor Ghaneeian and Fariba Ghaneeian Trust	3/23/2012	5/8/2013
Roe 469	Gill Family Trust 1999	3/23/2012	5/8/2013
Roe 470	Gleason Trust	3/23/2012	5/8/2013
Roe 471	Gold Sky Prop. LLC	3/23/2012	5/8/2013
Roe 473	Guerrant Family Trust	3/23/2012	5/8/2013
Roe 474	Jose Guzman	3/23/2012	5/8/2013
Roe 475	Norma Guzman	3/23/2012	5/8/2013
Roe 476	H & N Development Co., Inc.	3/23/2012	5/8/2013
Roe 478	Mary Lou Byerly Harrell	3/23/2012	5/8/2013
Roe 481	Sam Haskins Trust	3/23/2012	5/8/2013
Roe 482	Bob D. Helton Living Trust	3/23/2012	5/8/2013
Roe 483	Herrmann Family Trust	3/23/2012	5/8/2013
Roe 484	HET 2440 LLC	3/23/2012	5/8/2013
Roe 485	Susan B. Hills Family Trust	3/23/2012	5/8/2013
Roe 486	Ho Giang	3/23/2012	5/8/2013
Roe 487	Mylinh Phan	3/23/2012	5/8/2013
Roe 488	Jennifer Chang Ho Family Trust	3/23/2012	5/8/2013
Roe 492	Horizon Sumitt LLC	3/23/2012	5/8/2013
Roe 493	James T Hsu	3/23/2012	5/8/2013
Roe 494	H Huffnagle	3/23/2012	5/8/2013
Roe 495	Maynard R Huffnagle	3/23/2012	5/8/2013
Roe 498	Iglesia De Dio Pentecostla Mi	3/23/2012	5/8/2013

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Doe/Roe No.	Name of Roe Cross-Defendant	Default Entered	Default Posted
Roe 499	Invescorp Ltd	3/23/2012	5/8/2013
Roe 503	Javid Investments, L.L.C.	3/23/2012	5/8/2013
Roe 504	Emma Lou Johnson	3/23/2012	5/8/2013
Roe 505	Annette F. Kam	3/23/2012	5/8/2013
Roe 509	Richard M. & Sandra A Lang Family Trust	3/23/2012	5/8/2013
Roe 512	Daniel Bronston Leroy	3/23/2012	5/8/2013
Roe 513	Mary Ann Lewis	3/23/2012	5/8/2013
Roe 514	Lien Family Survivors Trust	3/23/2012	5/8/2013
Roe 515	Christine Lin	3/23/2012	5/8/2013
Roe 516	Los Angeles Land Investment	3/23/2012	5/8/2013
Roe 517	Loyola Marymount University	3/23/2012	5/8/2013
Roe 518	Clark C Lu	3/23/2012	5/8/2013
Roe 519	Danny C Lu	3/23/2012	5/8/2013
Roe 520	Douglas R. McAvoy and Amy M. McAvoy Trust	3/23/2012	5/8/2013
Roe 521	Roberta Merry Family Trust	3/23/2012	5/8/2013
Roe 522	Hans Peter Meyer	3/23/2012	5/8/2013
Roe 523	Ipbi Kim Meyer	3/23/2012	5/8/2013
Roe 525	S Huth-Tanner	3/23/2012	5/8/2013
Roe 526	Jamie Miller	3/23/2012	5/8/2013
Roe 527	Mojave & Tropico LLC	3/23/2012	5/8/2013
Roe 530	Elaine L. Morales	3/23/2012	5/8/2013
Roe 531	Mary B Mower	3/23/2012	5/8/2013
Roe 537	Fred Piwenitzky	3/23/2012	5/8/2013

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DEFAULTS ENTERED

Doe/Roe No.	Name of Roe Cross-Defendant	Default Entered	Default Posted
Roe 538	Sachiko Piwenitzky	3/23/2012	5/8/2013
Roe 539	Pledge Investment LLC	3/23/2012	5/8/2013
Roe 540	Lulu Edna Pollock	3/23/2012	5/8/2013
Roe 541	Popinjay Corp. N V	3/23/2012	5/8/2013
Roe 542	Donald L. Purviance	3/23/2012	5/8/2013
Roe 544	Ronald A Ralphs	3/23/2012	5/8/2013
Roe 545	Ramos Trust	3/23/2012	5/8/2013
Roe 547	Edgar Reinoso	3/23/2012	5/8/2013
Roe 551	Lori March Scourby	3/23/2012	5/8/2013
Roe 552	Sellsite & United LLC	3/23/2012	5/8/2013
Roe 554	SF Pacific Properties Inc	3/23/2012	5/8/2013
Roe 557	Theodore H Sims, Jr.	3/23/2012	5/8/2013
Roe 559	Mi R Song	3/23/2012	5/8/2013
Roe 560	John Stern and Eleanor Stern Trust	3/23/2012	5/8/2013
Roe 561	Helen H. Stookey	3/23/2012	5/8/2013
Roe 563	John Su	3/23/2012	5/8/2013
Roe 564	Chen Su	3/23/2012	5/8/2013
Roe 565	Supermed Health Inc.	3/23/2012	5/8/2013
Roe 566	Sylvan Vista Development Co.	3/23/2012	5/8/2013
Roe 567	Tamkin Family Trust	3/23/2012	5/8/2013
Roe 568	Charles Tapia and Nellie Tapia Family Trust	3/23/2012	5/8/2013
Roe 569	Tazman, A Limited Liability Company	3/23/2012	5/8/2013
Roe 571	United Customhouse Brokers Inc.	3/23/2012	5/8/2013
Roe 574	Francom G. Watson, Jr.	3/23/2012	5/8/2013

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DEFAULTS ENTERED

Doe/Roe No.	Name of Roe Cross-Defendant	Default Entered	Default Posted
Roe 575	A. Watson	3/23/2012	5/8/2013
Roe 576	Wells Fargo Bank NA	3/23/2012	5/8/2013
Roe 577	Richard A. White and Valerie K. White Trust	3/23/2012	5/8/2013
Roe 578	Wood Family Trust	3/23/2012	5/8/2013
Roe 580	Yeh Vivian Hwa	3/23/2012	5/8/2013
Roe 581	Lincoln Chu Kuen Yung	3/23/2012	5/8/2013
Roe 583	American Landmark Group LLC	3/23/2012	5/8/2013
Roe 585	190th Avenue West, LLC	3/23/2012	5/8/2013
Roe 596	Karla Bushnell	3/23/2012	5/8/2013
Roe 597	David Bushnell	3/23/2012	5/8/2013
Roe 601	Dorothy Etta Delia	3/23/2012	5/8/2013
Roe 602	John P Rusk	3/23/2012	5/8/2013
Roe 603	EPIC	3/23/2012	5/8/2013
Roe 604	Smith Development Co.	3/23/2012	5/8/2013
Roe 606	Hamid Ameri	3/23/2012	5/8/2013
Roe 607	Lutz Issleib	3/23/2012	5/8/2013
Roe 609	Erlinda Koo	3/23/2012	5/8/2013
Roe 610	Tywla Lake	3/23/2012	5/8/2013
Roe 612	Frank A Lane	3/23/2012	5/8/2013
Roe 613	High Desert Investments LLC.	3/23/2012	5/8/2013
Roe 614	Sol LeShin	3/23/2012	5/8/2013
Roe 615	Carl Proctor Jr.	3/23/2012	5/8/2013

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DEFAULTS ENTERED

Doe/Roe No.	Name of Roe Cross-Defendant	Default Entered	Default Posted
Roe 616	Qwest Engineering Inc.	3/23/2012	5/8/2013
Roe 617	Retlaw Enterprises LLC	3/23/2012	5/8/2013
Roe 619	Robert A. Stoner Properties	3/23/2012	5/8/2013
Roe 620	Ronald H. Carter/Audrey M. Carter Family Trust	3/23/2012	5/8/2013
Roe 621	Clarence E Shetler	3/23/2012	5/8/2013
Roe 625	1st and 41st West LLC	3/23/2012	5/8/2013
Roe 626	20th Street Properties	3/23/2012	5/8/2013
Roe 629	Mehran Abolmoluki	3/23/2012	5/8/2013
Roe 630	Antonio Acosta	3/23/2012	5/8/2013
Roe 631	Miriam Adams	3/23/2012	5/8/2013
Roe 632	Arnold Adicoff	3/23/2012	5/8/2013
Roe 633	James Agalsoff	3/23/2012	5/8/2013
Roe 635	Carlito Aguilar	3/23/2012	5/8/2013
Roe 636	Carmen Aguilar	3/23/2012	5/8/2013
Roe 638	Valentin Aguilar	3/23/2012	5/8/2013
Roe 639	Yolanda Aguilar	3/23/2012	5/8/2013
Roe 641	Martha Akin	3/23/2012	5/8/2013
Roe 642	Jack Albright	3/23/2012	5/8/2013
Roe 644	Casey Alesso	3/23/2012	5/8/2013
Roe 645	Donald Alexander	3/23/2012	5/8/2013
Roe 647	Betty Allen	3/23/2012	5/8/2013
Roe 648	Brunette Allen	3/23/2012	5/8/2013
Roe 649	George Allen	3/23/2012	5/8/2013
Roe 650	Guadalupe Allen	3/23/2012	5/8/2013

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DEFAULTS ENTERED

Doe/Roe No.	Name of Roe Cross-Defendant	Default Entered	Default Posted
Roe 651	Ronald Allen	3/23/2012	5/8/2013
Roe 652	Paul Allison	3/23/2012	5/8/2013
Roe 653	Yvonne Allison	3/23/2012	5/8/2013
Roe 654	Deborah Alluis	3/23/2012	5/8/2013
Roe 655	Jack Alluis	3/23/2012	5/8/2013
Roe 656	Mary Almarez	3/23/2012	5/8/2013
Roe 657	Jorge Alonso	3/23/2012	5/8/2013
Roe 658	Laura Alonso	3/23/2012	5/8/2013
Roe 659	ALP Equipment Sales Inc	3/23/2012	5/8/2013
Roe 660	Felipe Alvarez	3/23/2012	5/8/2013
Roe 661	Roberto Alvarez	3/23/2012	5/8/2013
Roe 663	Mary Alvidrez	3/23/2012	5/8/2013
Roe 664	Richard Alvidrez	3/23/2012	5/8/2013
Roe 666	An Van Phan Tr	3/23/2012	5/8/2013
Roe 667	Beatrice Anderson	3/23/2012	5/8/2013
Roe 670	Renee Anderson	3/23/2012	5/8/2013
Roe 671	Franklin Andrews	3/23/2012	5/8/2013
Roe 672	Treba Andrews	3/23/2012	5/8/2013
Roe 674	Sharon Annis	3/23/2012	5/8/2013
Roe 676	Antelope Valley Allied Arts Assn	3/23/2012	5/8/2013
Roe 677	Antelope Valley Florist Inc	3/23/2012	5/8/2013
Roe 684	Keiko Aoki	3/23/2012	5/8/2013
Roe 685	Jovencio Apostol	3/23/2012	5/8/2013
Roe 686	Frances Appleby	3/23/2012	5/8/2013
Roe 687	Thomas Appleby	3/23/2012	5/8/2013
Roe 689	Benedicto Arevalo	3/23/2012	5/8/2013
Roe 690	Nora Arevalo	3/23/2012	5/8/2013
Roe 693	Florence Arnold	3/23/2012	5/8/2013

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DEFAULTS ENTERED

Doe/Roe No.	Name of Roe Cross-Defendant	Default Entered	Default Posted
Roe 694	Lucita Arquileta	3/23/2012	5/8/2013
Roe 695	Rufino Arquileta	3/23/2012	5/8/2013
Roe 697	Arroyo Family Trust	3/23/2012	5/8/2013
Roe 698	Patricia Artigas	3/23/2012	5/8/2013
Roe 699	Noboru Asato	3/23/2012	5/8/2013
Roe 700	Jesus Ascencio	3/23/2012	5/8/2013
Roe 701	Aliza Asher	3/23/2012	5/8/2013
Roe 702	Shaul Asher	3/23/2012	5/8/2013
Roe 705	Gerard Auyong	3/23/2012	5/8/2013
Roe 706	Jane Aveni	3/23/2012	5/8/2013
Roe 707	Lloyd Avery	3/23/2012	5/8/2013
Roe 708	Alan Avrick	3/23/2012	5/8/2013
Roe 711	Jack Baerlein	3/23/2012	5/8/2013
Roe 716	Maria Balice	3/23/2012	5/8/2013
Roe 718	Emiliano Ballesteros	3/23/2012	5/8/2013
Roe 719	Rafael Banales	3/23/2012	5/8/2013
Roe 720	Bernardo Banuelos	3/23/2012	5/8/2013
Roe 721	Rosario Banuelos	3/23/2012	5/8/2013
Roe 723	Ron Banuk	3/23/2012	5/8/2013
Roe 725	Irene Barbeau	3/23/2012	5/8/2013
Roe 726	Ann Barnes	3/23/2012	5/8/2013
Roe 727	Wayne Barnes	3/23/2012	5/8/2013

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DEFAULTS ENTERED

Doe/Roe No.	Name of Roe Cross-Defendant	Default Entered	Default Posted
Roe 728	Terri Baron	3/23/2012	5/8/2013
Roe 729	Joseph Bartfay	3/23/2012	5/8/2013
Roe 730	Selma Bartfay	3/23/2012	5/8/2013
Roe 731	Basrock Woodcreek Gardens	3/23/2012	5/8/2013
Roe 733	Nancy Bauer	3/23/2012	5/8/2013
Roe 734	A Beasley	3/23/2012	5/8/2013
Roe 735	Teresa Becarra	3/23/2012	5/8/2013
Roe 737	Ikuko Becker	3/23/2012	5/8/2013
Roe 738	James Becker	3/23/2012	5/8/2013
Roe 739	Betty Bederio	3/23/2012	5/8/2013
Roe 740	Beatriz Belisario	3/23/2012	5/8/2013
Roe 741	Luis Belisario	3/23/2012	5/8/2013
Roe 742	Bell Tr	3/23/2012	5/8/2013
Roe 743	Beverly Bellanca	3/23/2012	5/8/2013
Roe 744	Cecilia Beltran	3/23/2012	5/8/2013
Roe 745	Victoria Benner	3/23/2012	5/8/2013
Roe 746	Bensky Living Trust	3/23/2012	5/8/2013
Roe 748	Nancy Benz	3/23/2012	5/8/2013
Roe 750	Gaylyn Berglund	3/23/2012	5/8/2013
Roe 751	Kenneth Berglund	3/23/2012	5/8/2013
Roe 752	Amante Bermundo	3/23/2012	5/8/2013
Roe 754	Ary Biers	3/23/2012	5/8/2013

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DEFAULTS ENTERED

Doe/Roe No.	Name of Roe Cross-Defendant	Default Entered	Default Posted
Roe 755	Robert Biers	3/23/2012	5/8/2013
Roe 756	Sylvia Bigornia	3/23/2012	5/8/2013
Roe 758	Alfons Bimbiris	3/23/2012	5/8/2013
Roe 759	Vera Bimbiris	3/23/2012	5/8/2013
Roe 760	Melvin Bittner	3/23/2012	5/8/2013
Roe 763	Catherine Black	3/23/2012	5/8/2013
Roe 764	Anita Blanchard	3/23/2012	5/8/2013
Roe 767	Betty Bliley	3/23/2012	5/8/2013
Roe 768	Eugene Bliley	3/23/2012	5/8/2013
Roe 770	Jose Bocanegra	3/23/2012	5/8/2013
Roe 771	James Bodkin	3/23/2012	5/8/2013
Roe 772	Frank Bodolai	3/23/2012	5/8/2013
Roe 773	Magdalena Bodolai	3/23/2012	5/8/2013
Roe 775	Minh Bosque	3/23/2012	5/8/2013
Roe 776	Gayle Bovee	3/23/2012	5/8/2013
Roe 777	Vicki Bovee	3/23/2012	5/8/2013
Roe 778	Donna Boyer	3/23/2012	5/8/2013
Roe 781	BPP Valley Central	3/23/2012	5/8/2013
Roe 784	Bradley Family Tr	3/23/2012	5/8/2013
Roe 785	Dennis Braly	3/23/2012	5/8/2013
Roe 787	Brasel Family Tr	3/23/2012	5/8/2013
Roe 788	Flora Braun	3/23/2012	5/8/2013

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DEFAULTS ENTERED

Doe/Roe No.	Name of Roe Cross-Defendant	Default Entered	Default Posted
Roe 789	Joe Brewer	3/23/2012	5/8/2013
Roe 794	Patricia Brooks	3/23/2012	5/8/2013
Roe 795	Mary Brosky	3/23/2012	5/8/2013
Roe 796	Vera Brown	3/23/2012	5/8/2013
Roe 797	Evelyn Bruno	3/23/2012	5/8/2013
Roe 798	Thomas Bryk	3/23/2012	5/8/2013
Roe 799	Eugene Buckley	3/23/2012	5/8/2013
Roe 800	Jeanne Buckley	3/23/2012	5/8/2013
Roe 801	Philip Bucknor	3/23/2012	5/8/2013
Roe 802	Donald Buhrmann	3/23/2012	5/8/2013
Roe 803	June Buhrmann	3/23/2012	5/8/2013
Roe 804	Washington Bumanglag	3/23/2012	5/8/2013
Roe 805	Walter Bunch	3/23/2012	5/8/2013
Roe 807	Karen Burgess	3/23/2012	5/8/2013
Roe 808	Randy Burgess	3/23/2012	5/8/2013
Roe 809	Raymond Burns	3/23/2012	5/8/2013
Roe 810	Doretha Burrell	3/23/2012	5/8/2013
Roe 814	Buytkus Family Trust	3/23/2012	5/8/2013
Roe 815	Daniel Byrne	3/23/2012	5/8/2013
Roe 816	David Byrne	3/23/2012	5/8/2013
Roe 820	Belva Caldwell	3/23/2012	5/8/2013
Roe 824	Marvin Calmeson	3/23/2012	5/8/2013
Roe 825	Herminia Camacho	3/23/2012	5/8/2013
Roe 826	Julian Camacho	3/23/2012	5/8/2013
Roe 827	Ricardo Camarena	3/23/2012	5/8/2013
Roe 828	Cambridge Homes, Inc.	3/23/2012	5/8/2013

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DEFAULTS ENTERED

Doe/Roe No.	Name of Roe Cross-Defendant	Default Entered	Default Posted
Roe 829	Bonnie Cameron	3/23/2012	5/8/2013
Roe 830	James Cameron	3/23/2012	5/8/2013
Roe 832	Erika Campbell	3/23/2012	5/8/2013
Roe 837	Lynda Capel	3/23/2012	5/8/2013
Roe 839	Barbara Carey	3/23/2012	5/8/2013
Roe 840	Donald Carey	3/23/2012	5/8/2013
Roe 841	Ernest Caringi	3/23/2012	5/8/2013
Roe 842	Violet Carlisle	3/23/2012	5/8/2013
Roe 843	Timothy Carney	3/23/2012	5/8/2013
Roe 844	Rosendo Carranza	3/23/2012	5/8/2013
Roe 847	Toribio Carrasco	3/23/2012	5/8/2013
Roe 848	Irene Carroll	3/23/2012	5/8/2013
Roe 849	James Carroll	3/23/2012	5/8/2013
Roe 850	Bera Carruthers	3/23/2012	5/8/2013
Roe 851	James B Caskey	3/23/2012	5/8/2013
Roe 852	Ruby J Caskey	3/23/2012	5/8/2013
Roe 853	Eugenia Carter	3/23/2012	5/8/2013
Roe 855	Terry Carter	3/23/2012	5/8/2013
Roe 856	Gary Castelan	3/23/2012	5/8/2013
Roe 857	Sharon Castelan	3/23/2012	5/8/2013
Roe 861	Jose Castillo	3/23/2012	5/8/2013
Roe 862	Remedios Castillo	3/23/2012	5/8/2013
Roe 864	Robert & Norma Caudle	3/23/2012	5/8/2013
Roe 865	Aurelia Cayetano	3/23/2012	5/8/2013

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DEFAULTS ENTERED

Doe/Roe No.	Name of Roe Cross-Defendant	Default Entered	Default Posted
Roe 866	Edgardo Cayetano	3/23/2012	5/8/2013
Roe 867	Julia Cecil	3/23/2012	5/8/2013
Roe 868	Ken Cecil	3/23/2012	5/8/2013
Roe 869	Gilbert Ceniceros	3/23/2012	5/8/2013
Roe 870	Edward Cernicky	3/23/2012	5/8/2013
Roe 871	Florence Cernicky	3/23/2012	5/8/2013
Roe 872	Marc Chachuat	3/23/2012	5/8/2013
Roe 873	Sukhdev Chahal	3/23/2012	5/8/2013
Roe 877	Siu Chan	3/23/2012	5/8/2013
Roe 878	Beverly Chandler	3/23/2012	5/8/2013
Roe 879	Burton Chandler	3/23/2012	5/8/2013
Roe 881	Py Chao	3/23/2012	5/8/2013
Roe 883	Christopher Cheung	3/23/2012	5/8/2013
Roe 886	Hu Chi Yu	3/23/2012	5/8/2013
Roe 887	Chou Chiang	3/23/2012	5/8/2013
Roe 888	Tim Chiu	3/23/2012	5/8/2013
Roe 889	Mi Choe	3/23/2012	5/8/2013
Roe 890	Pyong Choe	3/23/2012	5/8/2013
Roe 891	Kenneth Choi	3/23/2012	5/8/2013
Roe 892	Edwin Chong	3/23/2012	5/8/2013
Roe 894	Boniface Choy	3/23/2012	5/8/2013
Roe 898	John Christie	3/23/2012	5/8/2013
Roe 900	Ardathe Christopher	3/23/2012	5/8/2013
Roe 901	Daphne Chu	3/23/2012	5/8/2013

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DEFAULTS ENTERED

Doe/Roe No.	Name of Roe Cross-Defendant	Default Entered	Default Posted
Roe 905	Fred Chung	3/23/2012	5/8/2013
Roe 906	Gabrielle Chung	3/23/2012	5/8/2013
Roe 907	John Cinfio	3/23/2012	5/8/2013
Roe 908	James Cipollone	3/23/2012	5/8/2013
Roe 909	Richard Clark	3/23/2012	5/8/2013
Roe 911	Russell Clawson	3/23/2012	5/8/2013
Roe 912	Gail Clutter	3/23/2012	5/8/2013
Roe 913	Ralph Clutter	3/23/2012	5/8/2013
Roe 914	Lap Co	3/23/2012	5/8/2013
Roe 916	Marc Cole	3/23/2012	5/8/2013
Roe 918	William Collicutt	3/23/2012	5/8/2013
Roe 919	Beatrice Collins	3/23/2012	5/8/2013
Roe 921	Charles Colton	3/23/2012	5/8/2013
Roe 922	Larry Connelly	3/23/2012	5/8/2013
Roe 923	Leo Connelly	3/23/2012	5/8/2013
Roe 925	Alan Cook	3/23/2012	5/8/2013
Roe 926	Regina Cooley	3/23/2012	5/8/2013
Roe 927	Denise Cope	3/23/2012	5/8/2013
Roe 928	Thomas Cope	3/23/2012	5/8/2013
Roe 929	Ruby Corder	3/23/2012	5/8/2013
Roe 930	Alfredo Corrales	3/23/2012	5/8/2013
Roe 932	Calvin Cox	3/23/2012	5/8/2013

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DEFAULTS ENTERED

Doe/Roe No.	Name of Roe Cross-Defendant	Default Entered	Default Posted
Roe 935	Ronald Cronk	3/23/2012	5/8/2013
Roe 937	Cora Cruz	3/23/2012	5/8/2013
Roe 938	Felina Cruz	3/23/2012	5/8/2013
Roe 939	Nicasio Cruz	3/23/2012	5/8/2013
Roe 940	Roger Cruz	3/23/2012	5/8/2013
Roe 941	Mike Culha	3/23/2012	5/8/2013
Roe 944	Florin D Souza	3/23/2012	5/8/2013
Roe 945	Anita Dacles	3/23/2012	5/8/2013
Roe 946	Simplicio Dacles	3/23/2012	5/8/2013
Roe 949	Helga Dalley	3/23/2012	5/8/2013
Roe 950	Manfred Dalley	3/23/2012	5/8/2013
Roe 956	Mohammad Daood	3/23/2012	5/8/2013
Roe 957	Saleem Daood	3/23/2012	5/8/2013
Roe 958	Adib Daoud	3/23/2012	5/8/2013
Roe 959	Donna Daugherty	3/23/2012	5/8/2013
Roe 960	Anita Davalos	3/23/2012	5/8/2013
Roe 961	Dominador Davalos	3/23/2012	5/8/2013
Roe 962	Alfred David	3/23/2012	5/8/2013
Roe 965	Douglas Davis	3/23/2012	5/8/2013
Roe 966	James Davis	3/23/2012	5/8/2013
Roe 968	Davis Sibs Inc	3/23/2012	5/8/2013
Roe 977	Sefey Debotoun	3/23/2012	5/8/2013
Roe 978	Angelito Dedios	3/23/2012	5/8/2013
Roe 979	Bruno Deluca	3/23/2012	5/8/2013
Roe 981	Olin Derrick	3/23/2012	5/8/2013

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DEFAULTS ENTERED

Doe/Roe No.	Name of Roe Cross-Defendant	Default Entered	Default Posted
Roe 982	Deneen Deschene	3/23/2012	5/8/2013
Roe 983	Desert Lake L P	3/23/2012	5/8/2013
Roe 984	Juan Diaz	3/23/2012	5/8/2013
Roe 987	Gary Dicks	3/23/2012	5/8/2013
Roe 988	Nick Digiulio	3/23/2012	5/8/2013
Roe 989	Richard Dioli	3/23/2012	5/8/2013
Roe 990	Lonzo Dixon	3/23/2012	5/8/2013
Roe 991	Mae Dixon	3/23/2012	5/8/2013
Roe 992	Adelaida Dizon	3/23/2012	5/8/2013
Roe 994	Esteban Donis	3/23/2012	5/8/2013
Roe 995	Mauro Donis	3/23/2012	5/8/2013
Roe 996	Rosalina Donis	3/23/2012	5/8/2013
Roe 997	Virginia Donis	3/23/2012	5/8/2013
Roe 999	Michael Douglas	3/23/2012	5/8/2013
Roe 1000	Katherine Douglass	3/23/2012	5/8/2013
Roe 1001	Borom Douk	3/23/2012	5/8/2013
Roe 1002	S&B Douk	3/23/2012	5/8/2013
Roe 1003	Sokhom Douk	3/23/2012	5/8/2013
Roe 1004	James Downing	3/23/2012	5/8/2013
Roe 1005	Gary Downs	3/23/2012	5/8/2013
Roe 1006	Romnia Drever	3/23/2012	5/8/2013
Roe 1009	Eliseo Dumbrique	3/23/2012	5/8/2013
Roe 1010	Cynthia Dunlop	3/23/2012	5/8/2013
Roe 1011	James Dunn	3/23/2012	5/8/2013
Roe 1012	Raymond Dunning	3/23/2012	5/8/2013
Roe 1013	Loc Duong	3/23/2012	5/8/2013
Roe 1014	Harold Dykstra	3/23/2012	5/8/2013

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DEFAULTS ENTERED

Doe/Roe No.	Name of Roe Cross-Defendant	Default Entered	Default Posted
Roe 1015	Teresa Dykstra	3/23/2012	5/8/2013
Roe 1016	Wilbur Dykstra	3/23/2012	5/8/2013
Roe 1017	Dykstra Family Trust	3/23/2012	5/8/2013
Roe 1018	E I C Group et al	3/23/2012	5/8/2013
Roe 1019	Dorothy Earl	3/23/2012	5/8/2013
Roe 1020	Jack Earl	3/23/2012	5/8/2013
Roe 1021	David Earwood	3/23/2012	5/8/2013
Roe 1022	Benjamin Easter	3/23/2012	5/8/2013
Roe 1023	Joanne Ebert	3/23/2012	5/8/2013
Roe 1024	David Eckberg	3/23/2012	5/8/2013
Roe 1025	Paula Eckberg	3/23/2012	5/8/2013
Roe 1026	Dale Eckles	3/23/2012	5/8/2013
Roe 1027	Jean Economou	3/23/2012	5/8/2013
Roe 1028	John Edmonds	3/23/2012	5/8/2013
Roe 1034	Theodore Elness	3/23/2012	5/8/2013
Roe 1035	Rosa Elumba	3/23/2012	5/8/2013
Roe 1036	Zenaida Emms	3/23/2012	5/8/2013
Roe 1037	Rosario Empert	3/23/2012	5/8/2013
Roe 1039	Lorin Ensminger	3/23/2012	5/8/2013
Roe 1040	Catherine Erazim	3/23/2012	5/8/2013
Roe 1041	Catherine Erazim	3/23/2012	5/8/2013
Roe 1043	John Escobar	3/23/2012	5/8/2013
Roe 1044	Rose Esparza	3/23/2012	5/8/2013

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DEFAULTS ENTERED

Doe/Roe No.	Name of Roe Cross-Defendant	Default Entered	Default Posted
Roe 1045	Filomena Espiritu	3/23/2012	5/8/2013
Roe 1046	William Espiritu	3/23/2012	5/8/2013
Roe 1047	Basilio Esquivel	3/23/2012	5/8/2013
Roe 1048	Irma Koburn as Beneficiary of the Estate of Zelda C Schliske Decd	3/23/2012	5/8/2013
Roe 1049	Edelmira Estrada	3/23/2012	5/8/2013
Roe 1050	Hervi Estrada	3/23/2012	5/8/2013
Roe 1053	Carl Fabrizio	3/23/2012	5/8/2013
Roe 1054	Fairview Development LLC	3/23/2012	5/8/2013
Roe 1058	Richard Faria	3/23/2012	5/8/2013
Roe 1060	Deborah Feliciano	3/23/2012	5/8/2013
Roe 1061	Denese Felts	3/23/2012	5/8/2013
Roe 1062	Douglas Felts	3/23/2012	5/8/2013
Roe 1068	Ruth Fike	3/23/2012	5/8/2013
Roe 1069	Claudia Finkel	3/23/2012	5/8/2013
Roe 1071	Mary Fiorito	3/23/2012	5/8/2013
Roe 1073	Joanne Fletcher	3/23/2012	5/8/2013
Roe 1074	Gayle Flores	3/23/2012	5/8/2013
Roe 1075	Maria Flores	3/23/2012	5/8/2013
Roe 1077	Herbert Floyd	3/23/2012	5/8/2013
Roe 1078	Larry Fogleman	3/23/2012	5/8/2013
Roe 1079	Alejandro Fontillas	3/23/2012	5/8/2013
Roe 1080	John Ford	3/23/2012	5/8/2013

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DEFAULTS ENTERED

Doe/Roe No.	Name of Roe Cross-Defendant	Default Entered	Default Posted
Roe 1082	Antonia Fowler	3/23/2012	5/8/2013
Roe 1084	Kevin Frane	3/23/2012	5/8/2013
Roe 1085	Laurel Frane	3/23/2012	5/8/2013
Roe 1086	Stephenie Fredrick	3/23/2012	5/8/2013
Roe 1087	Esther Friedman	3/23/2012	5/8/2013
Roe 1088	Joanne Fu	3/23/2012	5/8/2013
Roe 1089	Yoshi Fujisawa	3/23/2012	5/8/2013
Roe 1090	Michi Fukumoto	3/23/2012	5/8/2013
Roe 1093	Jeff Galieti	3/23/2012	5/8/2013
Roe 1094	Jose Galvez	3/23/2012	5/8/2013
Roe 1095	Betty Gambone	3/23/2012	5/8/2013
Roe 1099	Martha Garcia	3/23/2012	5/8/2013
Roe 1101	Rodolfo Garcia	3/23/2012	5/8/2013
Roe 1103	Eduardo Garde	3/23/2012	5/8/2013
Roe 1104	Russellend Garde	3/23/2012	5/8/2013
Roe 1105	Garde Fmly Rev Tr	3/23/2012	5/8/2013
Roe 1107	Hung Gee	3/23/2012	5/8/2013
Roe 1111	Stefan Ghika Budesti	3/23/2012	5/8/2013
Roe 1112	Paul Giang	3/23/2012	5/8/2013
Roe 1114	Gilbraltar Homes LLC	3/23/2012	5/8/2013
Roe 1116	George Gillingham	3/23/2012	5/8/2013
Roe 1117	Gisele Schroeder Liv Tr	3/23/2012	5/8/2013
Roe 1118	Drena Glauser	3/23/2012	5/8/2013

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DEFAULTS ENTERED

Doe/Roe No.	Name of Roe Cross-Defendant	Default Entered	Default Posted
Roe 1119	Gary Glenn	3/23/2012	5/8/2013
Roe 1120	Paul Glessner	3/23/2012	5/8/2013
Roe 1122	Benito Gonzales	3/23/2012	5/8/2013
Roe 1123	Erminio Gonzales	3/23/2012	5/8/2013
Roe 1125	Quach Gonzales	3/23/2012	5/8/2013
Roe 1126	Carlos Conzalez (name should be spelled "Gonzalez"	3/23/2012	5/8/2013
Roe 1127	Frances Gonzalez	3/23/2012	5/8/2013
Roe 1128	Gloria Gonzalez	3/23/2012	5/8/2013
Roe 1130	Roque Gonzalez	3/23/2012	5/8/2013
Roe 1131	Tina Gonzalez	3/23/2012	5/8/2013
Roe 1135	Vicente Gose	3/23/2012	5/8/2013
Roe 1136	Christina Goya	3/23/2012	5/8/2013
Roe 1142	William Grant	3/23/2012	5/8/2013
Roe 1144	Barbara Green	3/23/2012	5/8/2013
Roe 1145	Hilda Green	3/23/2012	5/8/2013
Roe 1147	Donna Greenman	3/23/2012	5/8/2013
Roe 1148	Pierre Grember	3/23/2012	5/8/2013
Roe 1150	John Griffin	3/23/2012	5/8/2013
Roe 1154	Gerald Groff	3/23/2012	5/8/2013
Roe 1155	Marian Groff	3/23/2012	5/8/2013
Roe 1156	Lillian Groom	3/23/2012	5/8/2013
Roe 1158	Marge Groven	3/23/2012	5/8/2013
Roe 1159	Lucena Guiang	3/23/2012	5/8/2013
Roe 1160	Cristoval Guillen	3/23/2012	5/8/2013
Roe 1162	Alvaro Gutierrez	3/23/2012	5/8/2013

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DEFAULTS ENTERED

Doe/Roe No.	Name of Roe Cross-Defendant	Default Entered	Default Posted
Roe 1164	Santos Gutierrez	3/23/2012	5/8/2013
Roe 1165	Socorro Gutierrez	3/23/2012	5/8/2013
Roe 1166	Ovidio Guzman	3/23/2012	5/8/2013
Roe 1167	Jin Ha	3/23/2012	5/8/2013
Roe 1168	Young Ha	3/23/2012	5/8/2013
Roe 1170	Susan Hahn	3/23/2012	5/8/2013
Roe 1171	Homa Hamidi	3/23/2012	5/8/2013
Roe 1172	Carrie Hamson	3/23/2012	5/8/2013
Roe 1173	David Hamson	3/23/2012	5/8/2013
Roe 1174	Dean Hanano	3/23/2012	5/8/2013
Roe 1175	James Hanlon	3/23/2012	5/8/2013
Roe 1176	James Hanlon	3/23/2012	5/8/2013
Roe 1177	Harald Hansen	3/23/2012	5/8/2013
Roe 1178	Christine Hanson	3/23/2012	5/8/2013
Roe 1180	Willis Hard	3/23/2012	5/8/2013
Roe 1181	Joseph Harnik	3/23/2012	5/8/2013
Roe 1182	David Harper	3/23/2012	5/8/2013
Roe 1183	Diane Harris	3/23/2012	5/8/2013
Roe 1184	James Harris	3/23/2012	5/8/2013
Roe 1185	Karen Harris	3/23/2012	5/8/2013
Roe 1186	Karen Hart	3/23/2012	5/8/2013
Roe 1187	Harvell Family Tr	3/23/2012	5/8/2013
Roe 1188	Gary Hathaway	3/23/2012	5/8/2013
Roe 1190	Donald Haydon	3/23/2012	5/8/2013
Roe 1191	Fusako Hazama	3/23/2012	5/8/2013
Roe 1192	Hideo Hazama	3/23/2012	5/8/2013
Roe 1193	Alice Heggen	3/23/2012	5/8/2013
Roe 1197	Corine Henninger	3/23/2012	5/8/2013
Roe 1198	Antonio Hernandez	3/23/2012	5/8/2013
Roe 1199	Carol Herr	3/23/2012	5/8/2013

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DEFAULTS ENTERED

Doe/Roe No.	Name of Roe Cross-Defendant	Default Entered	Default Posted
Roe 1200	Ronald Hetzner	3/23/2012	5/8/2013
Roe 1201	Geraldine Heynen	3/23/2012	5/8/2013
Roe 1202	HGJ LLC	3/23/2012	5/8/2013
Roe 1207	Eric Hillerman	3/23/2012	5/8/2013
Roe 1208	Marilyn Hinck	3/23/2012	5/8/2013
Roe 1212	Thong Ho	3/23/2012	5/8/2013
Roe 1214	Albert Hobayan	3/23/2012	5/8/2013
Roe 1215	Violeta Hobayan	3/23/2012	5/8/2013
Roe 1216	Paul Hodges	3/23/2012	5/8/2013
Roe 1217	Debra Hodsdon	3/23/2012	5/8/2013
Roe 1218	Steve Hodsdon	3/23/2012	5/8/2013
Roe 1219	Wilbert E. Decd Est of Hoffman	3/23/2012	5/8/2013
Roe 1220	Soledad Holguin	3/23/2012	5/8/2013
Roe 1221	Clarissia Holland	3/23/2012	5/8/2013
Roe 1225	Linda Homan	3/23/2012	5/8/2013
Roe 1226	Mathew Homan	3/23/2012	5/8/2013
Roe 1227	Che Hong	3/23/2012	5/8/2013
Roe 1229	Khai Hong	3/23/2012	5/8/2013
Roe 1231	Tony Hong	3/23/2012	5/8/2013
Roe 1232	Martha Hooper	3/23/2012	5/8/2013
Roe 1233	Gary Hoover	3/23/2012	5/8/2013
Roe 1234	Marilyn Hoover	3/23/2012	5/8/2013

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DEFAULTS ENTERED

Doe/Roe No.	Name of Roe Cross-Defendant	Default Entered	Default Posted
Roe 1235	J Hopper	3/23/2012	5/8/2013
Roe 1240	William Hoskins	3/23/2012	5/8/2013
Roe 1243	Janette Hourani	3/23/2012	5/8/2013
Roe 1244	Leslie Howe	3/23/2012	5/8/2013
Roe 1245	Hsiaoni Chang	3/23/2012	5/8/2013
Roe 1247	Marie Hubbard	3/23/2012	5/8/2013
Roe 1248	Cresencio Huerta	3/23/2012	5/8/2013
Roe 1249	Romeo Hughes	3/23/2012	5/8/2013
Roe 1252	Robert Hunt	3/23/2012	5/8/2013
Roe 1256	Amy Hwang	3/23/2012	5/8/2013
Roe 1258	Hyun Chul Lee	3/23/2012	5/8/2013
Roe 1259	Kiyoshi Ige	3/23/2012	5/8/2013
Roe 1260	Isidro Ignacio	3/23/2012	5/8/2013
Roe 1262	Veronica Ingersoll	3/23/2012	5/8/2013
Roe 1263	Martin Ingram	3/23/2012	5/8/2013
Roe 1265	Pasquale Ioele	3/23/2012	5/8/2013
Roe 1266	Joy Irish	3/23/2012	5/8/2013
Roe 1267	Robert Irish	3/23/2012	5/8/2013
Roe 1271	Fukuyo Twamoto	3/23/2012	5/8/2013
Roe 1274	Dietra Jackson	3/23/2012	5/8/2013
Roe 1276	Arnold Jacobsen	3/23/2012	5/8/2013
Roe 1277	Jagatri L and Xantha Dhawan	3/23/2012	5/8/2013

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DEFAULTS ENTERED

Doe/Roe No.	Name of Roe Cross-Defendant	Default Entered	Default Posted
Roe 1278	Richard James	3/23/2012	5/8/2013
Roe 1279	David Jauregui	3/23/2012	5/8/2013
Roe 1280	Isaura Jauregui	3/23/2012	5/8/2013
Roe 1283	Enid Jeffrey	3/23/2012	5/8/2013
Roe 1286	Bobby Jennings	3/23/2012	5/8/2013
Roe 1287	Patricia Jennings	3/23/2012	5/8/2013
Roe 1289	Enrique Jimenez	3/23/2012	5/8/2013
Roe 1291	Henry Johnson	3/23/2012	5/8/2013
Roe 1294	Betty Jones	3/23/2012	5/8/2013
Roe 1295	Christine Jones	3/23/2012	5/8/2013
Roe 1296	David Jones	3/23/2012	5/8/2013
Roe 1297	Esther Jones	3/23/2012	5/8/2013
Roe 1298	Harold Jones	3/23/2012	5/8/2013
Roe 1301	Morton Juhl	3/23/2012	5/8/2013
Roe 1302	K A Investment Co LLC	3/23/2012	5/8/2013
Roe 1303	Isako Kagehiro	3/23/2012	5/8/2013
Roe 1304	Kenichi Kagehiro	3/23/2012	5/8/2013
Roe 1305	Mitsue Kanamori	3/23/2012	5/8/2013
Roe 1307	Katsuko Kariya	3/23/2012	5/8/2013
Roe 1308	Katsumi Kariya	3/23/2012	5/8/2013
Roe 1309	Nicholas Karthas	3/23/2012	5/8/2013
Roe 1310	Colleen Kasper	3/23/2012	5/8/2013
Roe 1311	Gordon Katsion	3/23/2012	5/8/2013
Roe 1312	Kaufler Trust	3/23/2012	

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DEFAULTS ENTERED

Doe/Roe No.	Name of Roe Cross-Defendant	Default Entered	Default Posted
Roe 1313	Wayne Kawamoto	3/23/2012	5/8/2013
Roe 1314	Nancy Kawamura	3/23/2012	5/8/2013
Roe 1315	Yasuko Kawamura	3/23/2012	5/8/2013
Roe 1316	Keast Fmly Tr	3/23/2012	5/8/2013
Roe 1317	Keck Fmly Tr	3/23/2012	5/8/2013
Roe 1319	Arpineh Keklikian	3/23/2012	5/8/2013
Roe 1320	Missak Keklikian	3/23/2012	5/8/2013
Roe 1321	Marie Kendrick	3/23/2012	5/8/2013
Roe 1324	Joel Kettenring	3/23/2012	5/8/2013
Roe 1325	Pauline Kettenring	3/23/2012	5/8/2013
Roe 1326	Harriet Kettles	3/23/2012	5/8/2013
Roe 1327	Sandra Key	3/23/2012	5/8/2013
Roe 1331	Fadi Khater	3/23/2012	5/8/2013
Roe 1332	Lorna Kila	3/23/2012	5/8/2013
Roe 1334	Soo Kim	3/23/2012	5/8/2013
Roe 1337	Carol Kinat	3/23/2012	5/8/2013
Roe 1338	Chun King	3/23/2012	5/8/2013
Roe 1339	William King	3/23/2012	5/8/2013
Roe 1341	Freda Kirkland	3/23/2012	5/8/2013
Roe 1345	Howard Klekar	3/23/2012	5/8/2013
Roe 1346	Frank Klojda	3/23/2012	5/8/2013
Roe 1348	Irene Knapp	3/23/2012	5/8/2013
Roe 1349	Kobayashi Family Trust	3/23/2012	5/8/2013
Roe 1351	Josephine Kollar	3/23/2012	5/8/2013
Roe 1352	William Kooken	3/23/2012	5/8/2013

EXHIBIT 1

DEFAULTS ENTERED

Doe/Roe No.	Name of Roe Cross-Defendant	Default Entered	Default Posted
Roe 1353	John Kostszewa	3/23/2012	5/8/2013
Roe 1354	Marlene Kostszewa	3/23/2012	5/8/2013
Roe 1356	Pamela Kousen	3/23/2012	5/8/2013
Roe 1358	Robert Kramer	3/23/2012	5/8/2013
Roe 1359	David Ku	3/23/2012	5/8/2013
Roe 1360	Sou Ku	3/23/2012	5/8/2013
Roe 1362	Terry Kuchta	3/23/2012	5/8/2013
Roe 1363	Seishi Kumagai	3/23/2012	5/8/2013
Roe 1364	Wei Kung	3/23/2012	5/8/2013
Roe 1366	Julia Kyle	3/23/2012	5/8/2013
Roe 1367	Jean La Porte	3/23/2012	5/8/2013
Roe 1368	Lilia Laguerta	3/23/2012	5/8/2013
Roe 1369	Deloris Lambert	3/23/2012	5/8/2013
Roe 1370	Nancy Lambert	3/23/2012	5/8/2013
Roe 1371	Lancaster Blvd	3/23/2012	5/8/2013
Roe 1372	Lancaster Blvd and 42nd St West	3/23/2012	5/8/2013
Roe 1373	Lancaster New Horizons	3/23/2012	5/8/2013
Roe 1374	Pearl Landau	3/23/2012	5/8/2013
Roe 1375	William Landau	3/23/2012	5/8/2013
Roe 1376	Jesus Landeverde	3/23/2012	5/8/2013
Roe 1378	Roberto Landeros	3/23/2012	5/8/2013
Roe 1382	William Lanier	3/23/2012	5/8/2013
Roe 1383	Ann Lanktree	3/23/2012	5/8/2013
Roe 1386	Bonnie Large	3/23/2012	5/8/2013
Roe 1387	Robert Large	3/23/2012	5/8/2013
Roe 1388	Samson Larranaga	3/23/2012	5/8/2013
Roe 1390	Alton Law	3/23/2012	5/8/2013
Roe 1391	Michael Lawrence	3/23/2012	5/8/2013
Roe 1392	Louie Laymance	3/23/2012	5/8/2013
Roe 1395	Conrado Lazo	3/23/2012	5/8/2013

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DEFAULTS ENTERED

Doe/Roe No.	Name of Roe Cross-Defendant	Default Entered	Default Posted
Roe 1398	Loi Le	3/23/2012	5/8/2013
Roe 1400	Suong Le	3/23/2012	5/8/2013
Roe 1401	Yen Le	3/23/2012	5/8/2013
Roe 1402	Cornelius Leary	3/23/2012	5/8/2013
Roe 1404	Margaret Lebrecht	3/23/2012	5/8/2013
Roe 1405	Chi Lee	3/23/2012	5/8/2013
Roe 1406	Delano Lee	3/23/2012	5/8/2013
Roe 1407	Jim Lee	3/23/2012	5/8/2013
Roe 1408	Mai Lee	3/23/2012	5/8/2013
Roe 1409	Ting Lee	3/23/2012	5/8/2013
Roe 1412	Aurelia Legaspi	3/23/2012	5/8/2013
Roe 1413	Felimon Legaspi	3/23/2012	5/8/2013
Roe 1415	Leighton Leno	3/23/2012	5/8/2013
Roe 1416	Nancy Leno	3/23/2012	5/8/2013
Roe 1418	Mariane Lesiak	3/23/2012	5/8/2013
Roe 1419	Max Lesiak	3/23/2012	5/8/2013
Roe 1420	Ramie Leung	3/23/2012	5/8/2013
Roe 1425	Rudolfo Libed	3/23/2012	5/8/2013
Roe 1426	Lien Family Survivors Trust	3/23/2012	5/8/2013
Roe 1427	Michael Liggett	3/23/2012	5/8/2013
Roe 1428	Camila Lim	3/23/2012	5/8/2013
Roe 1429	Leonore Limos	3/23/2012	5/8/2013
Roe 1430	Tachung Lin	3/23/2012	5/8/2013
Roe 1431	Donald Linde	3/23/2012	5/8/2013

EXHIBIT 1

DEFAULTS ENTERED

Doe/Roe No.	Name of Roe Cross-Defendant	Default Entered	Default Posted
Roe 1432	Ling Ling Fang	3/23/2012	5/8/2013
Roe 1433	Lilla Liong	3/23/2012	5/8/2013
Roe 1434	Chih Liu	3/23/2012	5/8/2013
Roe 1435	Suh Liu	3/23/2012	5/8/2013
Roe 1436	Shirley Lizotte	3/23/2012	5/8/2013
Roe 1437	Edith Llanda	3/23/2012	5/8/2013
Roe 1438	Lloyd F Avery Tr	3/23/2012	5/8/2013
Roe 1441	Carmelita Locsin	3/23/2012	5/8/2013
Roe 1442	Hilario Locsin	3/23/2012	5/8/2013
Roe 1443	Mary Logue	3/23/2012	5/8/2013
Roe 1444	Thanh Loi	3/23/2012	5/8/2013
Roe 1445	Lola R Johnson Trust	3/23/2012	5/8/2013
Roe 1446	Lombardo Fmly Rev Liv Tr	3/23/2012	5/8/2013
Roe 1448	Thomas Lopac	3/23/2012	5/8/2013
Roe 1449	Mark Lopez	3/23/2012	5/8/2013
Roe 1450	Olivia Lopez	3/23/2012	5/8/2013
Roe 1451	Victor Lopez	3/23/2012	
Roe 1452	Bernard Los Banos	3/23/2012	
Roe 1455	Charles Lowery	3/23/2012	
Roe 1458	Eva Lubbers	3/23/2012	
Roe 1459	Robert Lucero	3/23/2012	5/8/2013
Roe 1460	Maria Ludovico	3/23/2012	5/8/2013

EXHIBIT 1

DEFAULTS ENTERED

Doe/Roe No.	Name of Roe Cross-Defendant	Default Entered	Default Posted
Roe 1461	Mike Ly	3/23/2012	5/8/2013
Roe 1462	Patricia Lynch	3/23/2012	
Roe 1464	Christi Lyons	3/23/2012	
Roe 1465	John Lyons	3/23/2012	
Roe 1466	M14 Development LLC	3/23/2012	
Roe 1467	Bernadette Macadaeg	3/23/2012	
Roe 1468	Jeanenne Mace	3/23/2012	5/8/2013
Roe 1469	Mark Mace	3/23/2012	5/8/2013
Roe 1470	Antonio Macias	3/23/2012	
Roe 1471	Benjamin Macias	3/23/2012	5/8/2013
Roe 1472	Martina Macias	3/23/2012	
Roe 1473	James Mackel	3/23/2012	5/8/2013
Roe 1474	Antonio Madrigal	3/23/2012	
Roe 1475	Cecilia Magalona	3/23/2012	
Roe 1476	Pale Mageo	3/23/2012	
Roe 1477	Patrocinio Maglaya	3/23/2012	
Roe 1478	Robert Magliano	3/23/2012	
Roe 1479	Rosalin Magliano	3/23/2012	

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DEFAULTS ENTERED

Doe/Roe No.	Name of Roe Cross-Defendant	Default Entered	Default Posted
Roe 1480	Rolado Magtaas	3/23/2012	
Roe 1482	Vanna Mak	3/23/2012	
Roe 1483	Angela Malay	3/23/2012	
Roe 1484	Narciso Malit	3/23/2012	5/8/2013
Roe 1485	Lorie Manay	3/23/2012	
Roe 1486	Luzviminda Mandac	3/23/2012	
Roe 1487	David Manery	3/23/2012	
Roe 1488	Carol Mannino	3/23/2012	
Roe 1489	Charito Manuel	3/23/2012	
Roe 1492	Charles Manzo	3/23/2012	5/8/2013
Roe 1493	Rudolph Maravich	3/23/2012	5/8/2013
Roe 1494	Maree J De Lano Tr.	3/23/2012	5/8/2013
Roe 1496	Helen Marotta	3/23/2012	5/8/2013
Roe 1497	Alfredo Marquez	3/23/2012	5/8/2013
Roe 1498	Manuela Marquez	3/23/2012	5/8/2013
Roe 1501	Mary Marsh	3/23/2012	5/8/2013
Roe 1503	Byrn Marshall	3/23/2012	5/8/2013
Roe 1506	Alma Martin	3/23/2012	5/8/2013
Roe 1507	Arthur Martin	3/23/2012	5/8/2013
Roe 1508	Barbara Martin	3/23/2012	5/8/2013
Roe 1509	Thomas Martin	3/23/2012	5/8/2013
Roe 1510	Francisco Martinez	3/23/2012	5/8/2013

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DEFAULTS ENTERED

Doe/Roe No.	Name of Roe Cross-Defendant	Default Entered	Default Posted
Roe 1512	Jesus Martinez	3/23/2012	5/8/2013
Roe 1514	Maria Martinez	3/23/2012	5/8/2013
Roe 1515	Robert Martinez	3/23/2012	5/8/2013
Roe 1523	Mildred Mason	3/23/2012	5/8/2013
Roe 1524	Donald Masters	3/23/2012	5/8/2013
Roe 1526	Rosario Mata	3/23/2012	5/8/2013
Roe 1528	Sumiko Matsushima	3/23/2012	5/8/2013
Roe 1529	Fulton Matthews	3/23/2012	5/8/2013
Roe 1530	Matthew Maurice	3/23/2012	5/8/2013
Roe 1531	Shirley Maxilom	3/23/2012	5/8/2013
Roe 1532	Catherine Maxwell	3/23/2012	5/8/2013
Roe 1535	Gustauo Mazariegos	3/23/2012	5/8/2013
Roe 1536	Linda Mazariegos	3/23/2012	5/8/2013
Roe 1539	Raymond Mc Kay	3/23/2012	5/8/2013
Roe 1540	B Mc Laren	3/23/2012	5/8/2013
Roe 1541	Brian Mc Laughlin	3/23/2012	5/8/2013
Roe 1542	Rae McAllister	3/23/2012	5/8/2013
Roe 1543	Julienne McCalman	3/23/2012	5/8/2013
Roe 1544	Walter McCalman	3/23/2012	5/8/2013
Roe 1545	Loreta McClain	3/23/2012	5/8/2013
Roe 1546	Susan McCline	3/23/2012	5/8/2013
Roe 1547	Donan McClung	3/23/2012	5/8/2013
Roe 1548	Frederick McCool	3/23/2012	5/8/2013

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DEFAULTS ENTERED

Doe/Roe No.	Name of Roe Cross-Defendant	Default Entered	Default Posted
Roe 1549	Rita McCool	3/23/2012	5/8/2013
Roe 1550	Jerrie McDowell	3/23/2012	5/8/2013
Roe 1551	Patty McGahan	3/23/2012	5/8/2013
Roe 1553	Edwin McNinch	3/23/2012	5/8/2013
Roe 1554	Margaret McNinch	3/23/2012	5/8/2013
Roe 1557	Julian Medina	3/23/2012	5/8/2013
Roe 1558	Juana Mejia	3/23/2012	5/8/2013
Roe 1559	Leonard Mellow	3/23/2012	5/8/2013
Roe 1560	Alfredo Mendoza	3/23/2012	5/8/2013
Roe 1561	Cuauhtemoc Mendoza	3/23/2012	5/8/2013
Roe 1563	Herminia Messier	3/23/2012	5/8/2013
Roe 1564	Leonard Messier	3/23/2012	5/8/2013
Roe 1565	David Meyer	3/23/2012	5/8/2013
Roe 1566	Lisa Meyer	3/23/2012	5/8/2013
Roe 1567	Meyer Crest Ltd	3/23/2012	5/8/2013
Roe 1568	Meyer Crest Ltr	3/23/2012	5/8/2013
Roe 1571	Hisao Mihara	3/23/2012	5/8/2013
Roe 1572	Molly Mikel	3/23/2012	5/8/2013
Roe 1573	Sam Mikel	3/23/2012	5/8/2013
Roe 1575	Linda Miller	3/23/2012	5/8/2013
Roe 1576	Nancy Miller	3/23/2012	5/8/2013

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DEFAULTS ENTERED

Doe/Roe No.	Name of Roe Cross-Defendant	Default Entered	Default Posted
Roe 1577	Raymond Miller	3/23/2012	5/8/2013
Roe 1578	Richard Miller	3/23/2012	5/8/2013
Roe 1579	Steven Miller	3/23/2012	5/8/2013
Roe 1583	Lieu Minh	3/23/2012	5/8/2013
Roe 1584	Van Minh	3/23/2012	5/8/2013
Roe 1585	Salvador Miranda	3/23/2012	5/8/2013
Roe 1586	Morteza Mirkazemi	3/23/2012	5/8/2013
Roe 1587	Susan Mirkazemi	3/23/2012	5/8/2013
Roe 1590	Janice Mitsushima	3/23/2012	5/8/2013
Roe 1593	Chiung Mo	3/23/2012	5/8/2013
Roe 1595	Bjorn Moene	3/23/2012	5/8/2013
Roe 1596	Celina Molina	3/23/2012	5/8/2013
Roe 1598	Patricio Moneda	3/23/2012	5/8/2013
Roe 1599	Saeed Monfared	3/23/2012	5/8/2013
Roe 1600	Eusebio Montemayor	3/23/2012	5/8/2013
Roe 1601	Maria Montes	3/23/2012	5/8/2013
Roe 1602	Judith Moore	3/23/2012	5/8/2013
Roe 1603	Thomas Moore	3/23/2012	5/8/2013
Roe 1604	William Moore	3/23/2012	5/8/2013
Roe 1605	Michael Moreno	3/23/2012	5/8/2013
Roe 1606	Ritsuko Mori	3/23/2012	5/8/2013
Roe 1607	John Morris	3/23/2012	5/8/2013
Roe 1609	Mary Moses	3/23/2012	5/8/2013

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DEFAULTS ENTERED

Doe/Roe No.	Name of Roe Cross-Defendant	Default Entered	Default Posted
Roe 1610	Firouzeh Motavvef	3/23/2012	5/8/2013
Roe 1611	Mansoor Motavvef	3/23/2012	5/8/2013
Roe 1612	Girard Moughalian	3/23/2012	5/8/2013
Roe 1613	Renate Moughalian	3/23/2012	5/8/2013
Roe 1614	Marilyn Mudgett	3/23/2012	5/8/2013
Roe 1615	Brandon Mullins	3/23/2012	5/8/2013
Roe 1616	Maia Mulvena	3/23/2012	5/8/2013
Roe 1618	Emma Mungia	3/23/2012	5/8/2013
Roe 1620	Dan Munz	3/23/2012	5/8/2013
Roe 1623	Bronwyn Murdock	3/23/2012	5/8/2013
Roe 1624	Estela Muro	3/23/2012	5/8/2013
Roe 1626	Murtaugh Survivors Trust	3/23/2012	5/8/2013
Roe 1628	Duk Myung	3/23/2012	5/8/2013
Roe 1629	Hyun Myung	3/23/2012	5/8/2013
Roe 1631	Mary Nadwodny	3/23/2012	5/8/2013
Roe 1635	Satoye Nakamichi	3/23/2012	5/8/2013
Roe 1636	Yoshito Nakashima	3/23/2012	5/8/2013
Roe 1637	Shizuko Nakawatase	3/23/2012	5/8/2013
Roe 1638	Yoshitaka Nakawatase	3/23/2012	5/8/2013
Roe 1639	Jim Nanamkin	3/23/2012	5/8/2013
Roe 1640	David Naputi	3/23/2012	5/8/2013
Roe 1642	Nationwide Asset Management LP	3/23/2012	5/8/2013
Roe 1643	Charyl Naval	3/23/2012	5/8/2013
Roe 1645	Andrea Navarro	3/23/2012	5/8/2013

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DEFAULTS ENTERED

Doe/Roe No.	Name of Roe Cross-Defendant	Default Entered	Default Posted
Roe 1647	Jose Navarro	3/23/2012	5/8/2013
Roe 1651	Dorwin Newman	3/23/2012	5/8/2013
Roe 1652	Shirley Newman	3/23/2012	5/8/2013
Roe 1653	Newsom Family Trust	3/23/2012	5/8/2013
Roe 1654	Binh Ngo	3/23/2012	5/8/2013
Roe 1655	Anthony Nguyen	3/23/2012	5/8/2013
Roe 1656	Danny Nguyen	3/23/2012	5/8/2013
Roe 1657	Frank Nguyen	3/23/2012	5/8/2013
Roe 1658	Ngoc Nguyen	3/23/2012	5/8/2013
Roe 1659	Nguyet Nguyen	3/23/2012	5/8/2013
Roe 1660	Sonnie Nguyen	3/23/2012	5/8/2013
Roe 1661	Thanh Nguyen	3/23/2012	5/8/2013
Roe 1665	Gerard Nicholson	3/23/2012	5/8/2013
Roe 1666	Marie Nicholson	3/23/2012	5/8/2013
Roe 1668	Eric Nishida	3/23/2012	5/8/2013
Roe 1670	Lydia Nixon	3/23/2012	5/8/2013
Roe 1672	Dixie Noel	3/23/2012	5/8/2013
Roe 1674	Mark Noterman	3/23/2012	5/8/2013
Roe 1675	Yvette Noterman	3/23/2012	5/8/2013
Roe 1676	Nancy Nou	3/23/2012	5/8/2013
Roe 1677	Cipriano Noveloso	3/23/2012	5/8/2013
Roe 1678	Dolores Noveloso	3/23/2012	5/8/2013
Roe 1679	Henry Nozaki	3/23/2012	5/8/2013
Roe 1680	Naomi Nozaki	3/23/2012	5/8/2013

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DEFAULTS ENTERED

Doe/Roe No.	Name of Roe Cross-Defendant	Default Entered	Default Posted
Roe 1681	Mary Nutter	3/23/2012	5/8/2013
Roe 1682	Merle Oberg	3/23/2012	5/8/2013
Roe 1683	Timothy Oconnor	3/23/2012	5/8/2013
Roe 1684	Jessie Ohta	3/23/2012	5/8/2013
Roe 1685	Haruto Okihara	3/23/2012	5/8/2013
Roe 1687	Rick Olivas	3/23/2012	5/8/2013
Roe 1688	Olson Family Trust	3/23/2012	5/8/2013
Roe 1691	Adoracion Orara	3/23/2012	5/8/2013
Roe 1692	Francisco Orara	3/23/2012	5/8/2013
Roe 1694	Evelyn Ortega	3/23/2012	5/8/2013
Roe 1695	Joe Mari Ortega	3/23/2012	5/8/2013
Roe 1696	Pedro Ortega	3/23/2012	5/8/2013
Roe 1698	Doris Oshiro	3/23/2012	5/8/2013
Roe 1699	Firooz Oskooi	3/23/2012	5/8/2013
Roe 1705	Charlene Padgett	3/23/2012	5/8/2013
Roe 1706	Roy Padgett	3/23/2012	5/8/2013
Roe 1707	Marta Padilla	3/23/2012	5/8/2013
Roe 1708	Paz Padilla	3/23/2012	5/8/2013

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DEFAULTS ENTERED

Doe/Roe No.	Name of Roe Cross-Defendant	Default Entered	Default Posted
Roe 1709	Claire Padua	3/23/2012	5/8/2013
Roe 1711	Leonida Pagdilao	3/23/2012	5/8/2013
Roe 1712	Julio Palacio	3/23/2012	5/8/2013
Roe 1714	Palmdale 5th Street West LLC	3/23/2012	5/8/2013
Roe 1715	Palmdale Family Housing	3/23/2012	5/8/2013
Roe 1716	Palmdale Lodging Associates LLC	3/23/2012	5/8/2013
Roe 1717	Palmdale Mobile Park LLC	3/23/2012	5/8/2013
Roe 1719	Eugenio Paredes	3/23/2012	5/8/2013
Roe 1722	Inyoung Park	3/23/2012	5/8/2013
Roe 1728	Jose Pastrano	3/23/2012	5/8/2013
Roe 1730	Sally Patino	3/23/2012	5/8/2013
Roe 1732	Adrian Pauling	3/23/2012	5/8/2013
Roe 1738	Vicenta Pena	3/23/2012	5/8/2013
Roe 1740	Michael Pereira	3/23/2012	5/8/2013
Roe 1741	Rosa Perez	3/23/2012	5/8/2013
Roe 1742	PH Rosamond LLC	3/23/2012	5/8/2013
Roe 1743	Orrin Phillips	3/23/2012	5/8/2013
Roe 1744	Paul Pieratt	3/23/2012	5/8/2013
Roe 1748	Arthur Pizano	3/23/2012	5/8/2013
Roe 1750	Tavil Ployngam	3/23/2012	5/8/2013
Roe 1751	Perla Pollard	3/23/2012	5/8/2013
Roe 1752	Robert Pollard	3/23/2012	5/8/2013
Roe 1755	Poole Family Tr	3/23/2012	5/8/2013
Roe 1756	Dora Porcari	3/23/2012	5/8/2013
Roe 1760	Robert Potter	3/23/2012	5/8/2013
Roe 1762	Waraya Pratanthip	3/23/2012	5/8/2013

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DEFAULTS ENTERED

Doe/Roe No.	Name of Roe Cross-Defendant	Default Entered	Default Posted
Roe 1764	Romano Procida	3/23/2012	5/8/2013
Roe 1765	Bruno Prodan	3/23/2012	5/8/2013
Roe 1766	Rosa Prodan	3/23/2012	5/8/2013
Roe 1767	PVK Family Limited Ptn	3/23/2012	5/8/2013
Roe 1768	Quan Quoc Pham	3/23/2012	5/8/2013
Roe 1769	Quantumcue Inc	3/23/2012	5/8/2013
Roe 1770	Bella Questin	3/23/2012	5/8/2013
Roe 1773	Mary Quinlan	3/23/2012	5/8/2013
Roe 1774	Theodore Rabena	3/23/2012	5/8/2013
Roe 1776	Armando Raguine	3/23/2012	5/8/2013
Roe 1778	Gay Ralphs	3/23/2012	5/8/2013
Roe 1779	Fred Rampe	3/23/2012	5/8/2013
Roe 1780	Felicitas Ranada	3/23/2012	5/8/2013
Roe 1782	Mahmud Rawjee	3/23/2012	5/8/2013
Roe 1783	Fereidoun Razavi	3/23/2012	5/8/2013
Roe 1784	Clarence Razer	3/23/2012	5/8/2013
Roe 1785	Jean Razer	3/23/2012	5/8/2013
Roe 1786	Joan Reach	3/23/2012	5/8/2013
Roe 1788	Robert Reed	3/23/2012	5/8/2013
Roe 1789	Barbara Reff	3/23/2012	5/8/2013
Roe 1790	Herbert Reff	3/23/2012	5/8/2013
Roe 1791	Mary Reid	3/23/2012	5/8/2013
Roe 1795	Concepcion Reyes	3/23/2012	5/8/2013
Roe 1796	Elizabeth Reyes	3/23/2012	5/8/2013
Roe 1797	Ernesto Reyes	3/23/2012	5/8/2013

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Doe/Roe No.	Name of Roe Cross-Defendant	Default Entered	Default Posted
Roe 1798	Vicente Reyes	3/23/2012	5/8/2013
Roe 1801	Sei Rhee	3/23/2012	5/8/2013
Roe 1803	Susan Rhoda	3/23/2012	5/8/2013
Roe 1804	Michele Rhoden	3/23/2012	5/8/2013
Roe 1805	Morris Richards	3/23/2012	5/8/2013
Roe 1807	Ronald Ricketts	3/23/2012	5/8/2013
Roe 1810	Anita Rider	3/23/2012	5/8/2013
Roe 1811	Florence Rimando	3/23/2012	5/8/2013
Roe 1812	Ruben Rimando	3/23/2012	5/8/2013
Roe 1813	Maria Rios	3/23/2012	5/8/2013
Roe 1814	Nicolas Rios	3/23/2012	5/8/2013
Roe 1815	Joyce Ripperda	3/23/2012	5/8/2013
Roe 1816	James Rippon	3/23/2012	5/8/2013
Roe 1818	George Rivera	3/23/2012	5/8/2013
Roe 1820	David Robbie	3/23/2012	5/8/2013
Roe 1821	Kinue Robbie	3/23/2012	5/8/2013
Roe 1822	Tracy Roberson	3/23/2012	5/8/2013
Roe 1824	Charles Robertson	3/23/2012	5/8/2013
Roe 1825	Albert Rodarte	3/23/2012	5/8/2013
Roe 1826	Concepcion Rodriguez	3/23/2012	5/8/2013
Roe 1827	Guadalupe Rodriguez	3/23/2012	5/8/2013
Roe 1828	Ignacio Rodriguez	3/23/2012	5/8/2013
Roe 1829	John Rodriguez	3/23/2012	5/8/2013

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DEFAULTS ENTERED

Doe/Roe No.	Name of Roe Cross-Defendant	Default Entered	Default Posted
Roe 1831	Roquemore Tr	3/23/2012	5/8/2013
Roe 1832	Russell Rosenberry	3/23/2012	5/8/2013
Roe 1835	Robert Rosenthal	3/23/2012	5/8/2013
Roe 1836	Ross Rebar Co., Inc.	3/23/2012	5/8/2013
Roe 1837	Richard Rottgering	3/23/2012	5/8/2013
Roe 1838	Trisha Rowe	3/23/2012	5/8/2013
Roe 1839	Marshall Rowen	3/23/2012	5/8/2013
Roe 1840	Myra Rowland	3/23/2012	5/8/2013
Roe 1841	Sidney Ru	3/23/2012	5/8/2013
Roe 1842	James Rubenstein	3/23/2012	5/8/2013
Roe 1846	Dewey Runkle	3/23/2012	5/8/2013
Roe 1847	Lynn Ruona	3/23/2012	5/8/2013
Roe 1848	Frederick Ruopp	3/23/2012	5/8/2013
Roe 1849	Berna Russell	3/23/2012	5/8/2013
Roe 1850	Helen Russell	3/23/2012	5/8/2013
Roe 1851	Patricia Ruston	3/23/2012	5/8/2013
Roe 1852	Tom Ruston	3/23/2012	5/8/2013
Roe 1854	Hermogenes Sacman	3/23/2012	5/8/2013
Roe 1860	Katsuji Saito	3/23/2012	5/8/2013
Roe 1861	Gabriel Salazar	3/23/2012	5/8/2013
Roe 1862	Hoger Saleh	3/23/2012	5/8/2013
Roe 1863	Betty Sallen	3/23/2012	5/8/2013
Roe 1864	Joseph Sallen	3/23/2012	5/8/2013
Roe 1865	San Diego French American	3/23/2012	5/8/2013
Roe 1867	Francisco Sanchez	3/23/2012	5/8/2013

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DEFAULTS ENTERED

Doe/Roe No.	Name of Roe Cross-Defendant	Default Entered	Default Posted
Roe 1868	Maria Sanchez	3/23/2012	5/8/2013
Roe 1869	Gregorio Santos	3/23/2012	5/8/2013
Roe 1870	Jose Saromines	3/23/2012	5/8/2013
Roe 1872	Sasaki Family Trust 1995	3/23/2012	5/8/2013
Roe 1873	Karen Sauer	3/23/2012	5/8/2013
Roe 1874	Amy Say	3/23/2012	5/8/2013
Roe 1875	William Schad	3/23/2012	5/8/2013
Roe 1876	Alice Schaeffer	3/23/2012	5/8/2013
Roe 1877	Bud Schaeffer	3/23/2012	5/8/2013
Roe 1884	Judith Schlegel	3/23/2012	5/8/2013
Roe 1885	Stephen Schlegel	3/23/2012	5/8/2013
Roe 1887	Hazel Schoepflin	3/23/2012	5/8/2013
Roe 1888	Niel Schoepflin	3/23/2012	5/8/2013
Roe 1891	John Schulte	3/23/2012	5/8/2013
Roe 1892	Philip Schultz	3/23/2012	5/8/2013
Roe 1893	Betty Scidmore	3/23/2012	5/8/2013
Roe 1894	Robert Scott	3/23/2012	5/8/2013
Roe 1895	Patricia Scruggs	3/23/2012	5/8/2013
Roe 1897	Henry Segrove	3/23/2012	5/8/2013
Roe 1898	Florence Seibert	3/23/2012	5/8/2013

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DEFAULTS ENTERED

Doe/Roe No.	Name of Roe Cross-Defendant	Default Entered	Default Posted
Roe 1899	Alvin Selnick	3/23/2012	5/8/2013
Roe 1901	Carl Semotan	3/23/2012	5/8/2013
Roe 1903	Ralph Sexton	3/23/2012	5/8/2013
Roe 1904	Eugenia Shadd	3/23/2012	5/8/2013
Roe 1905	William Shannon	3/23/2012	5/8/2013
Roe 1908	Catherine Shearer	3/23/2012	5/8/2013
Roe 1909	Shearer Marital Trust	3/23/2012	5/8/2013
Roe 1911	Earnest Sherman	3/23/2012	5/8/2013
Roe 1912	Hajime Shibuya	3/23/2012	5/8/2013
Roe 1913	Kyoko Shibuya	3/23/2012	5/8/2013
Roe 1914	Lupe Shimabukuro	3/23/2012	5/8/2013
Roe 1915	Rodney Shimabukuro	3/23/2012	5/8/2013
Roe 1916	Yoshiaki Shimizu	3/23/2012	5/8/2013
Roe 1917	Shogo Shimomura	3/23/2012	5/8/2013
Roe 1918	Alves Shiu	3/23/2012	5/8/2013
Roe 1919	Benjamin Shlomi	3/23/2012	5/8/2013
Roe 1920	Behrouz Shokri	3/23/2012	5/8/2013

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DEFAULTS ENTERED

Doe/Roe No.	Name of Roe Cross-Defendant	Default Entered	Default Posted
Roe 1921	Fariba Shokri	3/23/2012	5/8/2013
Roe 1924	Lolita Sicat	3/23/2012	5/8/2013
Roe 1925	Jakob Siccama	3/23/2012	5/8/2013
Roe 1928	Sierra Gateway Resolution LLC	3/23/2012	5/8/2013
Roe 1930	Edward Simon	3/23/2012	5/8/2013
Roe 1932	Gora Singh	3/23/2012	5/8/2013
Roe 1933	Tina Singh	3/23/2012	5/8/2013
Roe 1935	Esther Siville	3/23/2012	5/8/2013
Roe 1936	Siville Family Trust	3/23/2012	5/8/2013
Roe 1937	Charles Skaggs	3/23/2012	5/8/2013
Roe 1938	Rebecca Skaggs	3/23/2012	5/8/2013
Roe 1939	Georgette Skiadas	3/23/2012	5/8/2013
Roe 1941	Charles Skinner	3/23/2012	5/8/2013
Roe 1942	Sharren Skinner	3/23/2012	5/8/2013
Roe 1943	Frank Small	3/23/2012	5/8/2013
Roe 1945	Chong Smith	3/23/2012	5/8/2013
Roe 1946	Jack Smith	3/23/2012	5/8/2013
Roe 1948	Larry Smith	3/23/2012	5/8/2013
Roe 1951	Robert Smith	3/23/2012	5/8/2013

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DEFAULTS ENTERED

Doe/Roe No.	Name of Roe Cross-Defendant	Default Entered	Default Posted
Roe 1953	Gary Snyder	3/23/2012	5/8/2013
Roe 1956	Konstantinos Soteropoulos	3/23/2012	5/8/2013
Roe 1957	Juan Soto	3/23/2012	5/8/2013
Roe 1958	James South	3/23/2012	5/8/2013
Roe 1961	Edward Sovich	3/23/2012	5/8/2013
Roe 1963	T Spenard	3/23/2012	5/8/2013
Roe 1964	Francis Sperling	3/23/2012	5/8/2013
Roe 1965	David Sserunkuma	3/23/2012	5/8/2013
Roe 1967	Virginia Stadler	3/23/2012	5/8/2013
Roe 1969	Alan Stenerson	3/23/2012	5/8/2013
Roe 1971	Teresita Sterkel	3/23/2012	5/8/2013
Roe 1973	Nicole Stetson	3/23/2012	5/8/2013
Roe 1975	Stipancic Tr	3/23/2012	5/8/2013
Roe 1976	Brian Stone	3/23/2012	5/8/2013
Roe 1977	Lois Stover	3/23/2012	5/8/2013
Roe 1980	Wilma Stremel	3/23/2012	5/8/2013
Roe 1981	Thomas Striegler	3/23/2012	5/8/2013
Roe 1982	Steve Stubner	3/23/2012	5/8/2013
Roe 1983	Guzel Sturm	3/23/2012	5/8/2013
Roe 1987	Jordan Sugarman	3/23/2012	5/8/2013
Roe 1988	Ruth Sugarman	3/23/2012	5/8/2013
Roe 1991	Eugene Summers	3/23/2012	5/8/2013
Roe 1993	Queenie Summers	3/23/2012	5/8/2013

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DEFAULTS ENTERED

Doe/Roe No.	Name of Roe Cross-Defendant	Default Entered	Default Posted
Roe 1995	Frana Sunjka	3/23/2012	5/8/2013
Roe 1996	Joseph Sunjka	3/23/2012	5/8/2013
Roe 1997	Sunlight Townhome LLC	3/23/2012	5/8/2013
Roe 1998	Lenny Supa	3/23/2012	5/8/2013
Roe 2000	Fadia Sweis	3/23/2012	5/8/2013
Roe 2001	Samir Sweis	3/23/2012	5/8/2013
Roe 2002	Ethel Szeto	3/23/2012	5/8/2013
Roe 2003	T L Squared LLC	3/23/2012	5/8/2013
Roe 2005	Takashi Takagi	3/23/2012	5/8/2013
Roe 2006	Reiko Takashita	3/23/2012	5/8/2013
Roe 2008	Grover Talley	3/23/2012	5/8/2013
Roe 2009	Herbert Tam	3/23/2012	5/8/2013
Roe 2010	Cres Tamayo	3/23/2012	5/8/2013
Roe 2011	Macario Tamayo	3/23/2012	5/8/2013
Roe 2012	Corazon Tan	3/23/2012	5/8/2013
Roe 2013	Fidelino Tan	3/23/2012	5/8/2013
Roe 2014	Alice Tanaka	3/23/2012	5/8/2013
Roe 2015	Roy Tanaka	3/23/2012	5/8/2013
Roe 2017	Robin Taniguchi	3/23/2012	
Roe 2018	Chi-Kwang Tao	3/23/2012	
Roe 2019	Ting-Ning Tao	3/23/2012	
Roe 2020	George Tapia	3/23/2012	

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DEFAULTS ENTERED

Doe/Roe No.	Name of Roe Cross-Defendant	Default Entered	Default Posted
Roe 2021	F Taylor	3/23/2012	
Roe 2026	Fumio Teruya	3/23/2012	
Roe 2027	Hisako Teruya	3/23/2012	
Roe 2032	Mary Thompson	3/23/2012	
Roe 2033	William Thompson	3/23/2012	5/8/2013
Roe 2036	Thyra Retzke Family Trust	3/23/2012	
Roe 2037	Ronald Tichauer	3/23/2012	5/8/2013
Roe 2038	Louise Tiendas	3/23/2012	
Roe 2039	Tertius Tiendas	3/23/2012	
Roe 2041	Chiang Ting	3/23/2012	
Roe 2042	Insurance Title	3/23/2012	
Roe 2043	Title Insurance and Trust Company	3/23/2012	
Roe 2044	Lynn Tivens	3/23/2012	
Roe 2045	Arthur Tobin	3/23/2012	
Roe 2046	Hilda Tobin	3/23/2012	
Roe 2047	Today Investment Group LLC	3/23/2012	5/8/2013
Roe 2050	Alice Tomei	3/23/2012	

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DEFAULTS ENTERED

Doe/Roe No.	Name of Roe Cross-Defendant	Default Entered	Default Posted
Roe 2051	Ralph Tomei	3/23/2012	
Roe 2052	Glen Tomkiewicz	3/23/2012	
Roe 2053	Jill Tomkiewicz	3/23/2012	
Roe 2054	Benny Tomlinson	3/23/2012	
Roe 2055	Dalisay Torres	3/23/2012	
Roe 2056	Edilberto Torres	3/23/2012	
Roe 2057	Nerio Torres	3/23/2012	
Roe 2058	Shirley Torres	3/23/2012	
Roe 2059	Victor Torres	3/23/2012	
Roe 2061	Felipe Tovar	3/23/2012	5/8/2013
Roe 2063	Huynh Tran	3/23/2012	
Roe 2064	Jeannie Tran	3/23/2012	
Roe 2065	Sharon Tremblay	3/23/2012	
Roe 2066	Emma Trochim	3/23/2012	
Roe 2069	Jenny Truong	3/23/2012	
Roe 2071	Liu Fang Tsen	3/23/2012	
Roe 2073	Gail Tsuhako	3/23/2012	

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DEFAULTS ENTERED

Doe/Roe No.	Name of Roe Cross-Defendant	Default Entered	Default Posted
Roe 2074	John Tsuhako	3/23/2012	
Roe 2078	Arthur Ulat	3/23/2012	
Roe 2079	Eldena Ulat	3/23/2012	
Roe 2080	Richard Unfried	3/23/2012	
Roe 2081	Hoa Uong	3/23/2012	
Roe 2083	Leslie Urban	3/23/2012	
Roe 2084	Civ Ushigome	3/23/2012	
Roe 2086	Amelia Uyehara	3/23/2012	
Roe 2087	Eddie Uyehara	3/23/2012	
Roe 2090	Elpidio Valdez	3/23/2012	
Roe 2092	Max Van Runkle	3/23/2012	5/8/2013
Roe 2093	Evangeline Vance	3/23/2012	5/8/2013
Roe 2094	Donna Vandergroen	3/23/2012	5/8/2013
Roe 2095	Ronald Vandergroen	3/23/2012	5/8/2013
Roe 2096	Victor Varela	3/23/2012	5/8/2013
Roe 2097	Danny Vaughn	3/23/2012	5/8/2013
Roe 2098	Gil Velchez	3/23/2012	5/8/2013
Roe 2099	Lolita Velchez	3/23/2012	5/8/2013
Roe 2100	Velur Properties LLC	3/23/2012	5/8/2013

EXHIBIT 1

DEFAULTS ENTERED

Doe/Roe No.	Name of Roe Cross-Defendant	Default Entered	Default Posted
Roe 2101	Venture Industrial LLC	3/23/2012	
Roe 2102	Crispino Vicari	3/23/2012	5/8/2013
Roe 2103	Isaias Vicens	3/23/2012	5/8/2013
Roe 2104	Bertha Villagomez	3/23/2012	5/8/2013
Roe 2105	Jose Villalpando	3/23/2012	5/8/2013
Roe 2106	Norma Villarente	3/23/2012	5/8/2013
Roe 2107	Doris Villegas	3/23/2012	5/8/2013
Roe 2108	Gregario Villegas	3/23/2012	5/8/2013
Roe 2109	Margarita Viloria	3/23/2012	5/8/2013
Roe 2110	Edward Vilt	3/23/2012	5/8/2013
Roe 2111	Rodger Virtue	3/23/2012	5/8/2013
Roe 2112	Danny Visitacion	3/23/2012	5/8/2013
Roe 2117	Richard Vonborcke	3/23/2012	5/8/2013
Roe 2118	Elisa Vondra	3/23/2012	5/8/2013
Roe 2119	James Vondra	3/23/2012	5/8/2013
Roe 2121	Robert Wade	3/23/2012	5/8/2013
Roe 2124	Daniel Walden	3/23/2012	5/8/2013
Roe 2125	Cecil Walker	3/23/2012	5/8/2013
Roe 2126	Grace Walker	3/23/2012	5/8/2013
Roe 2127	Patricia Wallace	3/23/2012	5/8/2013
Roe 2128	William Wallace	3/23/2012	5/8/2013
Roe 2134	Wong Wang	3/23/2012	5/8/2013
Roe 2135	William Warmington	3/23/2012	5/8/2013

EXHIBIT 1

DEFAULTS ENTERED

Doe/Roe No.	Name of Roe Cross-Defendant	Default Entered	Default Posted
Roe 2136	James Warner	3/23/2012	5/8/2013
Roe 2137	Leigh Warner	3/23/2012	5/8/2013
Roe 2138	Amy Watson	3/23/2012	5/8/2013
Roe 2139	Elizabeth Weaver	3/23/2012	5/8/2013
Roe 2140	George Webb	3/23/2012	5/8/2013
Roe 2141	Cecilia Wei	3/23/2012	5/8/2013
Roe 2142	Chung Wei	3/23/2012	5/8/2013
Roe 2143	Suhmei Wei	3/23/2012	5/8/2013
Roe 2145	Ival West	3/23/2012	5/8/2013
Roe 2147	Richard Wheaton	3/23/2012	5/8/2013
Roe 2148	Betty White	3/23/2012	5/8/2013
Roe 2149	Edward White	3/23/2012	5/8/2013
Roe 2150	James White	3/23/2012	5/8/2013
Roe 2151	Loretta White	3/23/2012	5/8/2013
Roe 2152	Vivian White	3/23/2012	5/8/2013
Roe 2153	Walt White	3/23/2012	5/8/2013
Roe 2158	Gary Wilcox	3/23/2012	5/8/2013
Roe 2160	Cynthia Williams	3/23/2012	5/8/2013
Roe 2161	Ronald Williams	3/23/2012	5/8/2013

EXHIBIT 1

DEFAULTS ENTERED

Doe/Roe No.	Name of Roe Cross-Defendant	Default Entered	Default Posted
Roe 2162	Williams Fmly Tr (NAK reads, "Williams Family Trust")	3/23/2012	5/8/2013
Roe 2164	Donald Wilson	3/23/2012	5/8/2013
Roe 2168	Wilson Family Tr	3/23/2012	5/8/2013
Roe 2169	Donald Winkler	3/23/2012	5/8/2013
Roe 2170	Susan Winkler	3/23/2012	5/8/2013
Roe 2171	Theresa Winters	3/23/2012	5/8/2013
Roe 2172	WKR360-6 LLC	3/23/2012	5/8/2013
Roe 2173	Heatwig Wloczyk	3/23/2012	5/8/2013
Roe 2175	Margaret Wolfe	3/23/2012	5/8/2013
Roe 2176	Otis Wolfe	3/23/2012	5/8/2013
Roe 2177	Gary Wong	3/23/2012	5/8/2013
Roe 2179	Mai Wong	3/23/2012	5/8/2013
Roe 2180	Karen Wonnell	3/23/2012	5/8/2013
Roe 2182	Robert Woodall	3/23/2012	5/8/2013
Roe 2185	Mary Wray	3/23/2012	5/8/2013
Roe 2186	Emiko Wright	3/23/2012	5/8/2013
Roe 2189	Robert Wright	3/23/2012	5/8/2013
Roe 2192	Roobik Yaghoubi	3/23/2012	5/8/2013
Roe 2193	Antonio Yago	3/23/2012	5/8/2013
Roe 2194	Grace Yamada	3/23/2012	5/8/2013
Roe 2195	Maria Yanez	3/23/2012	5/8/2013
Roe 2196	Wendy Yang	3/23/2012	5/8/2013
Roe 2197	Joseph Yankovich	3/23/2012	5/8/2013
Roe 2198	Monica Yeomans	3/23/2012	5/8/2013

EXHIBIT 1

DEFAULTS ENTERED

Doe/Roe No.	Name of Roe Cross-Defendant	Default Entered	Default Posted
Roe 2199	Tammy Yin	3/23/2012	5/8/2013
Roe 2201	Barney Yoshino	3/23/2012	5/8/2013
Roe 2202	Carlos Young	3/23/2012	5/8/2013
Roe 2203	Julie Young	3/23/2012	5/8/2013
Roe 2204	Kim Young	3/23/2012	5/8/2013
Roe 2205	Bob Yu	3/23/2012	5/8/2013
Roe 2206	Kyu Yu	3/23/2012	5/8/2013
Roe 2207	Brian Yung	3/23/2012	5/8/2013
Roe 2210	Coral Zedicher	3/23/2012	5/8/2013
Roe 2211	Donald Zedicher	3/23/2012	5/8/2013
Roe 2212	Hao Zhan	3/23/2012	5/8/2013
Roe 2213	Stanley Zimmerman	3/23/2012	5/8/2013
Roe 2214	Milton Zucker	3/23/2012	5/8/2013
Roe 2215	Natalie Zucker	3/23/2012	5/8/2013
Roe 2218	Charlotte Zwinger	3/23/2012	5/8/2013
Roe 2219	Mark McNerney	3/23/2012	5/8/2013
Roe 2221	Jon Safranek	3/23/2012	5/8/2013
Roe 2224	Robert Jones	3/23/2012	5/8/2013
Roe 2225	James Jones	3/23/2012	5/8/2013
Roe 2226	Adriana Balderra	3/23/2012	5/8/2013
Roe 2231	Donald Johnson	3/23/2012	5/8/2013
Roe 2232	Richard Peters	3/23/2012	5/8/2013
Roe 2239	Sam Sarieddine	3/23/2012	5/8/2013

EXHIBIT 1

DEFAULTS ENTERED

Doe/Roe No.	Name of Roe Cross-Defendant	Default Entered	Default Posted
Roe 2240	Mitchell Truesdale	3/23/2012	5/8/2013
Roe 2241	Keith Calhoun	3/23/2012	5/8/2013
Roe 2242	Barbara Schultz	3/23/2012	5/8/2013
Roe 2243	Bruce Sylvies	3/23/2012	5/8/2013
Roe 2244	Philip Schultz	3/23/2012	5/8/2013
Roe 2245	Dralle	3/23/2012	5/8/2013
Roe 2248	Alba Castillo	3/23/2012	5/8/2013
Roe 2249	Selton Phillips	3/23/2012	5/8/2013
Roe 2250	Moises Merestela	3/23/2012	5/8/2013
Roe 2251	Diana Burke	3/23/2012	5/8/2013
Roe 2253	Stanley Vong	3/23/2012	5/8/2013
Roe 2254	Larry Wilborn	3/23/2012	5/8/2013
Roe 2255	Michie Wilborn	3/23/2012	5/8/2013
Roe 2256	John Lazarus	3/23/2012	5/8/2013
Roe 2257	Lambartha Vandenberg Tr	3/23/2012	5/8/2013
Roe 2260	George Sack	3/23/2012	5/8/2013
Roe 2261	Palmdale Mobile Frank LLC	3/23/2012	5/8/2013
Roe 2265	John Griffin	3/23/2012	5/8/2013

EXHIBIT 1

DEFAULTS ENTERED

Doe/Roe No.	Name of Roe Cross-Defendant	Default Entered	Default Posted
Roe 2267	Porter Sprolls	3/23/2012	5/8/2013
Roe 2268	Albert Gaba	3/23/2012	5/8/2013
Roe 2269	Delia Gaba	3/23/2012	5/8/2013
Roe 2270	Audrey Sprolls	3/23/2012	5/8/2013
Roe 2272	Francisco Batino	3/23/2012	5/8/2013
Roe 2274	Bar Or Carmit	3/23/2012	5/8/2013
Roe 2275	Joseph Kinkoopf	3/23/2012	5/8/2013
Roe 2276	Tina Kinkoopf	3/23/2012	5/8/2013
Roe 2277	Jerry F. Shotbolt / Shotbolt Family Trust	3/23/2012	5/8/2013
Roe 2279	Benjamin C Both	3/23/2012	5/8/2013
Roe 2280	Christina D Both	3/23/2012	5/8/2013
Roe 2283	Manuel Ariliano	3/23/2012	5/8/2013
Roe 2284	Leodegaria A Ariliano	3/23/2012	5/8/2013
Roe 2285	Sandra Pastor	3/23/2012	5/8/2013
Roe 2286	Erik R. Hermann / Hermann Trust	3/23/2012	5/8/2013
Roe 2287	Julia A Hermann / Hermann Trust	3/23/2012	5/8/2013
Roe 2288	Albert T Rodriguez	3/23/2012	5/8/2013
Roe 2289	Edelmira B Rodriguez	3/23/2012	5/8/2013
Roe 2292	Juan A Valenzuela	3/23/2012	5/8/2013
Roe 2294	Vicki Atkins / Atkins Trust	3/23/2012	5/8/2013

EXHIBIT 1

DEFAULTS ENTERED

Doe/Roe No.	Name of Roe Cross-Defendant	Default Entered	Default Posted
Roe 2295	Stephen D Wahl	3/23/2012	5/8/2013
Roe 2296	Mettler Valley Mutual Water Co.	3/23/2012	5/8/2013

EXHIBIT 1

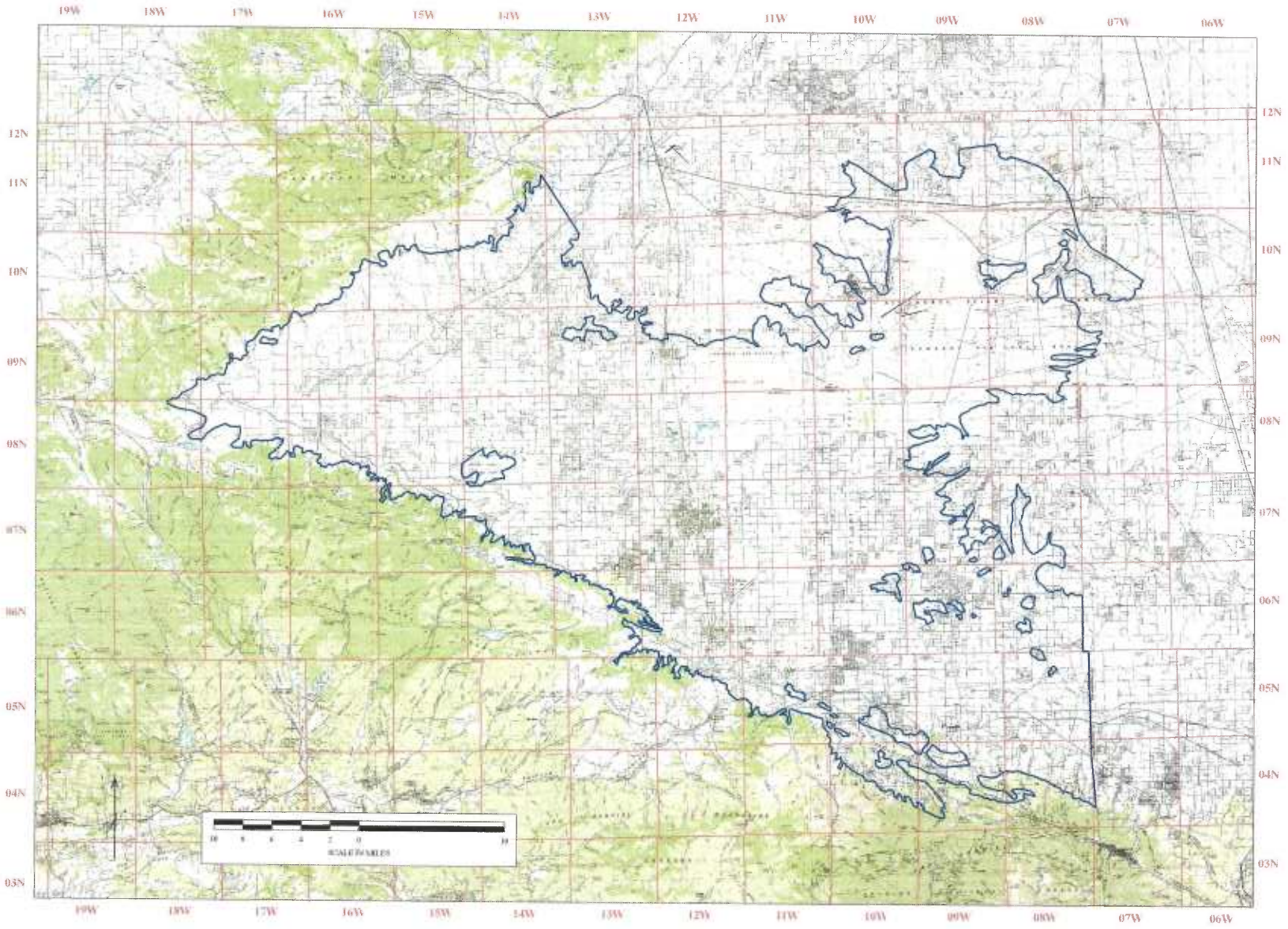


EXHIBIT 2

Jurisdictional Boundary
Antelope Valley Groundwater Adjudication

Producer Name	**Non-Overlying Production Rights (in Acre-Feet)**	**Percentage Share of Adjusted Native Safe Yield**
Los Angeles County Waterworks District No. 40	6,789.26	9.605%
Palmdale Water District	2,769.63	3.918%
Little Rock Creek Irrigation District	796.58	1.127%
Quartz Hill Water District	563.73	0.798%
Rosamond Community Services District	404.42	0.572%
Palm Ranch Irrigation District	465.69	0.659%
Desert Lake Community Services District	73.53	0.104%
California Water Service Company	343.14	0.485%
North Edwards Water District	49.02	0.069%
Boron Community Services District	50.00	0.071%
West Valley County Water District	40.00	0.057%
Total Acre Feet:	**12,345.00**	

EXHIBIT 3

Judicial Council Coordination
Proceeding No. 4408
Santa Clara Case No.: 1-05-CV-049053

Producer Name	Pre-Rampdown Production	Overlying Production Rights	Percentage Share of Adjusted Native Safe Yield
Adams Bennett Investments, LLC	0.00	0.00	0.000%
Antelope Park Mutual Water Company	208.75	169.89	0.240%
Antelope Valley Joint Union High School District	71.74	41.00	0.058%
Antelope Valley Mobile Estates	19.88	6.69	0.009%
Antelope Valley Water Storage LLC	1772.00	1772.00	2.507%
Aqua-J Mutual Water Company	44.90	44.35	0.063%
AV Solar Ranch 1, LLC	96.00	96.00	0.136%
AVEK	4000.00	3550.00	5.022%
Averydale Mutual Water Company	257.95	254.35	0.360%
Baxter Mutual Water Company	44.75	35.02	0.050%
Big Rock Mutual Water Company	0.00	0.00	0.000%
Bleich Flat Mutual Water Company	33.50	33.50	0.047%
Bolthouse Properties LLC	16805.89	9945.00	14.069%
Brittner Trust, Glen Brittner, Trustee	4.00	4.00	0.006%
Burrows/300 A40 H LLC	295.00	295.00	0.417%
C. Louise R. Close Living Trust	1.00	1.00	0.001%
City of Los Angeles, Department of Airports	7851.00	3975.00	5.623%
Colorado Mutual Water Co.	25.90	25.54	0.036%
Copa De Oro Land Company	325.00	325.00	0.460%
County Sanitation Districts of Los Angeles #14 and 20	8000.00	3400.00	4.810%
Craig Van Dam, Marta Van Dam, Nick Van Dam, Janet Van Dam	1037.00	640.00	0.905%
Del Sur Ranch LLC	600.00	600.00	0.849%
Dennis M. and Diane K. McWilliams	1.00	1.00	0.001%
Diamond Farming Co. LLC/Crystal Organic LLC/Grimmway/Lapis	3354.00	1986.00	2.810%
Donna Wilson	10.00	7.00	0.010%
Effren Chavez	44.00	44.00	0.062%
El Dorado Mutual Water Company	276.05	272.16	0.385%
eSolar Inc.; Red Dawn Suntower LLC	150.00	150.00	0.212%
eSolar Inc.; Tumbleweed Suntower LLC	0.00	0.00	0.000%
eSolar, Inc.; Sierra Sun Tower, LLC	5.76	3.00	0.004%
Eugene B. Nebeker	4016.00	1775.00	2.511%
Evergreen Mutual Water Company	69.50	68.54	0.097%
First Mutual Water Company	15.62	5.25	0.007%
G. Lane Family (Frank and Yvonne Lane 1993 Family Trust, Little Rock Sand and Gravel, Inc., George and Charlene Lane Family Trust) [Does not include water pumped on land leased to Granite Construction]	1402.00	773.00	1.094%

Producer Name	Pre-Rampdown Production	Overlying Production Rights	Percentage Share of Adjusted Native Safe Yield
Gailen W. Kyle and Julie Kyle, Trustees of The Kyle Revocable Living Trust	9275.00	3670.00	5.192%
Gary Van Dam, Gertrude Van Dam, Delmar Van Dam, Delmar D. Van Dam and Gertrude J. Van Dam, as Trustees of the Delmar D. and Gertrude J. Van Dam Family Trust – 1996, Craig Van Dam, Marta Van Dam, High Desert Dairy Partnership, High Desert Dairy	9931.50	3215.00	4.548%
Gene Bahlman	5.25	5.00	0.007%
Gorrindo Resourceful LLC	629.00	629.00	0.890%
Granite Construction Company (Big Rock Facility)	126.00	126.00	0.178%
Granite Construction Company (Little Rock Sand and Gravel, Inc.)	400.00	234.00	0.331%
H & N Development Co. West Inc.	1799.75	808.00	1.143%
Irma Ann Carle Trust, Irma-Anne Carle, Trustee	1.00	1.00	0.001%
James and Elizabeth Bridwell	1.00	1.00	0.001%
James M. Leer, III and Diana Leer	1.00	1.00	0.001%
Jane Healy and Healy Enterprises Inc.	700.00	700.00	0.990%
Jeffrey and Nancee Siebert	200.00	106.00	0.150%
John and Adrienne Reca	501.45	251.00	0.355%
John A. Calandri; Calandri Water Company, LLC; John A. Calandri and Shannon C. Calandri as cotrustees of “The John and Shannon Calandri 1992 Trust”; Katherine J. Calandri Nelson, Trustee of "The Katherine J. Calandri Nelson 2008 Trust”	3803.00	1776.00	2.512%
Jose Maritorena, Marie Maritorena, Jean Maritorena, Maritorena Farms, the Jose Maritorena Living Trust	3800.55	1775.00	2.511%
Land Projects Mutual Water Co.	622.50	613.54	0.868%
Landale Mutual Water Co.	157.75	155.57	0.220%
Landinv Inc	2000.00	969.00	1.371%
Lands of Promise Mutual Water Company	64.61	21.69	0.031%
LAURA GRIFFIN, trustee of the FAMILY BYPASS TRUST created under the LEONARD W. GRIFFIN AND LAURA GRIFFIN TRUST, dated July 9, 1993	1170.00	668.00	0.945%
Lawrence Dean Evans, Jr. and Susan Evans	1.00	1.00	0.001%
Lawrence J. Schilling and Mary P. Schilling, Trustees of the L&M Schilling 1992 Family Trust	4.00	4.00	0.006%
Leah Frankenberg	1.00	1.00	0.001%
Littlerock Aggregate Co., Inc., Holliday Rock Co., Inc.	405.00	151.00	0.214%
Llano Del Rio Water Company	572.65	279.00	0.395%

Producer Name	Pre-Rampdown Production	Overlying Production Rights	Percentage Share of Adjusted Native Safe Yield
Llano Mutual Water Company	0.00	0.00	0.000%
Lilia Mabel Selak, TTEE; Barbara Aznarez Decd Trust and Selak, Mabel Trust	150.00	150.00	0.212%
Marie A. Unini and Robert J. LeClair	1.00	1.00	0.001%
Mark W. and Nancy L. Benz	1.00	1.00	0.001%
Michael and Dolores A. Weatherbie	1.00	1.00	0.001%
Miracle Improvement Corporation dba Golden Sands Mobile Home Park dba Golden Sands Trailer Park	45.40	27.00	0.038%
Northrop Grumman Systems Corporation	2.00	2.00	0.003%
NRG Solar Alpine, LLC	64.21	38.00	0.054%
R AND M RANCH, INC.	1458.00	686.00	0.970%
Randall and Billie Dickey	1.00	1.00	0.001%
Richard Miner	1089.40	999.00	1.413%
Richard Nelson, Willow Springs Co.	180.65	135.00	0.191%
Rosamond High School	586.40	202.23	0.286%
Rosamond Ranch, LP	598.00	598.00	0.846%
Rose Villa Apartments	22.72	7.62	0.011%
Ruth C. Findley	1.00	1.00	0.001%
Sahara Nursery and Farm	22.18	22.00	0.031%
Saint Andrew's Abbey, Inc.	175.00	102.00	0.144%
Sal and Connie Cardile	1.00	1.00	0.001%
Service Rock Products, L.P.	503.00	267.00	0.378%
SGS Antelope Valley Development, LLC	57.00	57.00	0.081%
Shadow Acres Mutual Water Company	52.60	51.74	0.073%
Sheep Creek Water Co.	0.00	0.00	0.000%
Southern California Edison Company	17.75	8.00	0.011%
Denise Godde, Steven F. Godde, Pamela M. Godde and Gary M. Godde; Denise Godde and Steven Godde as Trustees of the D & S Godde Trust	1461.50	683.00	0.966%
Sundale Mutual Water Company	472.23	472.23	0.668%
Sunnyside Farms Mutual Water Company, Inc.	75.40	74.26	0.105%
Suzanne J. Richter	1.00	1.00	0.001%
Tejon Ranchcorp and Tejon Ranch Co.	3414.00	1634.00	2.312%
Barry S., Terry A. & Kathleen M. Munz	5.00	5.00	0.007%
Thomas and Julie Bookman 2007 Trust	272.50	136.00	0.192%
Tierra Bonita Mutual Water Company	40.75	40.32	0.057%
Tierra Bonita Ranch	505.00	430.00	0.608%
Triple M Property Co.	15.00	15.00	0.021%
Turk Trust dated December 16, 1998	1.00	1.00	0.001%

Producer Name	Pre-Rampdown Production	Overlying Production Rights	Percentage Share of Adjusted Native Safe Yield
U.S. Borax	1905.00	1905.00	2.695%
Vulcan Materials Co., Vulcan Lands Inc., Consolidated Rock Products Co., Calmat Land Co., and allied Concrete & Materials	519.10	260.00	0.368%
WAGAS Land Company LLC	984.15	580.00	0.821%
WDS California II, LLC	2397.00	1159.00	1.640%
West Side Park Mutual Water Co.	280.75	276.86	0.392%
White Fence Farms Mutual Water Co.	783.05	772.13	1.092%
William Fisher Memorial Water Company	4.53	4.53	0.006%
60th Street Association Water System	2.16	2.16	0.003%
Totals	**105173.92**	**58270.17**	

CONFORMED COPY
OF ORIGINAL FILED
Los Angeles Superior Court

JUL 18 2011

John A. Clarke, Executive Officer/Clerk

By _____, Deputy
RAUL SANCHEZ

SUPERIOR COURT OF CALIFORNIA

COUNTY OF LOS ANGELES

ANTELOPE VALLEY GROUNDWATER CASES

Included Consolidated Actions:

Los Angeles County Waterworks District No. 40 v. Diamond Farming Co.
Superior Court of California
County of Los Angeles, Case No. BC 325 201

Los Angeles County Waterworks District No. 40 v. Diamond Farming Co.
Superior Court of California, County of Kern,
Case No. S-1500-CV-254-348

Wm. Bolthouse Farms, Inc. v. City of Lancaster
Diamond Farming Co. v. City of Lancaster
Diamond Farming Co. v. Palmdale Water Dist.
Superior Court of California, County of Riverside, consolidated actions, Case Nos. RIC 353 840, RIC 344 436, RIC 344 668

Rebecca Lee Willis v. Los Angeles County Waterworks District No. 40
Superior Court of California, County of Los Angeles, Case No. BC 364 553

Richard A. Wood v. Los Angeles County Waterworks District No. 40
Superior Court of California, County of Los

Judicial Council Coordination Proceeding No. 4408

Lead Case No. BC 325 201

STATEMENT OF DECISION PHASE THREE TRIAL

Judge: Honorable Jack Komar

Angeles, Case No. BC 391 869

The standard for a statement of decision as set forth in Code of Civil Procedure section 632 requires a court to explain ". . . the legal and factual basis for its decision as to each of the principal controverted issues at trial...." Case law is clear that a court must provide the factual and legal basis for the decision on those issues only closely related to the ultimate issues on the case. (See *People v. Casa Blanca Convalescent Homes* (1984) 159 Cal. App. 3d 509, 523-524.) It is also clear that a court need not respond to requests that are in the nature of "interrogatories." (See *id.* at pp. 525-526.)

The only issues at this phase of the trial were simply to determine whether the adjudication area aquifer is in a current state of overdraft and as part of that adjudication to determine the safe yield. This Statement of Decision focuses solely on those issues.

Cross-complainants Los Angeles County Waterworks District No. 40, City of Palmdale, Palmdale Water District, Littlerock Creek Irrigation District, Palm Ranch Irrigation District, Quartz Hill Water District, California Water Service Company, Rosamond Community Service District, Phelan Piñon Hills Community Services District, Desert Lake Community Services District, North Edwards Water District (collectively, the "Public Water Producers")[1] brought an action for, *inter alia*, declaratory relief, alleging that the Antelope Valley adjudication area groundwater aquifer was in a state of overdraft and required judicial intervention to provide for management of the water resources within the aquifer to prevent depletion of the aquifer and damage to the Antelope Valley basin.

Several of the cross-defendant parties (collectively, the "Land Owner Group") also sought declaratory relief in their various independent (now coordinated and consolidated) actions.

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[1] The United States and the City of Los Angeles, though not water suppliers in the Antelope Valley adjudication area, joined with the Public Water Producers. Rosamond Community Services District joined with the Land Owner Group.

The first issues to be decided in the declaratory relief cause of action are the issues of overdraft and safe yield. The remaining causes of action and issues are to be tried in a subsequent phase or phases.

This Phase Three trial commenced on January 4, 2011 and continued thereafter on various days based upon the needs of the various parties and the Court's availability. Appearances of counsel are noted in the minutes of the Court.

At the conclusion of the evidence, the Court offered counsel the opportunity to provide written final arguments and the invitation was declined by all counsel. On April 13, 2011, the Court heard oral argument and the matter was ordered submitted.

The Public Water Producers (and others) have alleged that the basin is in a condition of overdraft and have requested that the Court determine a safe yield and consider imposition of a physical solution or other remedy to prevent further depletion of the water resource and degradation of the condition of the aquifer.

Several parties in opposition to the request of the Public Water Producers have contended that while there may have been overdraft in the past, currently the aquifer has recovered and is not in overdraft. These same parties contend that it is not possible to establish a single value for safe yield; instead they have requested that the Court determine a range of values for safe yield.

The Court concludes that the Public Water Producers have the burden of proof and that the burden must be satisfied for this phase and purpose by a preponderance of the evidence. This burden of proof may or may not be appropriate to other phases of this trial. And since the findings here have no application to other phases, such as prescription or rights of appropriators, and the parties have not briefed those or other issues, the Court makes no conclusions as to what standard of proof might be applicable to such other issues or phases of trial.

The law defines overdraft as extractions in excess of the "safe yield" of water from an aquifer, which over time will lead to a depletion of the water supply within a groundwater basin as well as other detrimental effects, if the imbalance between pumping and extraction continues. (*City of Los Angeles v. City of San Fernando* (1975) 14 Cal. 3d 199; *City of*

Pasadena v. City of Alhambra (1949) 33 Cal. 2d 908, 929; *Orange County Water District v. City of Riverside* (1959) 173 Cal. App. 2d 137.) "Safe yield" is the amount of annual extractions of water from the aquifer over time equal to the amount of water needed to recharge the groundwater aquifer and maintain it in equilibrium, plus any temporary surplus. Temporary surplus is defined as that amount of water that may be pumped from an aquifer to make room to store future water that would otherwise be wasted and unavailable for use.

Determination of safe yield and overdraft requires the expert opinions of hydrologists and geologists.[2] Experts in the field of hydrogeology routinely base their opinions and conclusions concerning groundwater basin overdraft on evidence of long-term lowering of groundwater levels, loss of groundwater storage, declining water quality, seawater intrusion (not an issue in this case), land subsidence, and the like. Experts also conduct a sophisticated analysis of precipitation and its runoff, stream flow, and infiltration into the aquifer, including such things as evapotranspiration, water from other sources introduced into the aquifer (artificial recharge), as well as the nature and quantity of extractions from the aquifer and return flows therefrom.

Generally, neither overdraft nor safe yield can be determined by looking at a groundwater basin in a single year but must be determined by evaluating the basin conditions over a sufficient period of time to determine whether pumping rates have or will lead to eventual permanent lowering of the water level in the aquifer and ultimately depletion of the water supply or other harm. Recharge must equal discharge over the long term. (*City of Los Angeles v. City of San Fernando, supra*, 14 Cal. 3rd at pp. 278-279.) But having heard evidence about the aquifer as a whole, the Court is not making historical findings that would be applicable to specific areas of the aquifer or that could be used in a specific way to determine water rights in particular areas of the aquifer.

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[2] All the experts offer estimates. The American Heritage College Dictionary, Third Edition, defines an "estimate" as, *inter alia*, "[a] rough calculation, as of size" or "[a] judgment based on one's impressions; an opinion."

The location of the Antelope Valley adjudication area boundaries was the subject of the Phase One and Two trials in this matter. The Court defined the boundaries of the valley aquifer based upon evidence of hydro-connection within the aquifer. If there was no hydro-connectivity with the aquifer, an area was excluded from the adjudication. The degree of hydro-connectivity within the Antelope Valley adjudication area varies from area to area. Some areas seemingly have fairly small or nominal hydro-connectivity but must be included in this phase of the adjudication unless the connection is *de minimis*.[3] Pumping in those parts of the aquifer may be shown to have *de minimis* effect on other parts of the aquifer while pumping in other areas within the basin appear to have material impacts on adjacent parts of the basin. All areas were included within the adjudication area because they all have some level of hydro-connection, some more and some less. How to deal with those differences is ultimately a basin management decision that is well beyond the scope of this phase of trial.

Overdraft

The preponderance of the evidence presented establishes that the adjudication area aquifer is in a state of overdraft. Reliable estimates of the long-term extractions from the basin have exceeded reliable estimates of the basin's recharge by significant margins, and empirical evidence of overdraft in the basin corroborates that conclusion. Portions of the aquifer have sustained a significant loss of groundwater storage since 1951. While pumping in recent years has reduced and moderated, the margin between pumping and recharge as cultural conditions have changed and precipitation has increased (with the appearance of wetter parts of the historical cycle), pumping in some areas of the aquifer is continuing to cause harm to the basin. The evidence is persuasive that current extractions exceed recharge and therefore that the basin is

---

[3] The court may exclude truly de minimis connectivity areas based upon evidence in later phases of the trial if shown to have virtually no impact on the aquifer.

in a state of overdraft. Since 1951[4] there is evidence of periods of substantial pumping (principally agricultural in the early years of the period) coinciding with periods of drought, with almost continuous lowering of water levels and severe subsidence in some areas extending to the present time, with intervals of slight rises in water levels in some areas.

Areas of increased pumping, with concomitant lowering of water levels, can have a serious effect on water rights in other areas, caused by cones of depression, which alter natural water flow gradients, causing the lowering of water levels in adjacent areas, with resulting subsidence and loss of aquifer storage capacity. Given population growth, and agricultural and industrial changes, the valley is at risk of being in an even more serious continuing overdraft in the future unless pumping is controlled.

While the lowering of current water levels has slowed, and some levels in wells in some areas have risen in recent years, significant areas within the aquifer continue to show declining levels, some slightly so, but many with material lowering of water levels.

Thus, the Antelope Valley adjudication area is in a state of overdraft based on estimates of extraction and recharge, corroborated by physical evidence of conditions in the basin, and while the annual amount of overdraft has lessened in recent years with increased precipitation and recharge, the effects of overdraft remain and are in danger of being exacerbated with increased pumping and the prospective cyclical precipitation fluctuations shown by the historical record. The physical evidence establishes that there was significant subsidence occurring in parts of the adjudication area ranging from two to six feet or more in certain areas of the valley caused by such pumping and that measurable water levels fell in a substantial part of the valley. While some of the ongoing subsidence may be attributable to residual subsidence (from earlier periods of shortfall) that would not seem to be an explanation for the extent of continued subsidence. The evidence establishes that ground water extractions in excess of recharge are a cause as well.

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[4] Precipitation and well records prior to that year are too sketchy to be relied upon.

Safe Yield

A calculation of safe yield is necessary to manage the basin or create a physical solution to a potential or actual continuing overdraft. A determination of safe yield requires an initial determination of average annual natural or native recharge to the aquifer from all sources. The only source of natural or native recharge for the Antelope Valley is precipitation that recharges the aquifer and it is therefore necessary to ascertain average annual precipitation. The calculation of annual average precipitation can only be determined by using a baseline study period that covers precipitation in periods of drought and periods of abundant precipitation over a sufficient period of time that a reliable estimate of average future recharge based on precipitation can be made.

It has been suggested that safe yield could be based on using shorter base periods or more than one base period, (the total time span of which was considerably less than the 50 year period the Court believes is more credible). If the purpose of selecting a base period is to determine average recharge over time based on precipitation, choosing two consecutive periods of time with two different average numbers would not serve that purpose and would preclude estimating a single safe yield. Likewise, selecting a base period that does not have completely representative precipitation cycles over time would not provide an accurate evaluation of conditions in the valley. A base period that calculates average precipitation over a representative period of time permits reliable predictions about future natural recharge based on regular recurring precipitation cycles. A period of precipitation fluctuations from 1951 to 2005 satisfies that standard. Shorter periods do not.

The Court finds that current extraction of water from the aquifer by all pumping ranges from 130,000 to 150,000 acre feet a year, but in any event, is in excess of average annual recharge. The major area of dispute between the parties is the average amount of natural recharge, which also involves disputes concerning return flows, the amount of native vegetation water needs, evapotranspiration, stream flow, runoff, groundwater infiltration, specific yield, lag

time, bedrock infiltration, agricultural crop needs, and the like. Other sources of recharge to the basin, including artificial recharge-water pumped into the aquifer from external sources are not in dispute.

Evidence established that during the entire historical period presented, populations increased within the valley and water use changed in a variety of ways. There has been a shift in some areas to urban uses and away from agriculture although in recent years agricultural pumping has also increased. The nature of agricultural duties has changed as well. The type of irrigation used by farmers has become more efficient and less water is needed per acre (depending on the crops grown) with more efficient uses of water. But there has also been an increase as well as a change in the nature of the type of agriculture in the valley in material quantities in recent years. More of such changes may occur and it is important to both current and future generations to ensure that the water resources within the basin are managed prudently.

The Court heard from a very large number of experts, some of whom have provided opinion testimony of what constitutes safe yield. All the experts testifying acknowledged that changes in the selection of a base study period, lag time, agricultural water duties, evapotranspiration, specific yield, runoff quantities, well level contours, bedrock infiltration, return flows, playa evaporation relating to run off and bedrock infiltration, chloride measurements, satellite imaging, and agricultural and municipal pumping estimates, among others, would affect the ultimate opinion of natural recharge and return flows.

The opinions of all the experts are estimates, based upon their professional opinion. All of the opinions were critiqued by other experts who often had different opinions. The Court recognizes the imprecision of the various estimates and the fact that an estimate by definition is imprecise. But the fact that estimates lack precision does not mean that the Court cannot rely upon such estimates. The scientific community relies upon such estimates in the field of hydrogeology and the Court must do the same.

Reasonable experts can differ as to reasonable estimates of natural recharge and virtually all other components of water budgets, computations of change of storage, and the

like, all the while using the same formulae and scientific principles to reach their conclusion. For example, all the experts could agree on the definition of "Darcy's Law" and the physics principle of "conservation of mass" but still reach different conclusions.

Some of the experts opined that the basin was not in overdraft and that recharge was in excess of or in balance with extractions so that there was a surplus in the aquifer. One expert opined that loss of storage was merely space for temporary storage. Observable conditions in the valley are inconsistent with those conclusions. If there were a surplus, even in the shortened base periods used by the some experts, there should not be subsidence of land, nor the need to drill for water at deeper and deeper levels in those parts of the aquifer most affected by the overdraft. The physical condition of the valley is inconsistent with those estimates that there is and has been a surplus of water in the aquifer.

The selection of a safe yield number for an aquifer the size of the Antelope Valley is made difficult because of not only its size but because of the complexity of its geology. As reflected above, hydro-connectivity and conductivity varies considerably between various parts of the aquifer. The hydro-connectivity between some portions of the adjudication area aquifer and others is so slight as to be almost (apparently) nonexistent. Pumping in those areas may have little or no effect on other areas of the aquifer. The Antelope Valley basin is not like a bathtub where lowering and raising of water levels is equal in all parts of the "tub."

Therefore, assigning a safe yield number (what quantity of pumping from the basin will maintain equilibrium in the aquifer) may require different numbers for different parts of the aquifer (and clearly may also provide for some level of separate management). No attempt has been made in this phase of trial to define geological differences in the valley that would justify different safe yield numbers for different parts of the valley in light of the decision in Phase Two regarding connectivity (the Phase Two trial focused on hydro-connectivity for purposes of determining necessary parties to the action).

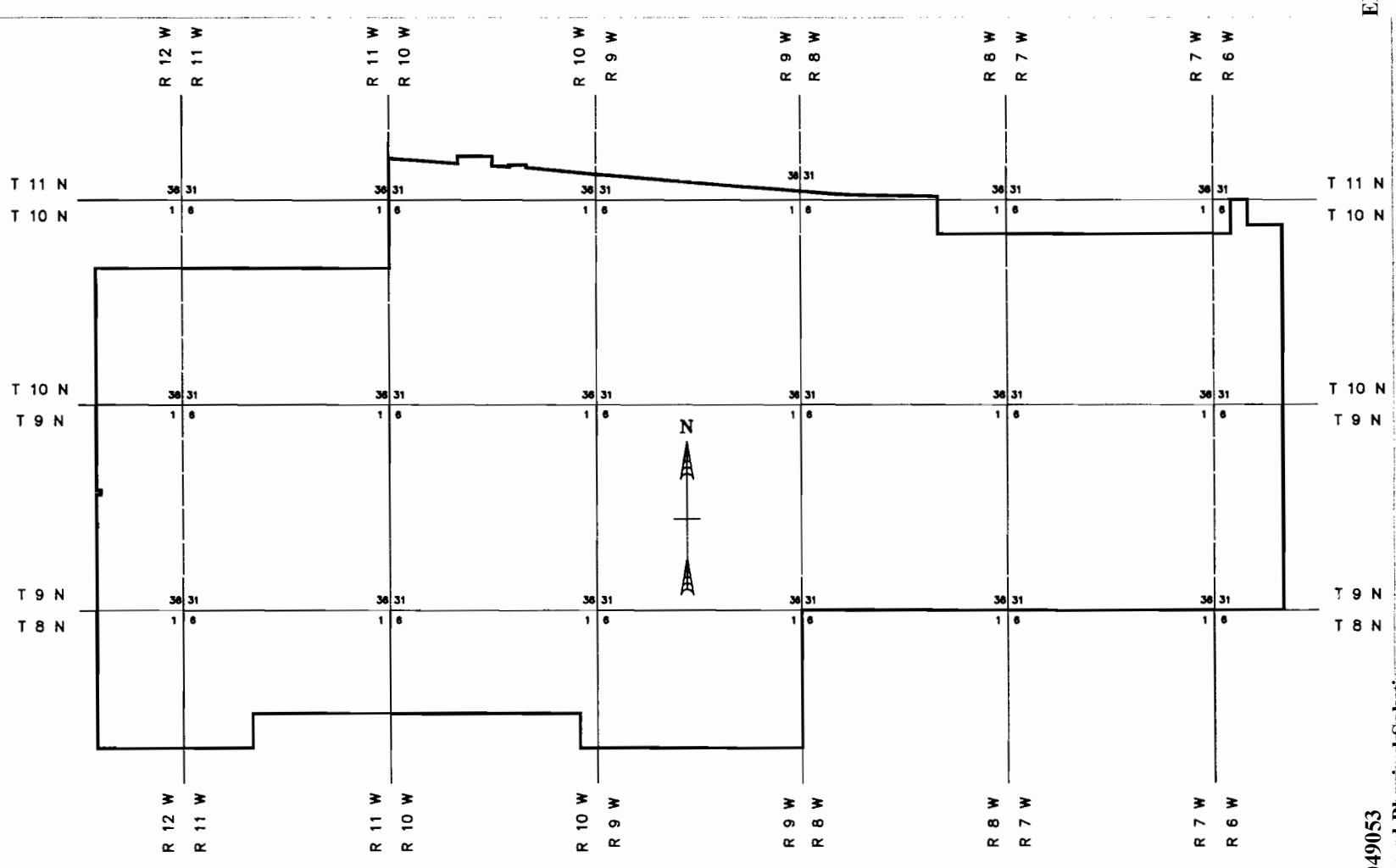
Weighing the various opinions of the experts, however, the Court finds by a preponderance of the evidence that conservatively setting a safe yield at 110,000 acre feet a

year will permit management of the valley in such a way as to preserve the rights of all parties in accordance with the Constitution and laws of the State of California. Some portions of the aquifer receive more recharge than others and pumping requirements vary. These differences require management decisions that respect the differences in both the geology and the cultural needs of the diverse parts of the valley.

It should not be assumed that the safe yield management number may not change as climate circumstances and pumping may change, or as the empirical evidence based on experience in managing the basin suggests it is either too high or too low.

Dated: JUL 13 2011

Hon. Jack Komar
Judge of the Superior Court



SCHEMATIC

NOT TO SCALE; BAR SCALE BELOW IS APPROXIMATE ONLY.

0 3 6 9 12

SCALE IN MILES

DEPARTMENT OF THE ARMY
CORPS OF ENGINEERS, SOUTH PACIFIC DIVISION
LOS ANGELES DISTRICT REAL ESTATE DIVISION

EDWARDS AIR FORCE BASE
LOS ANGELES, KERN & SAN BERNARDINO COUNTIES, CA
BASE BOUNDARY (PERIMETER) DIAGRAM

9 JUNE 2000 DWG 273-M-PER

EXHIBIT 6

1-05-CV-049053

Judgment and Physical Solution

EXHIBIT 7

20th Street East

Avenue M

Site 1

Site 2

Site 3

Site 4

Avenue N

Emergency Landing Area
(See Inset A)

Sierra Highway

OL AFP 42
Site 5

OL AFP 42
Site 5

Site 8

Site 7

Site 6

LAWA
Property

Lockheed Martin
Property

15th Street East

20th Street East

25th Street East

Avenue P

LEGEND

- Air Force Plant 42 Boundary
- Industrial Plant Boundary
- RAIL LINE
- ROAD
- SECURITY FENCE
- BUILDING

GRAPHIC SCALE

700' 0' 350' 700' 1400' 2100'

SCALE 1" =700'

N

Inset A

Avenue N

10th Street West

Emergency Landing Area

Sierra Highway

MARK	DATE	DESCRIPTION	BY
REVISIONS			

MARK	DATE	DESCRIPTION	BY
REVISIONS			

PRODUCTION FLIGHT TEST INSTALLATION

UNITED STATES AIR FORCE PLANT NO. 42

PALMDALE CALIFORNIA

1941 to 2011

OPERATIONS + MAINTENANCE AF PLANT 42 PALMDALE , CALIFORNIA

PREPARED BY:
U.S. AIR FORCE, PLANT 42

PREPARED FOR:
AIR FORCE PLANT 42,
OPERATIONS AND MAINTENANCE MANAGER

APPROVED BY:
CHIEF ENGINEER, AF PLANT 42

DRAWING NO. P42XXXXX-101

AIR FORCE PLANT 42
2501 E AVENUE P
PALMDALE, CALIFORNIA 93550
(661) 272-6629 - FAX 272-6610

Integrity First, Service Before Self, and Excellence in All We Do

Air Force Plant 42
Installation Layout

DESIGNED	TRACED	JOB NO.
		420
DRAWN	CHECKED	DATE
		27 May 14

P4210242-101 SHEET 1 OF 1

1:05-CV-04983
Judgment and Physical Solution

Rights to Produce Imported Water Return Flows

A.V. MATERIALS, INC.

ANTELOPE VALLEY COUNTRY CLUB

ANTELOPE VALLEY EAST-KERN WATER AGENCY

ANTELOPE VALLEY WATER COMPANY

ANTELOPE VALLEY WATER STORAGE, LLC

BORON COMMUNITY SERVICES DISTRICT

CALIFORNIA DEPARTMENT OF PARKS

CALIFORNIA WATER SERVICE COMPANY

COPA DE ORO LAND COMPANY, A CALIFORNIA GENERAL PARTNERSHIP

CRYSTAL ORGANIC FARMS, LLC

DESERT LAKE COMMUNITY SERVICES DISTRICT

DIAMOND FARMING COMPANY

EDGEMONT ACRES MWC

EL DORADO MUTUAL WATER COMPANY

EYHERABIDE, RAY/EYHERABIDE SHEEP CO.

GEORGE LANE, AS TRUSTEE OF THE GEORGE AND CHARLENE LANE

FAMILY TRUST, DATED 12/19/2007

GOODE, FORREST G. 1998 TRUST

GRANITE CONSTRUCTION COMPANY

GRIMMWAY ENTERPRISES, INC.

H & N DEVELOPMENT CO. WEST

HARTER, SCOTT

LANDALE MUTUAL WATER CO.

LITTLEROCK CREEK IRRIGATION DISTRICT

LITTLEROCK SAND AND GRAVEL, INC.

LOS ANGELES COUNTY WATERWORKS DISTRICT NO. 40

PALMDALE WATER DISTRICT

PALM RANCH IRRIGATION DISTRICT

QUARTZ HILL WATER DISTRICT

ROSAMOND COMMUNITY SERVICES DISTRICT

SAINT ANDREW'S ABBEY, INC.

SHADOW ACRES MUTUAL WATER COMPANY.

SUNNYSIDE FARMS MUTUAL WATER COMPANY, INC.

TEJON RANCHCORP/TEJON RANCH CO.

U.S. BORAX & CHEMICAL CO.

WARNACK, A.C. AS TRUSTEE OF THE A.C. WARNACK TRUST

WEST SIDE PARK MUTUAL WATER CO.

WHITE FENCE FARMS MUTUAL WATER CO.

Antelope Valley Adjudication Area
Proposed Adjudication Boundary

- Aqueducts
- Perennial Streams
- Seasonal Streams
- Faults
- EAFB Production Wells
- Gauging Stations

NOTE:
AFA = Acre Foot Average (Annual)

- Dept of Defense
- Bureau of Land Management
- U.S. Forest Service
- Other Federal
- State-County-Municipal
- Private
- Antelope Valley Groundwater Basin Boundary
- Boundary Of The Antelope Valley Watershed Contributory To The Antelope Valley Groundwater Basin

0 5 10 15 20 25
Miles

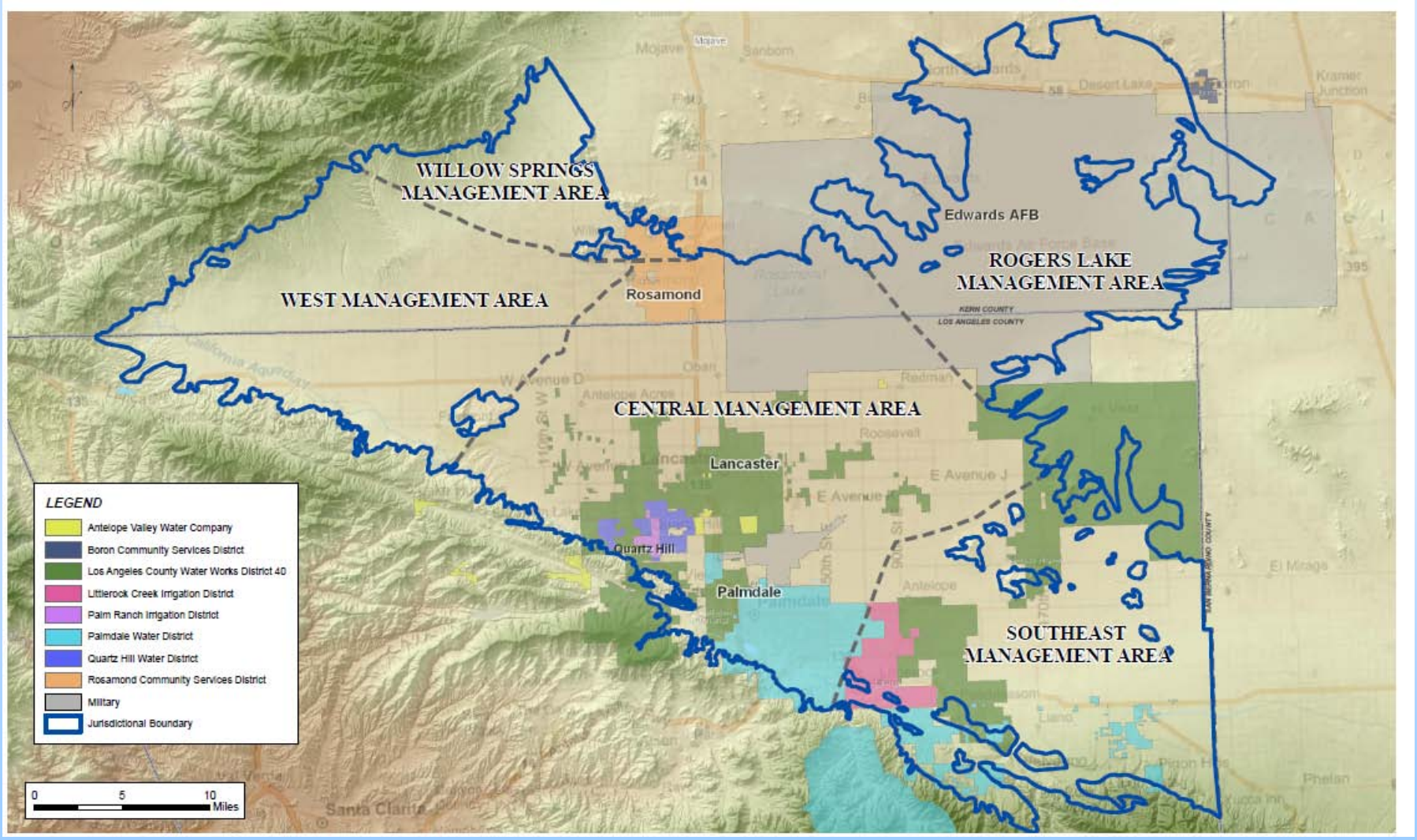
N

29JUN06
95ABW/CETM
ric.williams@edwards.af.mil

Arvin
Tehachapi
California City
Mojave
Rosamond
Lancaster
Palmdale
Littlerock
Acton
No Data
Plant 42
Edwards AFB
North Edwards
Boron
Lake Los Angeles
Adelanto
Victorville
Phelan
Hesperia
Wrightwood
Valyermo
AFA 946
AFA 3
AFA 10
AFA 8
AFA 33
AFA 197
AFA 54
AFA 2
AFA 0
AFA 23
AFA 39
AFA 38
AFA 28
AFA 65
AFA 4
AFA 16
AFA 26
AFA 5
AFA 94
AFA 333
AFA 206
AFA 7190
AFA 160
AFA 5301
AFA 111
AFA 12531
AFA 197
Oak Creek
Cottonwood Creek
Willow Springs Fault
Garlock Fault Zone
Randsburg-Mojave Fault
Los Angeles Aqueduct
Neenach Fault
California Aqueduct
Little Rock Creek
Big Rock Creek
Kern County
Los Angeles County
San Bernardino County
District 14

1-05-CV-049053
Judgment and Physical Solution

EXHIBIT 9


WILLOW SPRINGS MANAGEMENT AREA
WEST MANAGEMENT AREA
Rosamond
Edwards AFB
ROGERS LAKE MANAGEMENT AREA
KERN COUNTY
LOS ANGELES COUNTY
CENTRAL MANAGEMENT AREA
Lancaster
Quartz Hill
Palmdale
SOUTHEAST MANAGEMENT AREA
LEGEND
Antelope Valley Water Company
Boron Community Services District
Los Angeles County Water Works District 40
Littlerock Creek Irrigation District
Palm Ranch Irrigation District
Palmdale Water District
Quartz Hill Water District
Rosamond Community Services District
Military
Jurisdictional Boundary
0
5
10
Miles

Appendix C

Water Supply Contract Between DWR and AVEK

STATE OF CALIFORNIA
THE RESOURCES AGENCY OF CALIFORNIA
DEPARTMENT OF WATER RESOURCES

WATER SUPPLY CONTRACT
BETWEEN

THE STATE OF CALIFORNIA
DEPARTMENT OF WATER RESOURCES

AND

ANTELOPE VALLEY-EAST KERN WATER AGENCY

Disclaimer: This document integrates Antelope Valley-East Kern Water Agency's State Water Project water supply contract and amendments to the contract entered into since September 20, 1962. It is intended only to provide a convenient reference source, and the Department of Water Resources is unable to provide assurances that this integrated version accurately represents the original documents. For legal purposes, or when precise accuracy is required, users should direct their attention to original source documents rather than this integrated version.

(Incorporates through Amendment No. 24, executed August 21, 2013)
(No other amendments through 2017)

EXPLANATORY NOTES

< >	This symbol encloses material not contained in the original or amended contract, but added to assist the reader.
Exhibits	Materials that explain or provide detailed information regarding a contract provision.
Attachments	Materials that implement provisions of the basic contract when certain conditions are met.
Amendments	Amendments have been incorporated into this consolidated contract and are indicated by footnote.
Agency Name	This Water Supply Contract used the term "Agency" in the original contract for this contractor. Some amendments may not have retained the same nomenclature. This consolidated contract uses the term "Agency" to be consistent with the original contract. It does not change the content meaning.
Department Name	This Water Supply Contract used the term "State" in the original contract for this contractor. Some amendments may not have retained the same nomenclature. This consolidated contract uses the term "State" throughout to be consistent with the original contract. It does not change the content meaning.

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STATE OF CALIFORNIA
DEPARTMENT OF WATER RESOURCES

CONTRACT
BETWEEN THE STATE OF CALIFORNIA
DEPARTMENT OF WATER RESOURCES AND
ANTELOPE VALLEY-EAST KERN WATER AGENCY
FOR A WATER SUPPLY

THIS CONTRACT, made this 20th day of September, 1962, and as amended through August 21, 2013, pursuant to the provisions of the California Water Resources Development Bond Act, the State Central Valley Project Act, and other applicable laws of the State of California, between the State of California, acting by and through its Department of Water Resources, herein referred to as the "State", and Antelope Valley-East Kern Water Agency, a public agency in the State of California, duly organized, existing, and acting pursuant to the laws thereof with its principal place of business in Palmdale, California, herein referred to as the "Agency".

WITNESSETH, That:

WHEREAS, the State is authorized to construct and operate facilities for the storage and conveyance of water, certain of which facilities will make water available to the Agency; and

WHEREAS, funds will be provided under the California Water Resources Development Bond Act for the construction of said facilities; and

WHEREAS, the Agency is desirous of obtaining a supply of water from the State;

NOW THEREFORE, it is mutually agreed as follows:

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A. INTRODUCTORY PROVISIONS

1. DEFINITIONS

When used in this contract, the following terms shall have the meanings hereinafter set forth:

(a) Bond Act

"Bond Act" shall mean the California Water Resources Development Bond Act, comprising Chapter 8 (commencing at Section 12930) of Part 6 of Division 6 of the Water Code.

(b) System

"System" shall mean the State Water Resources Development System as defined in Section 12931 of the Water Code.

(c) Delta

"Delta" shall mean the Sacramento-San Joaquin Delta as defined in Section 12220 of the Water Code on November 8, 1960.

(d)[1] Contractor

"Contractor" shall mean any entity that has executed, or is an assignee of, a contract of the type published in Department of Water Resources Bulletin No. 141 dated November 1965, with the State for a dependable supply of water made available by the System, except such water as is made available by the facilities specified in Section 12934(d)(6) of the Water Code.

(e)[2] Project Facilities

"Project facilities" shall mean those facilities of the system which will, in whole or in part, serve the purposes of this contract by conserving water and making it available for use in and above the Delta and for export from the Delta and from such additional facilities as are defined in Article 1(h)(2) herein, and by conveying water to the Agency. Said project facilities shall consist specifically of "project conservation facilities" and "project transportation facilities", as hereinafter defined.

(f) Project Conservation Facilities

"Project conservation facilities" shall mean such project facilities as are presently included, or as may be added in the future, under (g) and (h) below.

(g) Initial Project Conservation Facilities

"Initial project conservation facilities" shall mean the following project facilities specified in Section 12934(d) of the Water Code:

1 Amended: Amendment No. 19
2 Amended: Amendment No. 13

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(1) All those facilities specified in subparagraph (1) thereof.

(2) Those facilities specified in subparagraph (3) thereof to the extent that they serve the purposes of water conservation in the Delta, water supply in the Delta, and transfer of water across the Delta.

(3) A reservoir near Los Banos in Merced County as specified in subparagraph (2) thereof.

(4) The reach of the San Joaquin Valley-Southern California Aqueduct extending from the Delta to a reservoir near Los Banos in Merced County, to the extent required for water conservation through conveyance of water diverted from the Delta to offstream storage in said reservoir as determined by the State.

(5) Those facilities specified in subparagraph (5) thereof which are incidental to the facilities included under (1), (2), (3), and (4) above.

(6) Those facilities specified in subparagraph (7) thereof which are necessary and appurtenant to the facilities included under (1), (2), (3), (4), and (5) above.

(h)[3] Additional Project Conservation Facilities

"Additional project conservation facilities" shall mean the following facilities and programs which will serve the purpose of preventing any reduction in the minimum project yield as hereinafter defined:

(1) Those project facilities specified in Section 12938 of the Water Code;

(2) Those facilities and programs described in (A), (B), (C), (D), and (E) below which, in the State's determination, are engineeringly feasible and capable of producing project water which is economically competitive with alternative new water supply sources, provided that, in the State's determination, the construction and operation of such facilities and programs will not interfere with the requested deliveries of annual entitlement to any contractor other than the sponsoring contractor, and will not result in any greater annual charges to any contractor other than the sponsoring contractor than would have occurred with the construction at the same time of alternative new water supply sources which are either reservoirs located north of the Delta or off-Aqueduct storage reservoirs located south or west of the Delta designed to supply water to the California Aqueduct. The following facilities and programs shall hereinafter be referred to as "Local Projects":

(A) On-stream and off-stream surface storage reservoirs not provided for in Section 12938 of the Water Code, that will produce project water for the System for a period of time agreed to by the sponsoring contractor;

(B) Ground water storage facilities that will produce project water for the System for a period of time agreed to by the sponsoring contractor;

(C) Waste water reclamation facilities that will produce project water

3 Amended: Amendment No. 13

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for the System for a period of time agreed to by the sponsoring contractor;

(D) Water and facilities for delivering water purchased by the State for the System for a period of time agreed to by the sponsoring contractor; provided that the economic test specified herein shall be applied to the cost of these facilities together with the cost of the purchased water; and

(E) Future water conservation programs and facilities that will reduce demands by the sponsoring contractor for project water from the System for a period of time agreed to by the sponsoring contractor and will thereby have the effect of increasing project water available in the Delta for distribution.

(3) Whether a Local Project described in (2) above shall be considered economically competitive shall be determined by the State by comparing, in an engineering and economic analysis, such Local Project with alternative new water supply sources which are either reservoirs located north of the Delta or off-Aqueduct storage reservoirs located south or west of the Delta designed to supply water to the California Aqueduct. The analysis for such alternative new water supply sources shall use the average cost per acre-foot of yield in the latest studies made for such sources by the State and shall compare those facilities with the proposed Local Project using commonly accepted engineering economics. In the case of a Local Project to be funded in part by the State as part of the System and in part from other sources, the economic analysis specified herein shall be applied only to the portion to be funded by the State as part of the System.

(4) The Local Projects in (2) above shall not be constructed or implemented unless or until:

(A) The sponsoring contractor signs a written agreement with the State which:

(i) Contains the sponsoring contractor's approval of such facility or program.

(ii) Specifies the yield and the period of time during which the water from the Local Project shall constitute project water; and

(iii) Specifies the disposition of such Local Project or of the yield from such Local Project upon the expiration of such period of time; and

(B) All contractors within whose boundaries any portion of such Local Project is located, and who are not sponsoring contractors for such Local Project give their written approval of such Local Project.

(5) "Sponsoring contractor" as used in this Article 1(h) shall mean the contractor or contractors who either will receive the yield from facilities described in 2(A), (B), (C), or (D) above, or agree to reduce demands for project water from the System pursuant to 2(E) above.

(6) In the event of a shortage in water supply within the meaning of Article 18(a), the determination of whether to count, in whole or in part, the yield from facilities described in 2(A), (B), (C), or (D) above, or the reduced demand from future

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conservation programs described in 2(E) above in the allocation of deficiencies among contractors will be based on a project-by-project evaluation taking into consideration such factors as any limitation on the use of the water from such facilities and whether the sponsoring contractor has access to project water from the Delta as an alternate to such facilities.

(i) Project Transportation Facilities

"Project transportation facilities" shall mean those project facilities:

(1) Specified in Water Code Section 12934(d)(2) which are described in Table H of this contract;

(2)[4] Facilities for the generation and transmission of electrical energy of the following types:

(A) Hydroelectric generating and transmission facilities, whose operation is dependent on the transportation of project water, or on releases to channels downstream of project facilities defined under (1) above. Such facilities shall be called "project aqueduct power recovery plants."

(B) All other generating and associated transmission facilities, except those dependent on water from project conservation facilities, for the generation of power. These facilities shall be called "off-aqueduct power facilities" and shall consist of the State's interest in the Reid-Gardner and any other generating and associated transmission facilities, constructed or financed in whole or in part by the State, which are economically competitive with alternative power supply sources as determined by the State.

(3) Specified in Water Code Section 12934(d)(7) which are necessary and appurtenant to the facilities included under (1) and (2) above.

(j) Project Water

"Project water" shall mean water made available for delivery to the contractors by project conservation facilities and the transportation facilities included in the System.

(k)[5] Minimum Project Yield

"Minimum project yield" shall mean the dependable annual supply of project water to be made available assuming completion of the initial project conservation facilities and additional project conservation facilities. The project's capability of providing the minimum project yield shall be determined by the State on the basis of coordinated operations studies of initial project conservation facilities and additional project conservation facilities, which studies shall be based upon factors including but not limited to: (1) the estimated relative proportion of deliveries for agricultural use to deliveries for municipal use assuming Maximum Annual Table A Amounts for all contractors and the characteristic distributions of demands for these two uses throughout the year; and (2) agreements now in effect or as hereafter amended or supplemented between the

4 Amended: Amendment No. 13
5 Amended: Amendments No. 1, 19, and 21

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State and the United States and others regarding the division of utilization of waters of the Delta or streams tributary thereto.

(l)[6] Annual Table A Amount

"Annual Table A Amount" shall mean the amount of project water set forth in Table A of this contract that the State, pursuant to the obligations of this contract and applicable law, makes available for delivery to the Agency at the delivery structures provided for the Agency. The term Annual Table A Amount shall not be interpreted to mean that in each year the State will be able to make that quantity of project water available to the Agency. The Annual Table A Amounts and the terms of this contract reflect an expectation that under certain conditions the Agency will receive its full Annual Table A Amount; but that under other conditions only a lesser amount, allocated in accordance with this contract, may be made available to the Agency. This recognition that full Annual Table A Amounts will not be deliverable under all conditions does not change the obligations of the State under this contract, including but not limited to, the obligations to make all reasonable efforts to complete the project facilities, to perfect and protect water rights, and to allocate among contractors the supply available in any year, as set forth in Articles 6(b), 6(c), 16(b) and 18, in the manner and subject to the terms and conditions of those articles and this contract. Where the term "annual entitlement" appears elsewhere in this contract, it shall mean "Annual Table A Amount." The State agrees that in future amendments to this and other contractor's contracts, in lieu of the term "annual entitlement," the term "Annual Table A Amount" will be used and will have the same meaning as "annual entitlement" wherever that term is used.

(m)[7] Maximum Annual Table A Amount

"Maximum annual entitlement" shall mean the maximum annual amounts set forth in Table A of this contract, and where the term "maximum annual entitlement" appears elsewhere in this contract it shall mean "Maximum Annual Table A Amounts."

(n) Supplemental Conservation Facilities

"Supplemental conservation facilities" shall mean those facilities provided for in Section 12938 of the Water Code which will serve the purpose of supplying water in addition to the minimum project yield, and for meeting local needs.

(o) Supplemental Water

"Supplemental water" shall mean water made available by supplemental conservation facilities, in excess of the minimum project yield.

(p) Year

"Year" shall mean the 12-month period from January 1 through December 31, both dates inclusive.

6 Amended: Amendment No. 21
7 Amended: Amendment No. 21

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(q) Year of Initial Water Delivery

"Year of initial water delivery" shall mean the year when project water will first be available for delivery to a contractor pursuant to its contract with the State.

(r)[8] Project Interest Rate

"Project interest rate" shall mean the weighted average interest rate on bonds, advances, or loans listed in this section to the extent the proceeds of any such bonds, advances, or loans are for construction of the State Water Facilities defined in Section 12934(d) of the Water Code, the additional project conservation facilities, and the supplemental conservation facilities (except off-aqueduct power facilities; water system facilities; advances for delivery structures, measuring devices and excess capacity; and East Branch Enlargement Facilities). The project interest rate shall be calculated as a decimal fraction to five places by dividing (i) the total interest cost required to be paid or credited by the State during the life of the indebtedness or advance by (ii) the total of the products of the various principal amounts and the respective terms in years of all such amounts. The bonds, advances, or loans used in calculating the project interest rate shall be:

(1) General obligation bonds issued by the State under the Bond Act, except that any premium received on the sale of these bonds shall not be included in the calculation of the project interest rate,

(2) Revenue bonds issued by the State under the Central Valley Project Act after May 1, 1969,

(3) Bonds issued by the State under any other authority granted by the Legislature or the voters,

(4) Bonds issued by any agency, district, political subdivision, public corporation, or nonprofit corporation of this State,

(5) Funds advanced by any contractor without the actual incurring of bonded debt therefor, for which the net interest cost and terms shall be those which would have resulted if the contractor had sold bonds for the purpose of funding the advance, as determined by the State,

(6) Funds borrowed from the General Fund or other funds in the Treasury of the State of California, for which the total interest cost shall be computed at the interest rate earned over the period of such borrowing by moneys in the Surplus Money Investment Fund of such Treasury invested in securities, and

(7) Any other financing capability available in the Treasury of the State of California at whatever interest rate and other financing costs are provided in the law authorizing such borrowing. However, the use of other financing from the State Treasury is intended to involve only short term borrowing at interest rates and other financing costs no greater than those charged to other State agencies during the same period until such time as the Department can sell bonds and reimburse the source of the short term borrowing from the proceeds of the bond sale.

8 Amended: Amendments No. 5, 13, 15, and 16

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(s) Capital Costs

"Capital costs" shall mean all costs incurred subsequent to authorization of a facility for construction by the Legislature or by administrative action pursuant to Section 11290 of the Water Code and to the Bond Act, including those so incurred prior to the beginning of the project repayment period as herein defined and any accrued unpaid interest charges thereon at the rates specified herein, which are properly chargeable to the construction of and the furnishing of equipment for the facilities of the System, including the costs of surveys, engineering studies, exploratory work, designs, preparation of construction plans and specifications, acquisition of lands, easements and rights-of-way, relocation work, and essential administrative work in connection therewith, all as shown upon the official records of the Department of Water Resources.

(t)[9] Project Repayment Period

"Project repayment period" shall mean that period of years commencing on January 1, 1961, and extending until December 31, 2035; *Provided*, that whenever construction of any project facilities is financed by a bond issue with maturity dates later than December 31, 2035, whether the bonds are issued pursuant to the Bond Act or other authority, repayment of the costs of such facilities shall be extended to end on the date of the latest maturities of the bonds with which construction of such facilities is financed.

(u) Municipal Use

"Municipal use" shall mean all those uses of water common to the municipal water supply of a city, town, or other similar population group, including uses for domestic purposes, uses for the purposes of commerce, trade or industry, and any other use incidental thereto for any beneficial purpose.

(v) Manufacturing Use

"Manufacturing use" shall mean any use of water primarily in the production of finished goods for market.

(w) Agricultural Use

"Agricultural use" shall mean any use of water primarily in the production of plant crops or livestock for market, including any use incidental thereto for domestic or stock-watering purposes.

(x) Subject to Approval by the State

"Subject to approval by the State" shall mean subject to the determination and judgment of the State as to acceptability.

(y) Area of Origin Statutes

"Area of origin statutes" shall mean Sections 10505 and 11460 through 11463 of the Water Code as now existing or hereafter amended.

9 Amended: Amendment No. 12

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<(z) No Such Subarticle Exists.>

<(aa) No Such Subarticle Exists.>

<(bb) No Such Subarticle Exists.>

(cc)[10] Water System Revenue Bonds

"Water system revenue bonds" shall mean revenue bonds or revenue bond anticipation notes issued by the State under the Central Valley Project Act after January 1, 1987 for water system facilities identified in Article 1(hh).

<(dd) No Such Subarticle Exists.>

<(ee) No Such Subarticle Exists.>

<(ff) No Such Subarticle Exists.>

<(gg) No Such Subarticle Exists.>

(hh)[11] Water System Facilities

"Water System Facilities" shall mean the following facilities to the extent that they are financed with water system revenue bonds or to the extent that other financing of such facilities is reimbursed with proceeds from water system revenue bonds:

(1) The North Bay Aqueduct,

(2) The Coastal Branch Aqueduct,

(3) Delta Facilities, including Suisun Marsh facilities, to serve the purposes of water conservation in the Delta, water supply in the Delta, transfer of water across the Delta, and mitigation of the environmental effects of project facilities, and to the extent presently authorized as project purposes, recreation and fish and wildlife enhancement,

(4) Local projects as defined in Article 1(h)(2) designed to develop no more than 25,000 acre-feet of project yield from each project,

(5) Land acquisition prior to December 31, 1995, for the Kern Fan Element of the Kern Water Bank,

(6) Additional pumps at the Banks Delta Pumping Plant,

(7) The transmission line from Midway to Wheeler Ridge Pumping Plant,

(8) Repairs, additions, and betterments to conservation or transportation facilities existing as of January 1, 1987, and to all other facilities described in this subarticle (hh) except for item (5),

(9) A project facilities corporation yard, and

(10) A project facilities operation center.

10 Amended: Amendment No. 16
11 Amended: Amendments No. 16 and 19

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(ii)[12] Carry-over Entitlement Water

"Carry-over Entitlement Water" shall mean water from a contractor's annual entitlement for a respective year which is made available for delivery by the State in the next year pursuant to Article 12(e).

(jj)[13] Interruptible Water

"Interruptible water" shall mean project water available as determined by the State that is not needed for fulfilling contractors' annual entitlement deliveries as set forth in their water delivery schedules furnished pursuant to Article 12 or for meeting project operational requirements, including storage goals for the current or following years.

(kk)[14] Nonproject Water

"Nonproject water" shall mean water made available for delivery to contractors that is not project water as defined in Article 1(j).

(ll)[15] Monterey Amendments

"Monterey Amendments" shall mean this amendment and substantially similar amendments to other contractors' water supply contracts that include, among other provisions, the addition of Articles 51 through 56.

2.[16] TERM OF CONTRACT

This contract shall become effective on the date first above written and shall remain in effect for the longest of the following:

1. The project repayment period
2. 75 years
3. The period ending with the latest maturity date of any bond issue used to finance the construction costs of project facilities.

3. VALIDATION

Within one (1) year after the effective date of this contract, the Agency shall submit this contract to a court of competent jurisdiction for determination of its validity by a proceeding in mandamus or other appropriate proceeding or action, which proceeding or action shall be diligently prosecuted to final decree or judgment. In the event that this contract is determined to be invalid by such final decree or judgment, the State shall make all reasonable efforts to obtain validating legislation at the next session of the Legislature empowered to consider such legislation, and within six (6) months after the close of such session, if such legislation shall have been enacted, the Agency shall submit this contract to a court of competent jurisdiction for

12 Amended: Amendment No. 17
13 Amended: Amendment No. 19
14 Amended: Amendment No. 19
15 Amended: Amendment No. 19
16 Amended: Amendment No. 12

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redetermination of its validity by appropriate proceeding or action, which proceeding or action shall be diligently prosecuted to final decree or judgment.

4.[17] OPTION FOR CONTINUED SERVICE

By written notice to the State at least six (6) months prior to the expiration of the term of this contract, the Agency may elect to receive continued service after expiration of said term under the following conditions unless otherwise agreed to:

(1) Service of water in annual amounts up to and including the Agency's maximum annual entitlement hereunder.

(2) Service of water at no greater cost to the Agency than would have been the case had this contract continued in effect.

(3) Service of water under the same physical conditions of service, including time, place, amount and rate of delivery, as are provided for hereunder.

(4) Retention of the same chemical quality objective provision as is set forth herein.

(5) Retention of the same options to utilize the project transportation facilities as are provided for in Articles 18(c) and 55, to the extent such options are then applicable.

Other terms and conditions of the continued service shall be reasonable and equitable and shall be mutually agreed upon. In the event that said terms and conditions provide for continued service for a limited number of years only, the Agency shall have the same option to receive continued service here provided for upon the expiration of that and each succeeding period of continued service.

5. PLEDGE OF REVENUES

This contract is entered into for the direct benefit of the holders and owners of all general obligation bonds issued under the Bond Act, and the income and revenues derived from this contract are pledged to the purposes and in the priority set forth in that act.

B. WATER SERVICE PROVISIONS

6. ANNUAL ENTITLEMENTS

(a) Year of Initial Water Delivery

The year of initial water delivery to the Agency is presently estimated to be 1972. To the extent practicable, the State shall notify the Agency of any change in this estimate.

17 Amended: Amendment No. 19

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(b)[18] Agency's Annual Table A Amounts

Commencing with the year of initial water delivery to the Agency, the State each year shall make available for delivery to the Agency the amounts of project water designated in Table A of this contract, which amounts shall be subject to change as provided for in Article 7(a) and are referred to in this contract as the Agency's Annual Table A Amounts.

(c) Obligation of State to Complete Facilities

Subject to the availability of funds, the State shall make all reasonable efforts consistent with sound fiscal policies, reasonable construction schedules, and proper operating procedures to complete the project facilities necessary for delivery of project water to the Agency in such manner and at such times that said delivery can commence in or before the year specified in subdivision (a) of this article, and continue in the amounts designated in Table A of this contract.

7. CHANGES IN ANNUAL ENTITLEMENTS; MAXIMUM ANNUAL ENTITLEMENT

(a)[19] Changes in Annual Entitlements

The Agency may, at any time or times during the term of this contract, by timely written notice furnished to the State, request that project water be made available to it thereafter in annual amounts greater or less than the annual entitlements designated in Table A of this contract. Subject to approval by the State of any such request, the State's construction schedule shall be adjusted to the extent necessary to satisfy the request, and the requested increases or decreases in said annual entitlements shall be incorporated in said Table A by amendment thereof. Requests for changes in annual entitlements for more than one year shall be approved by the State: *Provided*, That no change shall be approved if in the judgment of the State it would impair the financial feasibility of project facilities.

(b) Maximum Annual Entitlement of Agency

The maximum amount of project water to be made available to the Agency in any one year under this contract shall be that specified in Table A of this contract and in said table designated as the Agency's "Maximum Annual Entitlement." In no event shall such maximum amount of project water to be made available to the Agency be increased over this amount, except as is otherwise provided in this contract.

8. OPTION TO INCREASE MAXIMUM ANNUAL ENTITLEMENT

In the event that the maximum annual entitlements under all contracts executed by the State on or before December 31, 1963, do not aggregate the amount of the minimum project yield as herein defined, the State shall immediately notify the Agency and all other contractors, and the Agency may elect to become entitled to the uncontracted for portion of the minimum project yield in or up to an amount which bears the same ratio to such uncontracted for portion as the Agency's maximum annual entitlement bears to the total of the maximum annual entitlements of all contractors as of that date: *Provided*, That such option may be exercised only to the extent that the water involved can be put to beneficial use within a reasonable period of time. Such option shall become effective on the date that the Agency receives said notice from

18 Amended: Amendment No. 21
19 Amended: Amendment No. 19

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the State and shall remain in effect through September 30, 1964. If the full amount of such uncontracted for portion of the minimum project yield is not preempted by the Agency under this option and by other contractors through the exercise of similar options on or before September 30, 1964, the Agency may request that it become entitled to any amount of such water not so preempted. Such request shall be subject to approval by the State and shall be considered in the light of all similar requests from other contractors. The State shall approve such request only to the extent that the water involved can be put to beneficial use within a reasonable period of time. Upon the exercise of such option or upon the approval of such request the Agency's maximum annual entitlement in Table A of this contract shall be increased by the amount of the additional entitlement thereby obtained by amendment of that table, and the Agency shall become obligated and hereby agrees to pay to the State a proportionate share of the costs attributable to such increase in accordance with cost allocation principles and procedures set forth in this contract. The service of and payment for said increased entitlement shall in all respects be subject to the terms and conditions of this contract.

9. DELIVERY POINTS

Project water made available to the Agency pursuant to Article 6 shall be delivered to the Agency by the State at the delivery structures established in accordance with Article 10.

10. DELIVERY STRUCTURES

(a) Determination of Size and Location of Delivery Structures

Project water made available to the Agency pursuant to this contract shall be delivered to the Agency at such locations and times and through delivery structures of such capacities as are requested by the Agency and approved by the State.

(b) Agency Requests as to Initial Delivery Structures

Pursuant to subdivision (a) of this article, the Agency shall furnish to the State on or before June 30, 1963, its written requests as to:

(1) The location of delivery structures for delivery of project water to it.

(2) The time at which project water is first to be delivered through each such delivery structure.

(3) The maximum instantaneous flow capacity in cubic feet per second to be provided in each such delivery structure.

(4) The maximum amount of water in acre-feet to be delivered in any one month through each such delivery structure.

(5) The total combined maximum instantaneous flow capacity in cubic feet per second to be provided by all such delivery structures.

(6) The total maximum amount of water in acre-feet to be delivered in any one month through all such delivery structures.

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(c) Requests by Agency for Additional Delivery Structures

From time to time the Agency may request delivery structures in addition to those requested pursuant to subdivision (b) of this article.

(d) Agency to Advance Funds for Delivery Structures

The Agency shall pay all of the costs of delivery structures for the delivery of project water to it, and shall deposit with the State, prior to the commencement of construction of any such delivery structure, an amount of money estimated by the State to be sufficient to cover the costs thereof.

11. MEASUREMENT OF WATER DELIVERED

(a) Measurement by State

The State shall measure all project water delivered to the Agency and shall keep and maintain accurate and complete records thereof. For this purpose, the State shall install, operate, and maintain at all delivery structures for delivery of project water to the Agency such measuring devices and equipment as are satisfactory and acceptable to both parties. Said devices and equipment shall be examined, tested, and serviced regularly to insure their accuracy. At any time or times, the Agency or any other contractor may inspect such measuring devices and equipment, and the measurements and records taken therefrom.

(b) Agency to Advance Funds for Measuring Devices

The Agency shall pay all of the costs of acquiring and installing the measuring devices and equipment provided for in subdivision (a) of this article, and shall deposit with the State, prior to such acquisition and installation, an amount of money estimated by the State to be sufficient to cover such costs.

12.[20] PRIORITIES, AMOUNTS, TIMES AND RATES OF DELIVERIES

(a) Procedure for Determining Water Delivery Schedule

The amounts, times, and rates of delivery of project water to the Agency during any year shall be in accordance with a water delivery schedule for that year, such schedule to be determined in the following manner:

(1) On or before October 1 of each year, the Agency shall submit in writing to the State a preliminary water delivery schedule, subject to the provisions of this article and Articles 6(b), 7(b), 10 and 17, indicating the amounts of water desired by the Agency during each month of the succeeding five (5) years.

(2)[21] Upon receipt of a preliminary schedule the State shall review it and, after consultation with the Agency, shall make such modifications in it as are necessary to insure the delivery of the annual quantity allocated to the Agency in accordance with Article 18 and to insure that the amounts, times, and rates of delivery to the Agency will be consistent with the State's overall delivery ability, considering the then current delivery schedules of all contractors. On or before December 1 of each year, the State shall determine and furnish to the Agency the water delivery schedule for the next

20 Title only: Amendment: No. 19
21 Amended: Amendment No. 19

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succeeding year which shall show the amounts of water to be delivered to the Agency during each month of that year.

(3) A water delivery schedule may be amended by the State upon the Agency's written request. Proposed amendments shall be submitted by the Agency within a reasonable time before the desired change is to become effective, and shall be subject to review and modification by the State in like manner as the schedule itself.

(b)[22] Limit on Peak Deliveries of Water

In no event shall the State be obligated to deliver to any contractor through all delivery structures provided for such contractor a total amount of project water in any year greater than the contractor's annual entitlement for that year; or to deliver to any contractor from the project transportation facilities downstream from Pumping Plant VI (Tehachapi Pumping Plant) in any one month of any year a total amount of project water greater than eleven percent (11%) of such contractor's annual entitlement for that year; or to deliver to any contractor from the project transportation facilities upstream from said Pumping Plant VI in any one month of any year a total amount of project water greater than the sum of eighteen percent (18%) of that portion of such contractor's annual entitlement for that year to be put to agricultural use, as determined by the State, and eleven percent (11%) of that portion of such contractor's annual entitlement for that year to be put to municipal use, as determined by the State: *Provided*, That if the State delivers project water to any contractor through delivery structures both downstream and upstream from said Pumping Plant VI, the foregoing limitations on monthly deliveries to such contractor shall be based on an appropriate apportionment of such contractor's annual entitlement for that year to the respective portions of such contractor's service area to which delivery is made from the project transportation facilities downstream from said Pumping Plant VI and from the project transportation facilities upstream therefrom: *Provided further*, That the respective percentages set forth hereinabove may be revised for a particular contractor by amendment of this subdivision after submission to the State of that contractor's requests with respect to maximum monthly deliveries, such revision being subject to approval by the State and subject to advancement to the State by the respective contractor of funds sufficient to cover any additional costs of the project transportation facilities occasioned thereby, as such costs are determined pursuant to Article 24(d): *Provided further*, That with respect to deliveries to the Agency from the project transportation facilities downstream from Pumping Plant VI the percentage of eleven percent (11%) is revised to the extent provided in Article 46(d) of this contract.

[23]Pursuant to Article 45(b), the State will provide capacity in Reach 22B to deliver up to 1,700 acre-feet per year at a continuous flowrate. Further, in the situation where delivery capacity in Reach 22B is insufficient to meet all requested demands of participating SWP contractors, those SWP contractors who originally participated in Reach 22B when it was constructed shall receive first priority for delivery services through Article 12(f). The Agency, as a post-construction participant in Reach 22B, shall receive delivery services in these situations after original SWP contractors' demands are met.

22 Amended: Amendment No. 4
23 Added: Amendment No. 22

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(c)[24] Limit on Rate of Delivery to Agency

In no event shall the State be obligated to deliver water to Agency through all delivery structures at a total combined instantaneous rate of flow exceeding 200 cubic feet per second, except as this rate of flow may be revised by amendment of this article after submission to the State of Agency's requests with respect to maximum flow capacities to be provided through all delivery structures, pursuant to Article 10.

<(d)[25] Delivery of Water Not Delivered in Accordance With Schedule - Deleted>

(e)[26] Delivery of Carry-over Entitlement Water

Upon request of the Agency, the State shall make Carry-over Entitlement Water available for delivery to the Agency during the first three months of the next year, to the extent that such deliveries do not adversely affect current or future project operations, as determined by the State. The State's determination shall include, but not be limited to the operational constraints of project facilities, filling of project conservation storage, flood control releases and water quality restrictions.

Carry-over of entitlement water shall be limited to entitlement water that was included in the Agency's approved delivery schedule for October, November and December, but was not delivered due to:

(1) scheduled or unscheduled outages of facilities within the Agency's service area; or

(2) a delay in the planned application of a contractor's annual entitlement water for pre-irrigation; or

(3) a delay in the planned spreading of the Agency's annual entitlement water for ground water storage.

After determining that the carry-over of entitlement water would not adversely affect project operations, the State shall notify the Agency of the amount of entitlement water to be carried over to the following January through March period. The notification shall include the proposed terms and conditions consistent with this Article 12(e) that would govern the delivery of the Carry-over Entitlement Water.

The Agency agrees to pay all significant identifiable costs associated with its Carry-over Entitlement Water, as determined by the State.

All scheduling and delivery of Carry-over Entitlement Water shall be carried out pursuant to the provisions of this contract.

The Agency agrees to forego the delivery of any Carry-over Entitlement Water that is lost because of project operations or is not delivered by March 31 of the next year.

Any Carry-over Entitlement Water foregone by the Agency will become a part of the current year's total project supply.

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24 Amended: Amendment No. 1, 2, 3, 20, 23, 24
25 Deleted: Amendment 19
26 Amended: Amendment No. 17

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(f)[27] Priorities

Each year water deliveries to the contractors shall be in accordance with the following priorities to the extent there are conflicts:

First, project water to meet scheduled deliveries of contractors' annual entitlements for that year.

Second, interruptible water to the extent contractors' annual entitlements for that year are not met by the first priority.

Third, project water to fulfill delivery requirements pursuant to Article 14(b).

Fourth, project water previously stored pursuant to Articles 12(e) and 56.

Fifth, nonproject water to fulfill contractors' annual entitlements for that year not met by the first two priorities.

Sixth, additional interruptible water delivered to contractors in excess of their annual entitlements for that year.

Seventh, additional nonproject water delivered to contractors in excess of their annual entitlements for that year.

<Priority for Reach 22B>

[28]*Further*, in the situation where delivery capacity in Reach 22B is insufficient to meet all requested demands of participating SWP contractors, those SWP contractors who originally participated in Reach 22B when it was constructed shall receive first priority for delivery services through Article 12(f). The Agency, as a post-construction participant in Reach 22B, shall receive delivery service in these situations after original SWP contractors' demands are met.

<Priority for Table A Transfer (1,993AF)>

[29]*Further*, in the situation where delivery capacity in reaches downstream of Reach 8D is insufficient to meet all requested demands of participating SWP contractors, those SWP contractors who originally participated in Reaches 9-19 when it was constructed shall receive first priority for delivery services through Article 12(f). Agency, as a post-construction participant in Reaches 9 through 19, shall receive delivery services in these situations after original SWP contractors' demands are met. For Reaches 20A through 22A, Agency shall receive first priority for delivery services because Agency has existing East Branch Enlargement capacity available.

<Priority for Table A Transfer (1,451AF)>

[30]*Further*, in the situation where delivery capacity in reaches downstream of Reach 8D is insufficient to meet all requested demands of participating SWP contractors, those SWP contractors who originally participated in Reaches 9-19 when it was constructed shall receive first priority for delivery services through Article 12(f). Agency, as a post-construction

27 Amended: Amendment No. 19
28 Amended: Amendment No. 22
29 Amended: Amendment No. 23
30 Amended: Amendment No. 24

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participant in Reaches 9 through 19, shall receive delivery services in these situations after original SWP contractors' demands are met. For Reaches 20A through 22A, Agency shall receive first priority for delivery services because Agency has existing East Branch Enlargement capacity available.

13. RESPONSIBILITIES FOR DELIVERY AND DISTRIBUTION OF WATER

(a) State Not Liable for Operation Beyond Delivery Structures

Neither the State nor any of its officers, agents, or employees shall be liable for the control, carriage, handling, use, disposal, or distribution of project water supplied to the Agency after such water has passed the delivery structures established in accordance with Article 10; nor for claim of damage of any nature whatsoever, including but not limited to property damage, personal injury or death, arising out of or connected with the control, carriage, handling, use, disposal or distribution of such water beyond said delivery structures; and the Agency shall indemnify and hold harmless the State and its officers, agents, and employees from any such damages or claims of damages.

(b) Agency Not Liable for Operation Upstream From Delivery Structures

Neither the Agency nor any of its officers, agents, or employees shall be liable for the control, carriage, handling, use, disposal, or distribution of project water before such water has passed the delivery structures established in accordance with Article 10; nor for claim of damage of any nature whatsoever, including but not limited to property damage, personal injury or death, arising out of or connected with the control, carriage, handling, use, disposal, or distribution of such water before it has passed said delivery structures.

14.[31] CURTAILMENT OF DELIVERY

(a) State May Curtail Deliveries

The State may temporarily discontinue or reduce the delivery of project water to the Agency hereunder for the purposes of necessary investigation, inspection, maintenance, repair, or replacement of any of the project facilities necessary for the delivery of project water to the Agency, as well as due to outages in, or reductions in capability of, such facilities beyond the State's control or unuseability of project water due to an emergency affecting project facilities. The State shall notify the Agency as far in advance as possible of any such discontinuance or reduction, except in cases of emergency, in which case notice need not be given.

(b) Agency May Receive Later Delivery of Water Not Delivered

In the event of any discontinuance or reduction of delivery of project water pursuant to subdivision (a) of this article, the Agency may elect to receive the amount of annual entitlement which otherwise would have been delivered to it during such period under the water delivery schedule for that year at other times during the year or the succeeding year to the extent that such water is then available and such election is consistent with the State's overall delivery ability, considering the then current delivery schedules of annual entitlement to all contractors.

31 Amended: Amendment No. 19

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15. AREA SERVED BY AGENCY

(a) State Approval of Sale of Water by Agency Outside Boundaries

Project water delivered to the Agency pursuant to this contract shall not be sold or otherwise disposed of by the Agency for use outside the Agency without the prior written consent of the State.

(b) State Approval of Change in Boundaries or Organization of Agency

While this contract is in effect no change shall be made in the Agency either by inclusion or exclusion of lands, by partial or total consolidation or merger with another district, by proceedings to dissolve, or otherwise, except with the prior written consent of the State or except by act of the Legislature.

(c) Map of Agency

The Agency shall provide the State with a map satisfactory to the State indicating the major existing distribution facilities and the boundaries of the Agency at the time the contract is signed and supplementary maps whenever a boundary change is made.

16. CONTINUITY AND DEPENDABILITY OF WATER SUPPLY

(a)[32] Limit on Total of all Maximum Annual Table A Amounts

The Agency's Maximum Annual Table A Amount hereunder, together with the maximum Table A amounts of all other contractors, shall aggregate no more than 4,185,000 acre-feet of project water.

(b) State to Perfect Water Rights

The State shall make all reasonable efforts to perfect and protect water rights necessary for the System and for the satisfaction of water supply commitments under this contract.

(c) State to Report on Ability to Meet Future Water Demands

Commencing within two (2) years from the year of initial project water delivery to the Agency, the State shall submit to the agency at not more than five-year intervals a report on the State's ability to meet future demands for project water and for supplemental water, and on the State's plans for constructing additional project conservation facilities and supplemental conservation facilities. Such reports shall include all estimates, projections, and other data which the State deems relevant thereto.

(d) Construction of Additional and Supplemental Conservation Facilities

Bond funds required to be expended for the construction of additional facilities of the System under the provisions of Section 12938 of the Water Code shall be expended only for construction of additional project conservation facilities as defined herein, and related, appurtenant facilities necessary and desirable to meet local needs: *Provided*, That if at any time after 1985 the State finds that a part or all of such bond funds are not then required for the above purpose, and will not be so required within the next succeeding ten (10) years, such bond funds may be used, to the extent permitted in the Bond Act, to construct supplemental conservation facilities as defined herein.

32 Amended: Amendments No. 1, 19, and 21

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(e) Furnishing of Supplemental Water

In planning and designing supplemental conservation facilities the State shall give consideration to the requirements and demands for supplemental water of the Agency and others who have contracted for project water. Entitlements to supplemental water shall be obtained, and repayment therefor shall be arranged, in contracts separate from contracts for project water.

17. CONSTRUCTION OF PROJECT FACILITIES

(a) Determination of Aqueduct Capacities

Subject to the rights of the Agency under subdivision (b) of this article and the other provisions of this contract, the State shall provide in each aqueduct reach of the project transportation facilities such maximum monthly delivery capability for the transport and delivery of project water to the Agency as, in the judgment of the State, will best serve the interests of the Agency and all other contractors entitled to delivery of project water from or through said facilities: *Provided*, That within three (3) months after the effective date of this contract the Agency shall furnish to the State a written request specifying such maximum monthly delivery capabilities, and the State shall give full consideration to such request in planning and designing said facilities.

(b) Criteria for Determining Capacity of Transportation Facilities

[33]The State shall design and construct the project transportation facilities so as to provide in each reach thereof, including reservoirs, the capacity necessary to enable delivery of project water in each year to the Agency and to other contractors in the maximum monthly amounts and at the locations, times, and maximum rates specified or provided for in their respective contracts for such year, and shall include in each such reach such capacity as is economically justified in the judgment of the State to compensate for scheduled outages for purposes of necessary investigation, inspection, maintenance, repair or replacement of project facilities, and for losses of water due to evaporation, leakage, seepage, or other causes. Subject to Articles 6(b), 7(b), 12(b) and 12(c), the capacity so to be provided by the State for each reach of the project transportation facilities necessary for transporting water to the Agency shall be sufficient to enable delivery to the Agency in each month of any year of an amount of water up to but not exceeding eleven percent (11%) of the Agency's annual entitlement for the respective year and, upon completion of the project facilities, to enable delivery to the Agency in each month of any year of an amount of water up to but not exceeding eleven percent (11%) of the Agency's maximum annual entitlement: *Provided*, That regulatory storage reservoirs included in the project transportation facilities may be utilized in conjunction with conveyance capacity provided in said facilities for delivery to the Agency of the foregoing monthly amounts, subject to the retention at all times, except during periods of emergency, in each reservoir on the East Branch Aqueduct and the West Branch Aqueduct, respectively, of an amount of stored water reasonably sufficient to meet emergency requirements of the Agency for project water during the respective year: *Provided further*, That excess capacity shall be provided in accordance with Article 46(d) of this contract.

33 Amended: Amendment No. 4

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(c) Inspection of Project Plans and Specifications

The Agency shall have a reasonable opportunity to inspect and study the State's plans and specifications for all project facilities and may make comments and recommendations thereon to the State. Such privilege shall also extend to any plans and specifications in connection with the use by the State, in conjunction with the project facilities, of facilities owned by an entity other than the State. The State shall not enter into any such agreement which would impair the State's ability to perform fully its obligations under this contract.

(d) Restriction on Bond Sales

No bonds shall be sold nor funds expended under the authority of the Bond Act for the construction of any aqueduct or appurtenance thereto included in the System unless and until contracts are executed which will insure the recovery by the State of at least seventy-five percent (75%) of those capital costs of the particular aqueduct and any appurtenances thereto which shall be reimbursable by the contractors as determined by the State; nor shall any bonds be sold or funds expended under the authority of the Bond Act for the construction of any project conservation facility or supplemental conservation facility, unless and until contracts are executed which, together with estimated revenues from the sale or other disposal of electrical energy generated in connection with operation of project conservation facilities and supplemental conservation facilities, will insure the recovery by the State of at least seventy-five percent (75%) of those capital costs of the particular facility which shall be reimbursable by the contractors as determined by the State: *Provided*, That the foregoing limitations shall not apply with respect to: (1) surveys, engineering studies, exploratory work, designs, preparation of construction plans and specifications, acquisition of lands, easements and rights of way, relocation work, and essential administrative work in connection therewith; (2) construction for which appropriations had been made prior to approval of the Bond Act by the voters of the State of California; and (3) construction of facilities pursuant to an agreement between the State and the United States.

(e) Failure to Complete Facilities

In the event that the State fails or is unable to complete construction of any portion or portions of the project transportation facilities necessary to deliver water to the Agency as provided in this contract, and gives the Agency written notice thereof, or by reason of such failure or inability construction of said facilities has ceased for a period of two and one-half (2½) years, the Agency, if it be not then in default and without exclusion of such other rights as it may have under this contract, may exercise the following options:

(1) The Agency may provide funds to the State in such amounts and at such times as may be necessary to enable the State to complete construction of such incompleted portion or portions of the project transportation facilities to the extent necessary for the transport and delivery of water to the Agency as provided for in this contract: *Provided*, That the State shall be and remain the owner of such project transportation facilities or portions thereof constructed in whole or in part with funds provided by the Agency, and shall be and remain obligated to operate, maintain, repair and replace such facilities to the full extent contemplated in this contract: *Provided further*, That the amount of any funds so provided by the Agency shall be credited by the State against the Agency's payment obligation under the capital cost component of the Transportation Charge, but the Agency shall be and remain obligated to pay its share of

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any capital costs of the above-described facilities not paid for with such funds, together with its proportionate share of the operation, maintenance, power and replacement costs of such facilities.

(2) The Agency may at its own expense, and on a joint venture basis if such an arrangement is made with other contractors having similar options, connect to the project transportation facilities constructed by the State for the purpose of receiving project water to which it is entitled under this contract. In such event and notwithstanding any other provisions of this contract, the structures for delivery of project water to the Agency pursuant hereto shall thereafter be deemed to be located at such point of connection. Specific arrangements for acquiring, constructing, operating, maintaining and replacing the Agency's facilities at the point of connection thereof with the State's facilities shall be in accordance with terms and conditions mutually agreed upon by the parties: *Provided*, That the State shall be and remain the owner of all facilities constructed by it to said point of connection, and the Agency shall be and remain obligated to pay its proportionate share of the costs thereof.

(f)[34] Adjustments Due to Supplemental Financing Costs

(1) If a contractor, with approval of the State, advances funds to the State to assist the State in financing construction of project facilities (not including delivery structures, measuring devices and excess capacity), such advance shall be amortized by means of annual credits to the contractor having made such advance of funds to the State, with such credits being equal to the actual bond service obligations payable by such contractor by reason of such advance or, if no bonded debt was incurred, then such credits shall be sufficient to cover the repayment of principal and interest costs which would have resulted if the contractor had sold bonds for the purpose of funding the advance as determined by the State.

(2) If, after May 1, 1969, any source of funds other than those provided by the Bond Act is employed to finance construction of specific project facilities, any additional costs incurred because of such financing will not be charged to the contractors, except for adjustments to the "project interest rate".

18.[35] SHORTAGE IN WATER SUPPLY

(a) Shortages; Delivery Priorities

In any year in which there may occur a shortage due to drought or any other cause whatsoever, in the supply of project water available for delivery to the contractors, with the result that such supply is less than the total of the annual entitlements of all contractors for that year, the State shall allocate the available supply in proportion to each contractor's annual entitlement as set forth in its Table A for that year and shall reduce the allocation of project water to each contractor using such water for agricultural purposes and to each contractor using such water for other purposes by the same percentage of their respective annual entitlements for that year: *Provided*, that the State may allocate on some other basis if such is required to meet minimum demands of contractors for domestic supply, fire protection, or sanitation during the year. If a contractor is allocated more water

34 Amended: Amendment No. 5
35 Amended: Amendment No. 19

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than it requested, the excess water shall be reallocated among the other contractors in proportion to their annual entitlements as provided for above. The foregoing provisions of this subdivision shall be inoperative to the extent necessary to comply with subdivision (c) of this article and to the extent that a contractor's annual entitlement for the respective year reflects established rights under the area of origin statutes precluding a reduction in deliveries to such contractor.

<(b) Permanent Shortage; Reduction of Entitlements - Deleted>

(c) Permanent Shortage; Contracts for Areas-of-Origin

In the event that the State, because of the establishment by a party of a prior right to water under the provisions of Sections 11460 through 11463 of the Water Code, enters into a contract with such party for a dependable supply of project water, which contract will cause a permanent shortage in the supply of project water to be made available to the Agency hereunder:

(1) The State shall: (i) equitably redistribute the costs of all transportation facilities included in the System among all contractors for project water, taking into account the diminution of the supply to the Agency and other prior contractors in accordance with the terms of their contracts, and (ii) revise the Agency's annual entitlements and maximum annual entitlement, by amendment of Table A of this contract to correspond to the reduced supply of project water to be made available to the Agency: *Provided*, That such redistribution of costs of transportation facilities shall not be made until there has been reasonable opportunity for the Agency to exercise the option provided for in (2) below, and for other prior contractors to exercise similar options.

(2) The Agency, at its option, shall have the right to use any of the project transportation facilities which by reason of such permanent shortage in the supply of project water to be made available to the Agency are not required for delivery of project water to the Agency, to transport water procured by it from any other source: *Provided*, That such use shall be within the limits of the capacities provided in the project transportation facilities for service to the Agency under this contract: *Provided further*, That, except to the extent such limitation in Section 12931 of the Water Code be changed, the Agency shall not use the project transportation facilities under this option to transport water the right to which was secured by the Agency through eminent domain unless such use be approved by the Legislature by concurrent resolution with a majority of the members elected to each house voting in favor thereof. This option shall terminate upon a redistribution of costs of transportation facilities by the State pursuant to (1) above. In the event that this option is exercised, the State shall take such fact into account in making such redistribution of costs, and shall offset such use as is made of the project transportation facilities pursuant thereto against any reduction in the Agency's payment obligation hereunder resulting from such redistribution of costs.

(d) Reinstatement of Entitlements

If after any revision of annual entitlements and maximum annual entitlements pursuant to subdivision (c) of this article, circumstances arise which, in the judgment of the State, justify a revision upward of the same, the State shall, with the consent of the affected contractor, reinstate proportionately the previously reduced entitlements of such contractor to the extent deemed justified, and shall equitably redistribute the costs of the project transportation facilities if inequities would otherwise occur as a result of such reinstatement of entitlements.

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(e) Advance Notice of Delivery Reductions

The State shall give the Agency written notice as far in advance as possible of any reduction in deliveries to it which is to be made under subdivision (a) of this article and, to the extent possible, shall give the Agency written notice five (5) years in advance of any reduction in its annual entitlements and maximum annual entitlement under subdivision (c) of this article. Reports submitted to the Agency pursuant to Article 16(c) may constitute such notices.

(f) No Liability for Shortages

Neither the State nor any of its officers, agents, or employees shall be liable for any damage, direct or indirect, arising from shortages in the amount of water to be made available for delivery to the Agency under this contract caused by drought, operation of area of origin statutes, or any other cause beyond its control.

19. WATER QUALITY

(a) Table of Water Quality Objectives

It shall be the objective of the State and the State shall take all reasonable measures to make available, at all delivery structures for delivery of project water to the Agency, project water of such quality that the following constituents do not exceed the concentrations stated as follows:

Constituent	*Unit*	*Monthly Average*	*Average for any 10-year Period*	*Maximum*
Total Dissolved Solids	ppm.	440	220	
Total Hardness	ppm.	180	110	
Chlorides	ppm.	110	55	
Sulfates	ppm.	110	20	
Boron	ppm.	0.6		
Sodium Percentage	%	50	40	
Fluoride	ppm.			1.5
Lead	ppm.			0.1
Selenium	ppm.			0.05
Hexavalent Chromium	ppm.			0.05
Arsenic	ppm.			0.05
Iron and Manganese together	ppm.			0.3
Magnesium	ppm.			125
Copper	ppm.			3.0
Zinc	ppm.			15
Phenol	ppm.			0.001

(b) Records of Water Quality

The State shall regularly take samples of water at each delivery structure for delivery of project water to the Agency, and shall make chemical and physical analyses and tests of such samples. The State shall keep accurate and complete records of all such analyses and tests, which records shall be available for inspection by the Agency at any time or times.

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(c) No Liability for Failure to Meet Quality Objectives

If through no negligence of the State or its officers, agents, or employees, the State is unable to attain the quality objectives set forth in subdivision (a) of this article, neither the State nor any of its officers, agents, or employees shall be liable in any manner whatsoever for such deviation from said quality objectives.

20. SUSPENSION OF SERVICE UPON DEFAULT

In the event of any default by the Agency in the payment of any money required to be paid to the State hereunder, the State may, upon not less than six months' notice to the Agency, suspend deliveries of water under this contract for so long as such default continues: *Provided*, That during such period the Agency shall remain obligated to make all payments required under this contract. Action taken pursuant to this article shall not deprive the State of or limit any remedy provided by this contract or by law for the recovery of money due or which may become due under this contract.

21.[36] INTERRUPTIBLE WATER SERVICE

(a) Allocation of Interruptible Water

Each year from water sources available to the project, the State shall make available and allocate interruptible water to contractors in accordance with the procedure in Article 18(a). Allocations of interruptible water in any one year may not be carried over for delivery in a subsequent year, nor shall the delivery of interruptible water in any year impact a contractor's approved deliveries of annual entitlement or the contractor's allocation of water for the next year. Deliveries of interruptible water in excess of a contractor's annual entitlement may be made if the deliveries do not adversely affect the State's delivery of annual entitlement to other contractors or adversely affect project operations. Any amounts of water owed to the Agency as of the date of this amendment pursuant to former Article 12(d), any contract provisions or letter agreements relating to wet weather water, and any Article 14(b) balances accumulated prior to 1995, are canceled. The State shall hereafter use its best efforts, in a manner that causes no adverse impacts upon other contractors or the project, to avoid adverse economic impacts due to a contractor's inability to take water during wet weather.

(b) Rates

For any interruptible water delivered pursuant to this article, contractors shall pay the State the same (including adjustments) for power resources (including on-aqueduct, off-aqueduct, and any other power) incurred in the transportation of such water as if such interruptible water were entitlement water, as well as all incremental operation, maintenance, and replacement costs, and any other incremental costs, as determined by the State. The State shall not include any administrative or contract preparation charge. Incremental costs shall mean those nonpower costs which would not be incurred if interruptible water were not scheduled for or delivered to the contractor. Only those contractors not participating in the repayment of the capital costs of a reach shall be required to pay any use of facilities charge for the delivery of interruptible water through that reach.

36 Amended: Amendments No. 10, 18, and 19

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(c) Contracts

To obtain a supply of interruptible water, a contractor shall execute a further contract with the State which shall be in conformity with this article and shall include at least provisions concerning the scheduling of deliveries of interruptible water and times and methods of payment.

C. PAYMENT PROVISIONS

22. DELTA WATER CHARGE

(a) Payment of Reimbursable Costs of Project Conservation Facilities

The payments to be made by each contractor for project water shall include an annual charge designated as the Delta Water Charge. This charge, together with the total revenues derived during the project repayment period from the sale or other disposal of electrical energy generated in connection with operation of project conservation facilities, shall return to the State during the project repayment period all costs of the project conservation facilities including capital, operation, maintenance, power, and replacement costs, which are allocated to the purpose of water conservation in, above, and below the Delta pursuant to subdivision (e) of this article during the project repayment period. Wherever reference is made, in connection with the computation or determination of the Delta Water Charge, to the costs of any facility or facilities included in the System, such reference shall be only to those costs of such facility or facilities which are reimbursable by the contractors as determined by the State.

(b)[37] Delta Water Rate Until 1970; Components of Rate Thereafter

For each contractor receiving project water in any year through December 31, 1969, the Delta Water Charge shall be the product of $3.50 and the contractor's annual entitlement to project water for the respective year. For each contractor receiving project water in the year 1970, the Delta Water Charge shall be the product of $6.65 and the contractor's annual entitlement to project water for that year. The $6.65 rate for the year 1970 shall consist of a capital cost component of $5.04 and a minimum operation, maintenance, power and replacement component of $1.61. For each contractor receiving project water in the year 1971, the Delta Water Charge shall be the product of $7.24 and the contractor's annual entitlement to project water for that year. The $7.24 rate for the year 1971 shall consist of a capital cost component of $5.44 and a minimum operation, maintenance, power and replacement component of $1.80. After December 31, 1971, the Delta Water Charge shall consist and be the sum of the following components as these are computed in accordance with subdivisions (c) and (d) of this article: a capital cost component; a minimum operation, maintenance, power and replacement component; and a variable operation, maintenance, power and replacement component.

37 Amended: Amendments No. 5 and 6

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(c) Computation of the Components of the Delta Water Rate

The capital cost, the minimum operation, maintenance, power, and replacement, and the variable operation, maintenance, power, and replacement components of the Delta Water Charge, together with that portion of the revenues derived during the project repayment period from the sale or other disposal of electrical energy generated in connection with operation of project conservation facilities which is allocated by the State to repayment of the respective category of costs, shall return to the State during the project repayment period, respectively, the following categories of the costs allocated to the purpose of water conservation in, above, and below the Delta pursuant to subdivision (e) of this article: (1) capital costs; (2) operation, maintenance, power, and replacement costs incurred irrespective of the amount of project water delivered to the contractors; and (3) operation, maintenance, power, and replacement costs incurred in an amount which is dependent upon and varies with the amount of project water delivered to the contractors: *Provided*, That each of the above categories of costs shall be inclusive of the appropriate costs properly chargeable to the generation and transmission of electrical energy in connection with operation of project conservation facilities. Each component of the Delta Water Charge shall be computed on the basis of a rate which, when charged during the project repayment period for each acre-foot of the sum of the yearly totals of annual entitlements of all contractors, will be sufficient, together with that portion of the revenues derived during the project repayment period from the sale or other disposal of electrical energy generated in connection with operation of project conservation facilities which is allocated by the State to repayment of the respective category of costs covered by that component. Each such rate shall be computed in accordance with the following formula:

$$\frac{(c_1 - r_1)(1+i)^{-1} + (c_2 - r_2)(1+i)^{-2} + \ldots + (c_n - r_n)(1+i)^{-n}}{e_1(1+i)^{-1} + e_2(1+i)^{-2} + \ldots + e_n(1+i)^{-n}}$$

Where:

i = The project interest rate.

c = The total costs included in the respective category of costs for the respective year of the project repayment period.

r = That portion of the revenues derived from the sale or other disposal of electrical energy allocated by the State to repayment of the costs included in the respective category for the respective year of the project repayment period.

1, 2, and n appearing below c and r = The respective year of the project repayment period for which costs are included in the respective category, n being the last year of the project repayment period.

e = With respect to the capital cost and minimum operation, maintenance, power, and replacement components, the total of annual entitlements to project water of all contractors for the respective year of the project repayment period.

e = With respect to the variable operation, maintenance, power, and replacement component, the total of the amounts of project water delivered to all contractors for the respective year of the expired portion of the project

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repayment period, together with the total of annual entitlements to project water of all contractors for the respective year of the unexpired portion of the project repayment period.

1, 2, and *n* appearing below

e = The respective year of the project repayment period in which the annual entitlements or project water deliveries occur, *n* being the last year of the project repayment period.

n used as an exponent = The number of years in the project repayment period.

(d) Application of Component Rates

The capital cost and minimum operation, maintenance, power, and replacement components of the Delta Water Charge shall be the product of the appropriate rate computed under subdivision (c) of this article, and the contractor's annual entitlement to project water for the respective year. The variable operation, maintenance, power, and replacement component of the charge shall be the product of the appropriate rate computed under subdivision (c) of this article and the number of acre-feet of project water delivered to the contractor during the respective year: *Provided*, That when project water has been requested by a contractor and delivery thereof has been commenced by the State, and, through no fault of the State, such water is wasted as a result of failure or refusal by the contractor to accept delivery thereof, said variable component during such period shall be the product of said rate per acre-foot and the sum of the number of acre-feet of project water delivered to the contractor and the number of acre-feet wasted.

(e)[38] Allocations to Project Purposes

Prior to the time that additional project conservation facilities or supplemental conservation facilities are constructed, the Delta Water Charge shall be determined on the basis of an allocation to project purposes, by the separable cost-remaining benefits method, of all actual and projected costs of all those initial project conservation facilities located in and above the Delta, and upon an allocation to the purposes of water conservation and water transportation, by the proportionate use of facilities method, of all actual and projected costs of the following project facilities located below the Delta: The aqueduct intake facilities at the Delta, Pumping Plant I (Delta Pumping Plant), the aqueduct from the Delta to San Luis Forebay (O'Neill Forebay), San Luis Forebay (O'Neill Forebay), and San Luis Reservoir: *Provided*, That all of the actual and projected costs properly chargeable to the generation and transmission of electrical energy in connection with operation of project conservation facilities shall be allocated to the purpose of water conservation in, above, and below the Delta: *Provided further*, That allocations to purposes the cost of which are to be paid by the United States shall be as determined by the United States.

38 Amended: Amendment No. 7

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Commencing in the year in which the State first awards a major construction contract for construction of a major feature of additional project conservation facilities, or first commences payments under a contract with a federal agency in the event a major feature of additional project conservation facilities is constructed by such federal agency under an agreement requiring the State to pay all or part of the costs of such construction, the Delta Water Charge shall be determined on the basis of the foregoing allocations and upon an allocation to project purposes, by the separable costs-remaining benefits method and subject to the foregoing provisos, of all projected costs of such feature of the additional project conservation facilities: *Provided*, That if the agreement with such federal agency allows repayment of costs of a portion of a facility to be deferred, the associated costs of such portion shall be excluded from the Delta Water Charge computations until repayment of such deferred costs or interest thereon is commenced by the State: *Provided further*, That all costs of additional project conservation facilities incurred prior to the award of a major construction contract, shall be included in the Delta Water Charge computations in the year in which they are incurred.

(f) Yearly Recomputation of Rates After 1970

The rates to be used in determining the components of the Delta Water Charge pursuant to subdivision (d) of this article and to become effective on January 1, 1970, shall be computed by the State in accordance with subdivision (c) of this article prior to that date. Such computation shall include an adjustment which shall account for the difference, if any, between revenues received by the State under the Delta Water Charge prior to January 1, 1970, and revenues which would have been received under the charge prior to that date had it been computed and charged in accordance with subdivisions (c) and (d) of this article. Upon such computation, a document establishing such rates shall be prepared by the State and attached to this contract as an amendment of this article. The State shall recompute such rates each year thereafter, and each such recomputation shall take account of and reflect increases or decreases from year to year in projected costs, outstanding reimbursable indebtedness of the State incurred to construct the project conservation facilities described in subdivision (e) of this article, annual entitlements, deliveries of project water, project interest rate, revenues from the sale or other disposal of electrical energy, and all other factors which are determinative of such rates. In addition, each such recomputation shall include an adjustment of the rates for succeeding years which shall account for the differences, if any, between projections of costs used by the State in determining said rates for all preceding years, and actual costs incurred by the State during such years. Upon each such recomputation, an appropriately revised copy of the document establishing such rates shall be prepared by the State and attached to this contract as an amendment of this article.

(g)[39] Supplemental Conservation Facilities

Upon the construction of the supplemental conservation facilities, the Delta Water Charge shall be paid by all contractors for supplemental water, as well as by contractors for project water, and, together with revenues derived from the sale or other disposal of electrical energy generated in connection with operation of project conservation facilities and supplemental conservation facilities, shall return to the State, in addition to those costs of the project conservation facilities allocated to the purpose of water conservation, in, above, and below the Delta pursuant to subdivision (e) of this article, all costs of such supplemental

39 Amended: Amendment No. 7

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conservation facilities, including capital, operation, maintenance, power, and replacement costs which are allocated to the purpose of water conservation, in, above, and below the Delta pursuant hereto. Commencing in the year in which the State first awards a major construction contract for construction of a major feature of any supplemental conservation facilities, or first commences payments under a contract with a federal agency in the event a major feature of supplemental conservation facilities is constructed by such federal agency under an agreement requiring the State to pay all or part of the costs of such construction, the Delta Water Charge shall be determined on the basis of the allocations made pursuant to subdivision (e) of this article, and upon an allocation to project purposes, by the separable costs-remaining benefits method and subject to provisos corresponding to those contained in said subdivision (e), of all projected costs of such feature of the supplemental conservation facilities. Commencing in the same year, the computation of the rates to be used in determining the components of the Delta Water Charge shall include the annual entitlements to water under all contracts for supplemental water. If the repayment period of any bonds sold to construct supplemental conservation facilities or the repayment period under any agreement with a federal agency for repayment of the costs of supplemental conservation facilities constructed by such federal agency extends beyond the repayment period of the contract, the Delta Water Charge shall be determined and redetermined on the basis of such extended repayment period as the State determines to be appropriate: *Provided*, That if the agreement with such federal agency allows repayment of costs of a portion of a facility to be deferred, the associated costs of such portion shall be excluded from the Delta Water Charge computations until repayment of such deferred costs or interest thereon is commenced by the State.

(h)[40] <Local Project as Additional Conservation Facility>

The determination of the rate for water under the Delta Water Charge shall be made by including the appropriate costs and quantities of water, calculated in accordance with subdivisions (c), (d) and (e) above, for all additional project conservation facilities as defined in Article 1(h) hereinabove. In the event a Local Project as defined in Article 1(h)(2) will, pursuant to written agreement between the State and the sponsoring contractor, be considered and treated as an additional project conservation facility for less than the estimated life of the facility, the rate under the Delta Water Charge will be determined on the basis of that portion of the appropriate cost and water supply associated with such facility as the period of time during which such facility shall be considered as an additional project conservation facility bears to the estimated life of such facility. No costs for the construction or implementation of any Local Project are to be included in the Delta Water Charge unless and until the written agreement required by Article 1(h) has been entered into.

(i)[41] <Project Water Purchased by State>

In calculating the rate for project water to be paid by each contractor for the Delta Water Charge under subdivisions (c), (d) and (e) above, the component for operation, maintenance, power and replacement costs shall include, but not be limited to, all costs to the State incurred in purchasing water, which is competitive with alternative sources as determined by the State, for delivery as project water.

40 Amended: Amendment No. 13
41 Amended: Amendment No. 13

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(j)[42] <Recovery of Water System Revenue Bond Financing Costs>

Notwithstanding provisions of Article 22 (a) through (i), the capital cost component and the minimum OMP&R component of the Delta Water Charge shall include an annual charge to recover the Agency's share of the conservation portion of the water system revenue bond financing costs. Charges to the Agency for these costs shall be calculated in accordance with provisions in Article 50 of this contract. Charges for the conservation portion of the water system revenue bond financing costs shall not be affected by any reductions in payments pursuant to Article 51.

23. TRANSPORTATION CHARGE

The payments to be made by each contractor entitled to delivery of project water from the project transportation facilities shall include an annual charge under the designation Transportation Charge. This charge shall return to the State during the project repayment period those costs of all project transportation facilities necessary to deliver project water to the contractor including capital, operation, maintenance, power, and replacement costs, which are allocated to the contractor during the project repayment period in accordance with the cost allocation principles and procedures herein after set forth. Wherever reference is made, in connection with the computation, determination, or payment of the Transportation Charge, to the costs of any facility or facilities included in the System, such reference shall be only to those costs of such facility or facilities which are reimbursable by the contractors as determined by the State. The Transportation Charge shall consist of a capital cost component; a minimum operation, maintenance, power, and replacement component; and a variable operation, maintenance, power, and replacement component, as these components are defined in and determined under Articles 24, 25, and 26, respectively. For the purpose of allocations of costs pursuant to said articles, the project transportation facilities shall be segregated into such aqueduct reaches as are determined by the State to be necessary for such allocations of costs. Subject to such modifications as are determined by the State to be required by reason of any request furnished by the Agency to the State pursuant to Article 17(a) of this contract, or by reason of contracts entered into by the State with other contractors, the aqueduct reaches of the project transportation facilities are established as set forth in Table I of this contract: *Provided*, That those costs of the aqueduct reaches from the Delta through the outlet of San Luis Reservoir which are allocated to the purpose of water conservation in, above, and below the Delta for the purpose of determining the Delta Water Charge, as hereinbefore set forth, shall not be included in the Transportation Charge.

24. TRANSPORTATION CHARGE - CAPITAL COST COMPONENT

(a) Method of Computation

The capital cost component of the Transportation Charge shall be sufficient to return to the State those capital costs of the project transportation facilities necessary to deliver water to the contractor which are allocated to the contractor pursuant to subdivision (b) of this article. The amount of this component shall be determined in two steps as follows: (1) an allocation of capital costs to the contractor, and (2) a computation of annual payment of such allocated capital costs

42 Amended: Amendments No. 16 and 19

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and interest thereon, computed at the project interest rate and compounded annually, to be made by the contractor.

(b)[43] Allocation of Capital Costs Among Contractors

In the first step, the total amount of capital costs of each aqueduct reach to be returned to the State shall be allocated among all contractors entitled to delivery of project water from or through the reach by the proportionate use of facilities method of cost allocation and in accordance with (1) and (2) below. The measure of the proportionate use of each contractor of each reach shall be the average of the following two ratios: (i) the ratio of the contractor's maximum annual entitlement to be delivered from or through the reach to the total of the maximum annual entitlements of all contractors to be delivered from or through the reach from the year in which charges are to be paid through the end of the project repayment period and (ii) the ratio of the capacity provided in the reach for the transport and delivery of project water to the contractor to the total capacity provided in the reach for the transport and delivery of project water to all contractors served from or through the reach from the year in which charges are to be paid through the end of the project repayment period. Allocations of capital costs to the Agency pursuant hereto shall be on the basis of relevant values which will be set forth in Table B of this contract by the State as soon as designs and cost estimates are prepared by it subsequent to receipt of requests from the Agency as to the maximum monthly delivery capability to be provided in each aqueduct reach of the project transportation facilities for the transport and delivery of project water to the Agency, pursuant to Article 17(a): *Provided,* That these values shall be subject to redetermination by the State in accordance with Article 28: *Provided further,* That the principles and procedures set forth in this subdivision shall be controlling as to allocations of capital costs to the Agency. Proportionate use of facilities factors for prior years shall not be adjusted by the State in response to changes or transfers of entitlement among contractors unless otherwise agreed by the State and the parties to the transfer and unless there is no impact on past charges or credits of other contractors.

(1) The total amount of capital costs allocated to a contractor shall be the sum of the products obtained when there is multiplied, for each aqueduct reach necessary to deliver water to the contractor, the total amount of the capital costs of the reach to be returned to the State under the Transportation Charge by the average of the two foregoing ratios for such reach as said average is set forth in the appropriate table included in its contract.

(2) In the event that excess capacity is provided in any aqueduct reach for the purpose of making project water available in the future to an agency or agencies with which the State has not executed contracts at the time of any allocation of costs pursuant to this subdivision, the prospective maximum annual entitlement or entitlements to be supplied by such excess capacity, as determined by the State, shall be deemed to be contracted for by said agency or agencies for the purpose of such allocation of costs, to the end that the capital costs of providing such excess capacity are not charged to any contractor entitled by virtue of an executed contract to the delivery of project water from or through that aqueduct reach at the time of such allocation. Where additional capacity is provided in any aqueduct reach to compensate for loss of water due to evaporation,

43 Amended: Amendment No. 15 and 19

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leakage, seepage, or other causes, or to compensate for scheduled outages for purposes of necessary investigation, inspection, maintenance, repair or replacement of the facilities of the project facilities, then, for the purpose of any allocation of costs pursuant to this subdivision: (i) the maximum annual entitlement to be delivered from or through the reach of each contractor entitled to delivery of project water from or through the reach shall be increased by an amount which bears the same proportion to the maximum annual delivery capability provided by such additional capacity that the contractor's maximum annual entitlement to be delivered from or through the reach bears to the total of the maximum annual entitlements to be delivered from or through the reach under all contracts; and (ii) the capacity provided in the reach for each contractor entitled to delivery of project water from or through the reach shall be increased in the same proportion that the contractor's maximum annual entitlement to be delivered from or through the reach is increased pursuant to (i) above.

(3) The projected amounts of capital costs to be allocated annually to the Agency under the capital cost component of the Transportation Charge shall be determined by the State in accordance with the cost allocation principles and procedures set forth in this subdivision, which principles and procedures shall be controlling as to allocations of capital costs to the Agency. Such amounts will be set forth in Table C of this contract by the State as soon as designs and cost estimates are prepared by it subsequent to receipt of requests from the Agency as to the maximum monthly delivery capability to be provided in each aqueduct reach for transport and delivery of project water to the Agency, pursuant to Article 17(a): *Provided*, That these amounts shall be subject to redetermination by the State in accordance with Article 28.

(c) Annual Payments of Allocated Capital Costs

In the second step, the Agency's annual payment of its allocated capital costs and interest thereon, computed at the project interest rate and compounded annually, shall be determined in accordance with a payment schedule established by the State and determined in accordance with the principles set forth in (1), (2), and (3) below, which principles shall be controlling as to the Agency's payment of its allocated capital costs. The Agency's payment schedule will be set forth in Table D of this contract by the State as soon as designs and cost estimates are prepared by it subsequent to receipt of requests from the Agency as to the maximum monthly delivery capability to be provided in each aqueduct reach for transport and delivery of project water to the Agency, pursuant to Article 17(a): *Provided*, That the amounts set forth in Table D shall be subject to redetermination by the State, pursuant to Article 28.

(1) The Agency's annual payment shall be the sum of the amounts due from the Agency on the Agency's allocated capital costs for the then current year and for each previous year where each such amount will pay, in not more than fifty (50) equal annual installments of principal and interest, the Agency's allocated capital costs for the respective year and interest thereon, computed at the project interest rate and compounded annually.

(2) The Agency may make payments at a more rapid rate if approved by the State.

(3) Such annual payments shall cease when all allocated capital costs and interest thereon, computed at the project interest rate and compounded annually, are repaid.

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(d) Payment in Advance for Excess Peaking Capacity

In the event that any contractor, pursuant to Article 12(b), requests delivery capacity in any aqueduct reach which will permit maximum monthly deliveries to such contractor in excess of the percentage amounts specified in said Article 12(b) for the uses designated therein, such contractor shall furnish to the State, in advance of the construction of such aqueduct reach, funds sufficient to cover the costs of providing such excess capacity, which funds shall be in an amount which bears the same proportion to the total capital costs of such reach, including the costs of providing such excess capacity, as such excess capacity bears to the total capacity of such reach, including such excess capacity. For the purpose of any allocation of costs pursuant to subdivision (b) of this article, the total capital costs of such aqueduct reach shall be allocated among all contractors entitled to delivery of project water from or through the reach in the following manner:

(1) The costs which would have been incurred for such reach had no such excess capacity been provided shall be estimated by the State and allocated among all such contractors in the manner provided in said subdivision (b); and

(2) The amount of the difference between said estimated costs and the projected actual costs of such reach shall be allocated to the contractor or contractors for which such excess capacity is provided.

Where such excess capacity is provided for more than one contractor, the costs allocated to them under (2) above shall be further allocated between or among them in amounts which bear the same proportion to the total of said allocated costs as the amount of such excess capacity provided for the respective contractor bears to the total of such excess capacity provided in such reach. In the event that the funds advanced by a contractor pursuant to this subdivision are more or less than the costs so allocated to such contractor under (2) above, the account of such contractor shall be credited or debited accordingly.

(e) Costs Incurred Prior to Date of Contract

The Agency's allocated capital costs for the year preceding the year of initial payment of the capital component of the Transportation Charge, pursuant to subdivision (c) of this article, shall consist of the sum of the Agency's allocated capital costs for each year through such year preceding the year of initial payment, and interest thereon, computed at the project interest rate and compounded annually.

(f)[44] <Off-Aqueduct Power Facilities>

The capital costs of project aqueduct power recovery plants shall be charged and allocated in accordance with this Article 24. The capital costs of off-aqueduct power facilities shall be charged and allocated in accordance with Article 25(d).

(g)[45] <East Branch Enlargement Facilities>

Notwithstanding provisions of Article 24(a) through 24(d), capital costs associated with East Branch Enlargement Facilities as defined in Article 49(a) shall be collected under the capital cost component of the East Branch Enlargement Transportation Charge [Article 49(d)]. Any

44 Amended: Amendment No. 13
45 Amended: Amendment No. 15

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capital costs of off-aqueduct power facilities associated with deliveries through East Branch Enlargement Facilities shall be charged and allocated in accordance with Article 25(d).

(g)[46] <Recovery of Water System Revenue Bond Financing Costs>

Notwithstanding provisions of Article 24(a) through (d), the capital cost component of the Transportation Charge shall include an annual charge to recover the Agency's share of the transportation portion of the water system revenue bond financing costs. Charges to the Agency for these costs shall be calculated in accordance with the provisions of Article 50 of this contract. Charges for the transportation portion of the water system revenue bond financing costs shall not be affected by any reductions in payments pursuant to Article 51.

25. TRANSPORTATION CHARGE - MINIMUM OPERATION, MAINTENANCE, POWER, AND REPLACEMENT COMPONENT

(a) Method of Computation

The minimum operation, maintenance, power, and replacement component of the Transportation Charge shall return to the State those costs of the project transportation facilities necessary to deliver water to the contractor which constitute operation, maintenance, power, and replacement costs incurred irrespective of the amount of project water delivered to the contractor and which are allocated to the contractor pursuant to (b) below: *Provided*, That to the extent permitted by law, the State may establish reserve funds to meet anticipated minimum replacement costs; and deposits in such reserve funds by the State: (1) shall be made in such amounts that such reserve funds will be adequate to meet such anticipated costs as they are incurred, and (2) shall be deemed to be a part of the minimum replacement costs for the year in which such deposits are made.

(b) Allocation of Costs

The total projected minimum operation, maintenance, power, and replacement costs of each aqueduct reach of the project transportation facilities for the respective year shall be allocated among all contractors entitled to delivery of project water from said facilities by the proportionate use of facilities method of cost allocation, in the same manner and upon the same bases as are set forth for the allocation of capital costs in Article 24: *Provided*, That such minimum operation, maintenance, power, and replacement costs as are incurred generally for the project transportation facilities first shall be allocated to each aqueduct reach in an amount which bears the same proportion to the total amount of such general costs that the amount of the costs incurred directly for the reach bears to the total of all direct costs for all aqueduct reaches.

(c) Payment Table

The amount to be paid each year by the Agency under the minimum operation, maintenance, power, and replacement component of the Transportation Charge shall be determined in accordance with subdivision (b) of this article on the basis of the relevant values to be set forth for the respective aqueduct reaches in Table B of this contract: *Provided*, That these values shall be subject to redetermination by the State in accordance with Article 28. Such amounts and any interest thereon shall be set forth by the State in Table E of this contract as soon as designs and cost estimates have been prepared by it subsequent to receipt of requests from the

46 Amended: Amendment No. 19

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Agency as to the maximum monthly delivery capability to be provided in each aqueduct reach for transport and delivery of project water to the Agency, pursuant to Article 17(a): *Provided*, That the amounts set forth in Table E shall be subject to redetermination by the State in accordance with Article 28.

(d)[47] <Off-Aqueduct Power Facilities>

Notwithstanding the provisions of subdivisions (a) and (b) of this article, or of Article 1(s), the costs of off-aqueduct power facilities shall be determined and allocated as follows:

(1) The off-aqueduct power costs shall include all annual costs the State incurs for any off-aqueduct power facility, which shall include, but not be limited to, power purchases, any annual principal and interest payments on funds borrowed by or advanced to the State, annual principal and interest on bonds issued by the State or other agency, or under revenue bond financing contracts, any requirements for coverage, deposits to reserves, and associated operation and maintenance costs of such facility, less any credits, interest earnings, or other monies received by the State in connection with such facility. In the event the State finances all or any part of an off-aqueduct power facility directly from funds other than bonds or borrowed funds, in lieu of such annual principal and interest payments, the repayment of capital costs as to that part financed by such other funds shall be determined on the basis of the schedule that would have been required under Article 24.

(2) The annual costs of off-aqueduct power facilities as computed in (1) above shall initially be allocated among contractors in amounts which bear the same proportions to the total amount of such power costs that the total estimated electrical energy (kilowatt hours) required to pump through project transportation facilities the desired delivery amounts of annual entitlements for that year, as submitted pursuant to Article 12(a)(1) and as may be modified by the State pursuant to Article 12(a)(2), bears to the total estimated electrical energy (kilowatt hours) required to pump all such amounts for all contractors through project transportation facilities for that year, all as determined by the State.

(3)[48] An interim adjustment in the allocation of the power costs calculated in accordance with (2) above, may be made in May of each year based on April revisions in approved schedules of deliveries of project and nonproject water for contractors for such year. A further adjustment shall be made in the following year based on actual deliveries of project and nonproject water for contractors provided, however, in the event no deliveries are made through a pumping plant, the adjustments shall not be made for that year at that plant.

(4) To the extent the monies received or to be received by the State from all contractors for off-aqueduct power costs in any year are determined by the State to be less than the amount required to pay the off-aqueduct power costs in such year, the State may allocate and charge that amount of off-aqueduct power costs to the Agency and other contractors in the same manner as costs under the capital cost component of the Transportation Charge are allocated and charged. After that amount has been so

47 Amended: Amendment No. 13
48 Amended: Amendments No. 13 and 19

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allocated, charged and collected, the State shall provide a reallocation of the amounts allocated pursuant to this paragraph (4), such reallocation to be based on the allocations made pursuant to (2) and (3) above for that year, or in the event no such allocation was made for that year, on the last previous allocation made pursuant to (2) and (3) above. Any such reallocation shall include appropriate interest at the project interest rate.

(e)[49] <No Subtitle>

The total minimum operation, maintenance, power and replacement component due that year from each contractor shall be the sum of the allocations made under the proportionate use of facilities method provided in subdivision (b) of this article and the allocations made pursuant to subdivision (d) of this article for each contractor.

(f)[50] <East Branch Enlargement Facilities>

Notwithstanding provisions of Article 25(a) through 25(c) and 25(e), minimum operation, maintenance, power, and replacement costs associated with deliveries through East Branch Enlargement Facilities as defined in Article 49(a) shall be collected under the minimum operation, maintenance, power, and replacement component of the East Branch Enlargement Transportation Charge [Article 49(e)].

26. TRANSPORTATION CHARGE - VARIABLE OPERATION, MAINTENANCE, POWER, AND REPLACEMENT COMPONENT

(a) Method of Computation

The variable operation, maintenance, power, and replacement component of the Transportation Charge shall return to the State those costs of the project transportation facilities necessary to deliver water to the contractor which constitute operation, maintenance, power, and replacement costs incurred in an amount which is dependent upon and varies with the amount of project water delivered to the contractor and which are allocated to the contractor pursuant to (1) and (2) below: *Provided*, That to the extent permitted by law, the State may establish reserve funds to meet anticipated variable replacement costs; and deposits in such reserve funds by the State: (1) shall be made in such amounts that such reserve funds will be adequate to meet such anticipated costs as they are incurred, and (2) shall be deemed to be a part of the variable replacement costs for the year in which such deposits are made. The amount of this component shall be determined as follows:

(1) There shall be computed for each aqueduct reach of the project transportation facilities a charge per acre-foot of water which will return to the State the total projected variable operation, maintenance, power, and replacement costs of the reach for the respective year. This computation shall be made by dividing said total by the number of acre-feet of project water estimated to be delivered from or through the reach to all contractors during the year.

(2) The amount of the variable component shall be the sum of the products obtained when the charges per acre-foot of water, determined under (1) above, for each aqueduct reach necessary to deliver water to the contractor are multiplied by the number

49 Amended: Amendment No. 13
50 Amended: Amendment No. 15

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of acre-feet of project water delivered to the contractor from or through that reach during the year: *Provided*, That when project water has been requested by a contractor and delivery thereof has been commenced by the State, and, through no fault of the State, such water is wasted as a result of failure or refusal by the contractor to accept delivery thereof, the amount of said variable component to be paid by such contractor during such period shall be the product of the above sum and the sum of the number of acre-feet of project water delivered to the contractor and the number of acre-feet wasted.

(b) Revenue From Aqueduct Power Recovery Plants

There shall be credited against the amount of the variable component to be paid by each contractor, as determined pursuant to subdivision (a) of this article, a portion of the projected net value of any power recovered during the respective year at project aqueduct power recovery plants located upstream on the particular aqueduct from the delivery structures for delivery of project water to the contractor. Such portion shall be in an amount which bears the same proportion to said projected net value that the number of acre-feet of project water delivered to the contractor through said plants during the year bears to the number of acre-feet of project water delivered to all contractors through said plants during the year.

(c) Payment Table

The amount to be paid each year by the Agency under the variable operation, maintenance, power, and replacement component of the Transportation Charge shall be determined in accordance with subdivision (a) of this article for the respective aqueduct reaches in Table B of this contract. Such amounts and any interest thereon shall be set forth by the State in Table F of this contract as soon as designs and cost estimates are prepared by it subsequent to receipt of requests from the Agency as to the maximum monthly delivery capability to be provided in each aqueduct reach for transport and delivery of project water to the Agency, pursuant to Article 17(a): *Provided*, That the amounts set forth in Table F shall be subject to redetermination by the State in accordance with Article 28.

(d)[51] <East Branch Enlargement Facilities>

There shall be no separate variable operation, maintenance, power, and replacement component for deliveries of water through East Branch Enlargement Facilities defined in Article 49(a).

27. TRANSPORTATION CHARGE - PAYMENT SCHEDULE

The amounts to be paid by the Agency for each year of the project repayment period under the capital cost and minimum operation, maintenance, power, and replacement components of the Transportation Charge, and under the variable operation, maintenance, power, and replacement component of said charge on the basis of then estimated deliveries, shall be set forth by the State in Table G of this contract as soon as designs and cost estimates have been prepared by it subsequent to receipt of requests from the Agency as to the maximum monthly delivery capability to be provided in each aqueduct reach for transport and delivery of project water to the Agency, pursuant to Article 17(a). Table G of this contract shall constitute a summation of Tables D, E, and F of this contract: *Provided*, That each of the amounts set forth in

51 Amended: Amendment No. 15

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Table G shall be subject to redetermination by the State in accordance with Article 28: *Provided further*, That the principles and procedures set forth in Articles 24, 25, and 26 shall be controlling as to such amounts. Such amounts shall be paid by the Agency in accordance with the provisions of Article 29.

28.[52] TRANSPORTATION CHARGE - REDETERMINATION

(a) Determinative Factors Subject to Retroactive Charge

The State shall redetermine the values and amounts set forth in Tables B, C, D, E, F, and G of this contract in the year following the year in which the State commences construction of the project transportation facilities and each year thereafter in order that the Transportation Charge to the Agency and the components thereof may accurately reflect the increases or decreases from year to year in projected costs, outstanding reimbursable indebtedness of the State incurred to construct the project transportation facilities described in Table I of this contract, annual entitlements, estimated deliveries, project interest rate, and all other factors which are determinative of such charges. In addition, each such redetermination shall include an adjustment of the components of the Transportation Charge to be paid by the Agency for succeeding years which shall account for the differences, if any, between those factors used by the State in determining the amounts of such components for all preceding years and the factors as then currently known by the State. Such adjustment shall be computed by the State and paid by the Agency or credited to the Agency's account in the manner described in (b) and (c) below.

(b) Adjustment: Transportation Charge - Capital Cost Component

Adjustments for prior underpayments or overpayments of the capital cost component of the Transportation Charge to the Agency, together with accrued interest charges or credits thereon computed at the then current project interest rate on the amount of the underpayment or overpayment and compounded annually for the number of years from the year the underpayment or overpayment occurred to and including the year following the redetermination, shall be paid in the year following the redetermination: *Provided*, That the Agency may elect to exercise the option whereby when the redetermined Transportation Charge for the following year, with adjustments, including adjustments of the operation, maintenance, power, and replacement components provided for in subdivision (c) of this article, is more or less than the last estimate of the Charge provided pursuant to Article 27 for the corresponding year, without adjustments, an amount equal to the total of such difference shall be deducted from or added to the adjusted capital cost component for that year and paid or credited in accordance with the following schedule:

Percent that Transportation Charge differs from last estimate (+ or -)	Period, in years, for amortizing the difference in indicated charge
for 10% or less	no amortization
more than 10%, but not more than 20%	2
more than 20%, but not more than 30%	3
more than 30%, but not more than 40%	4
more than 40%.	5

52 Amended (a)-(d): Amendment No. 9

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Such payments or credits shall be in equal semi-annual amounts of principal and interest on or before the 1st day of January and the 1st day of July, with interest computed at the project interest rate and compounded annually, during varying amortization periods as set forth in the preceding schedule: *Provided*, That for the purpose of determining the above differences in the Transportation Charge, the variable operation, maintenance, power, and replacement component shall be computed on the basis of the same estimated project water deliveries as was assumed in computing pursuant to Article 26(c).

(c) Adjustment: Transportation Charge - Minimum and Variable Components

One-twelfth of the adjustments for prior underpayments or overpayments of the Agency's minimum and variable operation, power, and replacement components for each year shall be added or credited to the corresponding components to be paid in the corresponding month of the year following the redetermination, together with accrued interest charges or credits thereon computed at the then current project interest rate on the amount of the underpayment or overpayment and compounded annually for the number of years from the year the underpayment or overpayment occurred to and including the year following the redetermination.

(d) Exercise of Option

The option provided for in subdivision (b) above shall be exercised in writing on or before the January 1 due date of the first payment of the capital cost component of the Transportation Charge for the year in which the option is to become effective.

Such option, once having been exercised, shall be applicable for all of the remaining years of the project repayment period.

(e)[53] <No Subtitle>

Notwithstanding the provisions of Article 28(b), adjustments for prior overpayments and underpayments shall be repaid beginning in the year following the redetermination by application of a unit rate per acre-foot which, when paid for the projected portion of the Agency's annual entitlement will return to the State, during the project repayment period, together with interest thereon computed at the project interest rate and compounded annually, the full amount of the adjustments resulting from financing after January 1, 1987, from all bonds, advances, or loans listed in Article 1(r) except for Article 1(r)(3) and except for bonds issued by the State under the Central Valley Project Act after January 1, 1987 for facilities not listed among the water system facilities in Article 1(hh). Notwithstanding the immediately preceding exception, such amortization shall also apply to any adjustments in this component charge resulting from a change in the project interest rate due to any refunding after January 1, 1986 of bonds issued under the Central Valley Project Act. However, amortization of adjustments resulting from items 1(r)(4) through (7) shall be limited to a period which would allow the Department to repay the debt service on a current basis until such time as bonds are issued to reimburse the source of such funding. In no event shall this amortization period be greater than the project repayment period.

53 Amended: Amendment No. 16

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(f) [54] Adjustment: Water System Revenue Bond Financing Costs

The use of water system revenue bonds for financing facilities listed in Article 1(hh) would result in adjustments for prior underpayments or overpayments of the capital cost component of the Transportation Charge to the Agency under the provisions of this article; however, in place of making such adjustments, charges to the Agency will be governed by Article 50.

29. TIME AND METHOD OF PAYMENT

(a) Initial Payment - Delta Water Charge

Payments by the Agency under the Delta Water Charge shall commence in the year of initial water delivery to the Agency.

(b) Initial Payment - Transportation Charge: Capital Component

Payments by the Agency under the capital cost component of the Transportation Charge shall commence in the year following the year in which the State commences construction of the project transportation facilities. If such construction has already commenced when this contract is executed, such payments shall begin in the year following the year of execution.

(c) Initial Payment - Transportation Charge: Minimum Component

Payments by the Agency under the minimum operation, maintenance, power, and replacement component of the Transportation Charge shall commence for each aqueduct reach in the year following the year in which construction of that reach is completed.

(d) Initial Payment - Transportation Charge: Variable Component

Payments by the Agency under the variable operation, maintenance, power, and replacement component of the Transportation Charge shall commence in the year of initial water delivery to the Agency.

(e) Statement of Charges

The State shall, on or before July 1 of each year, commencing with the year preceding the year in which payment of the respective charge is to commence pursuant to this article, furnish the Agency with a written statement of: (1) the charges to the Agency for the next succeeding year under the capital cost and minimum operation, maintenance, power, and replacement components of the Delta Water Charge and Transportation Charge; (2) the unit charges to the Agency for the next succeeding year under the variable operation, maintenance, power, and replacement components of said Delta Water Charge and Transportation Charge; and (3) the total charges to the Agency for the preceding year under the variable operation, maintenance, power, and replacement components of said Delta Water Charge and Transportation Charge: *Provided*, That through December 31, 1969, the Delta Water Charge shall be based upon a unit rate of $3.50 per acre-foot and shall be paid by the contractors on the basis of their respective annual entitlements to project water, as provided in Article 22(b): *Provided further*, That the first such statement shall be provided by the State as soon after the execution of this contract as is feasible. All such statements shall be accompanied by the latest revised copies of the document amendatory to Article 22 and of Tables B, C, D, E, F and G of this contract, together with such

54 Amended: Amendment No. 16

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other data and computations used by the State in determining the amounts of the above charges as the State deems appropriate. The State shall, on or before the fifteenth day of each month of each year, commencing with the year of initial water delivery to the Agency, furnish the Agency with a statement of the charges to the Agency for the preceding month under the variable operation, maintenance, power, and replacement components of the Delta Water Charge and Transportation Charge. Such charges shall be determined by the State in accordance with the relevant provisions of Articles 22 and 26 of this contract, upon the basis of metered deliveries of project water to the Agency, except as otherwise provided in those articles.

(f) Times of Payment - Capital Components

The Agency shall pay to the State, on or before January 1 of each year, commencing with the year in which payment of the respective charge is to commence pursuant to this article, one-half (½) of the charge to the Agency for the year under the capital cost component of the Delta Water Charge and one-half (½) of the charge to the Agency for the year under the capital cost component of the Transportation Charge, as such charges are stated pursuant to subdivision (e) of this article; and shall pay the remaining one-half (½) of each of said charges on or before July 1 of that year.

(g) Times of Payment - Minimum Components

The Agency shall pay to the State, on or before the first day of each month of each year, commencing with the year of initial water delivery to the Agency, one-twelfth (1/12) of the sum of the charges to the Agency for the year under the minimum operation, maintenance, power, and replacement components of the Delta Water Charge and Transportation Charge, respectively, as such charges are stated pursuant to subdivision (e) of this article.

(h) Times of Payment - Variable Components

The Agency shall pay to the State on or before the fifteenth day of each month of each year, commencing with the year of initial water delivery to the Agency, the charges to the Agency under the variable operation, maintenance, power, and replacement components of the Delta Water Charge and Transportation Charge, respectively, for which a statement was received by the Agency during the preceding month pursuant to subdivision (e) of this article, as such charges are stated in such statement.

(i) Contest of Accuracy of Charges

In the event that the Agency contests the accuracy of any statement submitted to it pursuant to subdivision (e) of this article, it shall give the State notice thereof at least ten (10) days prior to the day upon which payment of the stated amounts is due. To the extent that the State finds the Agency's contentions regarding the statement to be correct, it shall revise the statement accordingly, and the Agency shall make payment of the revised amounts on or before the due date. To the extent that the State does not find the Agency's contentions to be correct, or where time is not available for a review of such contentions prior to the due date, the Agency shall make payment of the stated amounts on or before the due date, but may make the contested part of such payment under protest and seek to recover the amount thereof from the State.

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<30.[55] SURCHARGE FOR PROJECT WATER USED ON EXCESS LAND - Deleted>

31. ADJUSTMENT FOR OVERPAYMENT OR UNDERPAYMENT

If in any year, by reason of errors in computation or other causes, there is an overpayment or underpayment to the State by the Agency of the charges provided for herein, which overpayment or underpayment is not accounted for and corrected in the annual redetermination of said charges, the amount of such overpayment or underpayment shall be credited or debited, as the case may be, to the Agency's account for the next succeeding year and the State shall notify the Agency thereof in writing.

32. DELINQUENCY IN PAYMENT

(a) Agency to Provide for Punctual Payment

The governing body of the Agency shall provide for the punctual payment to the State of payments which become due under this contract.

(b)[56] Interest on Overdue Payments

Upon every amount of money required to be paid by the Agency to the State pursuant to this contract which remains unpaid after it becomes due and payable, interest shall accrue at an annual rate equal to that earned by the Pooled Money Investment Fund, as provided in Government Code Sections 16480, et seq. calculated monthly on the amount of such delinquent payment from and after the due date until it is paid, and the Agency hereby agrees to pay such interest: provided, that no interest shall be charged to or be paid by the Agency unless such delinquency continues for more than thirty (30) days.

33. OBLIGATION OF AGENCY TO MAKE PAYMENTS

(a) Refusal of Water Does Not Affect Obligation

The Agency's failure or refusal to accept delivery of project water to which it is entitled under Article 6(b) shall in no way relieve the Agency of its obligation to make payments to the State as provided for in this contract. The State, however, shall make reasonable efforts to dispose of any water made available to but not required by the Agency and any net revenues from such disposal shall be credited pursuant to Article 21.

(b) Character of Obligation

The Agency as a whole is obligated to pay to the State the payments becoming due under this contract, notwithstanding any individual default by its constituents or others in the payment to the Agency of assessments, tolls, or other charges levied by the Agency.

34. OBLIGATION OF AGENCY TO LEVY TAXES AND ASSESSMENTS

(a) When Obligated

If in any year the Agency fails or is unable to raise sufficient funds by other means, the governing body of the Agency shall levy upon all property in the Agency not exempt from

55 Amended: Amendment No. 8
56 Amended: Amendment No. 13

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taxation, a tax or assessment sufficient to provide for all payments under this contract then due or to become due within that year.

(b) Enforcement by Officers of Agency

Taxes or assessments levied by the governing body of the Agency pursuant to subdivision (a) of this article shall be enforced and collected by all officers of the Agency charged with the duty of enforcing and collecting taxes or assessments levied by the Agency.

(c) Deposit in Separate Fund

All money collected for taxes or assessments under this article shall be kept in a separate fund by the treasurer or other officer of the Agency charged with the safekeeping and disbursement of funds of the Agency, and, upon the written demand of the State, the treasurer or other officer shall pay over to the State all such money in his possession or control then due the State under this contract, which money shall be applied by the State to the satisfaction of the amount due under this contract.

(d) Enforcement of Levy

In the event of failure, neglect, or refusal of any officer of the Agency to levy any tax or assessment necessary to provide payment by the Agency under this contract, to enforce or to collect the tax or assessment, or to pay over to the State any money then due the State collected on the tax or assessment, the State may take such action in a court of competent jurisdiction as it deems necessary to compel the performance in their proper sequence of all such duties. Action taken pursuant hereto shall not deprive the State of or limit any remedy provided by this contract or by law for the recovery of money due or which may become due under this contract.

D. GENERAL PROVISIONS

35. REMEDIES NOT EXCLUSIVE

The use by either party of any remedy specified herein for the enforcement of this contract is not exclusive and shall not deprive the party using such remedy of, or limit the application of, any other remedy provided by law.

36. AMENDMENTS

This contract may be amended at any time by mutual agreement of the parties, except insofar as any proposed amendments are in any way contrary to applicable law. The State shall promptly furnish the Agency with copies of all contracts now or hereafter executed by the State for a dependable supply of project water, and of any amendments thereof.

37. AGENCY NOT ESTOPPED TO CHALLENGE STATE LAWS

Nothing herein contained shall be construed as estopping or otherwise preventing the Agency or any person, firm, association, corporation, or public body or agency claiming by, through, or under the Agency from contesting by litigation or other lawful means the validity,

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constitutionality, construction or application of any law of this State, including laws referred to in the Bond Act, or as preventing or prejudicing the amendment or repeal of any such law, and each contract executed by the State for a dependable supply of project water shall contain a similar reservation with respect to State laws.

38. OPINIONS AND DETERMINATIONS

Where the terms of this contract provide for action to be based upon the opinion, judgment, approval, review, or determination of either party hereto, such terms are not intended to be and shall never be construed as permitting such opinion, judgment, approval, review, or determination to be arbitrary, capricious, or unreasonable.

39. CONTRACTING OFFICER OF THE STATE

The contracting officer of the State shall be the Director of Water Resources of the State of California and his successors, or their duly authorized representatives. The contracting officer shall be responsible for all discretionary acts, opinions, judgments, approvals, reviews, and determinations required of the State under the terms of this contract.

40. SUCCESSORS AND ASSIGNS OBLIGATED

This contract and all of its provisions shall apply to and bind the successors and assigns of the parties hereto.

41. ASSIGNMENT

No assignment or transfer of this contract or any part hereof, rights hereunder, or interest herein by the Agency shall be valid unless and until it is approved by the State and made subject to such reasonable terms and conditions as the State may impose.

42. WAIVER OF RIGHTS

Any waiver at any time by either party hereto of its rights with respect to a default or any other matter arising in connection with this contract, shall not be deemed to be a waiver with respect to any other default or matter.

43. NOTICES

All notices that are required either expressly or by implication to be given by one party to the other under this contract shall be signed for the State by its contracting officer, and for the Agency by such officer as it may, from time to time, authorize in writing to so act. All such notices shall be deemed to have been given if delivered personally or if enclosed in a properly addressed envelope and deposited in a United States Post Office for delivery by registered or certified mail. Unless and until formally notified otherwise, all notices shall be addressed to the parties at their addresses as shown on the signature page of this contract.

44. MAINTENANCE AND INSPECTION OF BOOKS, RECORDS, AND REPORTS

During regular office hours, each of the parties hereto and their duly authorized representatives shall have the right to inspect and make copies of any books, records, or reports of the other party pertaining to this contract or matters related hereto. Each of the parties hereto

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shall maintain and make available for such inspection accurate records of all of its costs, disbursements and receipts with respect to its activities under this contract and the Bond Act.

E. SPECIAL PROVISIONS AND TABLES

45. SPECIAL PROVISIONS

(a) <Timing of First Deliveries of Project Water>

On or before June 30, 1963, the Agency shall furnish to the State its written request specifying whether the agency shall receive water in the year of initial water delivery from the East Branch Aqueduct or from the West Branch Aqueduct as defined in Table H of this contract, and specifying the year in which the first delivery of project water from the other Branch Aqueducts shall be as so requested by the Agency, *Provided*, That in the event said request is, in the judgment of the State, incompatible with similar requests received from other contractors to be served from or through said Branch Aqueducts, which contractors have executed contracts with the State on or before June 30, 1963, the timing of first deliveries of project water to the Agency and such other contractors from said Branch Aqueducts shall be as established by mutual agreement among the State, the Agency, and said contractors, *Provided further*, That if such agreement has not been reached on or before December 31, 1963, the State may then construct said Branch Aqueducts in accordance with such construction schedules as, in the judgment of the State, will best serve the interests of all those contractors whose service areas as located south of the South Portal of the Tehachapi Tunnels and which have executed contracts with the State on or before June 30, 1963, *Provided further*, That the Agency is not precluded from requesting, pursuant to Article 10 of this contract, water through delivery structures located in aqueduct reaches upstream from the junction of the East and West Branch Aqueducts.

(b)[57] <Annual Entitlement Capacity (Including Reach 22B)>

The State shall provide sufficient capacity in the transportation facilities, subject to the provisions of Article 17(b), to deliver eleven percent (11%) of the Agency's annual entitlement in each of three and one-third (3-1/3) months in each year. Subject to the foregoing limitation, in scheduling deliveries under Article 12(a), the State will provide for up to eight point eighty-nine percent (8.89%) of the Agency's annual entitlement to be delivered in excess of a rate of eight and one-third percent (8-1/3%) per month: *Provided*, That the State shall not be obligated, by reason of this contract provision, to reduce the peaking service and/or emergency service heretofore provided for other agencies that have contracted for water service from the State Water Project, if the State determines that it is not feasible for any reason in the judgment of the State to build a dam at the Buttes reservoir site to provide such peaking and emergency service for the Agency: *Provided further*, That notwithstanding the State's determination, the Agency may notify the State at any time prior to the date the State commences final design of Buttes reservoir that the Agency does not desire the reservoir to be constructed, in which event the provisions of paragraph numbers 1, 2, and 3 of this amendment shall be of no further force and

57 Amended: Amendment No. 22

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effect: *Provided further*, That, notwithstanding the fact that the dam is not constructed, the Agency shall remain liable for and shall be obligated to pay the State all costs incurred by the State by reason of this amendment prior to the date the State determines such construction is not feasible or the date the Agency notifies the State that the Agency does not desire the reservoir to be constructed, whichever shall be earlier. <See also Article 12(b)>

[58]The Department will provide capacity in Reach 22B to deliver up to 1,700 acre-feet per year at a continuous flowrate.

<Other Provisions Applicable to Reach 22B>[59]

The Agency shall pay to the State the following charges attributable to the capacity provided in Reach 22B:

(a) retroactive and prospective charges under the capital cost component of the Transportation Charge;

(b) prospective charges under the minimum operation, maintenance, power and replacement component of the Transportation Charge; and

(c) prospective charges under the Water System Revenue Bond Surcharge.

Pursuant to the Agency's Water Supply Contract, the Agency shall remain obligation for the variable operation, maintenance, and power replacement component of the Transportation Charge, and for the Off-Aqueduct Power Racilities charge, for water delivered each year through Reach 22B.

The Agency concurs that the additional permanent use of Reach 22B will not materially impair the Agency's capacity to make payments to the State to retire bonded indebtedness incurred under the Water Supply Contract.

(c) <Annexations to the Agency>

The annexations to the Agency, authorized by Resolution No. 62-64 of the Board of Directors dated August 28, 1962, are deemed to be approved by the department within the meaning of Article 15(b), and are generally described as follows:

(1) The Tejon-Kinsey annexation, comprising approximately 200 square miles at the western boundary of the Agency

(2) The Agua-Dulce annexation, comprising approximately 40 square miles at the southwestern boundary of the Agency

(3) The East Antelope Valley annexation, comprising approximately 100 square miles at the southeastern boundary of the Agency

(4) The Hoffman No. 2 annexation, comprising approximately 16 square miles at the northeastern boundary of the Agency.

58 Amended: Amendments No. 22
59 Amended: Amendment No. 24

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(d)[60] <Table A Increase (3,000 AF)>

In accordance with the Agency's Water Supply Contract, the Agency's annual entitlement is increased by 3,000 acre-feet beginning in year 2002 and each succeeding year thereafter for the term of the Water Supply Contract. As a result of this transfer, Table A as designated in Article 6 is amended as follows:<*See current Table A end of this contract.*>

Increases in the Agency's Delta Water Charge, the Transportation Charges, and the Water System Revenue Bond Surcharge resulting from the increase in the Agency's annual entitlements for year 2002 and each year thereafter shall commence January 1, 2002, and be identified by the State and included in the annual Statement of Charges to the Agency.

Any over and under adjustments to payments made by TLBWSD for 2001 and prior years attributable to the 3,000 acre-feet of annual entitlement shall be paid by or credited to Tulare, including refunds or credits for Off-Aqueduct and Water System Revenue Bond reserves. Any over and under adjustments to payments made by the Agency for 2002 and future years attributable to the 3,000 acre-feet of annual entitlement shall be paid by or credited to the Agency.

Transportation capital cost component charges attributable to reaches downstream of TLBWSD shall be redetermined and allocated to the Agency retroactively and prospectively according to the proportionate use of facilities method described in Article 24.

(e)[61] <Table A Increase (1,993 AF)>

In accordance with the Agency's Water Supply Contract, the Agency is increasing its annual Table A amounts by 1,993 acre-feet beginning in the year 2014 and each succeeding year thereafter for the term of the Water Supply Contract. <*See current Table A end of this contract.*>

Increases in Agency's Delta Water Charge, the Transportation Charges, and the Water System Revenue Bond Surcharge resulting from the increase in Agency's annual Table A amounts for the year 2014 and each year thereafter shall commence January 1, 2014, and be identified by the State and included in future annual Statements of Charges to Agency.

Any over and under adjustments to payments made by DRWD for 2013 and prior years attributable to the 1,993 acre-feet of annual Table A amounts transferred on January 1, 2014 shall be paid by or credited to DRWD, including refunds or credits for Off-Aqueduct and Water System Revenue Bond reserves. Any over and under adjustments to payments made by Agnecy for 2014 and future years attributable to a total of 1,993 acre-feet of annual Table A amounts transferred on January 1, 2014 shall be paid by or credited to Agency.

Transportation capital cost component charges for capacity attributable to the 1,993 acre-feet of DRWD's Table A water to reaches downstream of DRWD in Reaches 9 through 19 shall be redetermined and allocated to Agency retroactively and prospectively according to the proportionate use of facilities method described in Article 24. Transportation capital cost component charges for capacity attributable to the 1,993 acre-feet of DRWD's Table A water for Reaches 20A through 22A shall not be redetermined because Agency has existing East Branch Enlargement capacity available.

60 Amended: Amendment No. 20
61 Added: Amendment No. 23

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For cost allocation and repayment purposes, the attached Exhibits A shows Table A amounts and capacity values for each aqueduct reach in which Agency participates consistent with the limits of Articles 12(b) and 12(c). These redetermined values shall be used to derive the proportionate use of facilities factors as set forth in Table B as designated in Article 24(b). The capacity amounts shown in Exhibit A are estimated values. Actual values will be used by the State in implementing the terms of this Amendment and in redetermination of Table B of Agency's Water Supply Contract under Article 28.

(f)[62] <Table A Increase (1,451 AF)>

In accordance with the Agency's Water Supply Contract, the Agency is increasing its annual Table A amounts by 1,451 acre-feet from Reach 8D beginning in the year 2014 and each succeeding year thereafter for the term of the Water Supply Contract. *<See current Table A end of this contract.>*

Increases in Agency's Delta Water Charge, the Transportation Charges, and the Water System Revenue Bond Surcharge resulting from the increase in Agency's annual Table A amounts for the year 2014 and each year thereafter shall commence January 1, 2014, and be identified by the State and included in future annual Statements of Charges to Agency.

Any over and under adjustments to payments made by TLBWSD for 2013 and prior years attributable to the 1,451 acre-feet of annual Table A amounts transferred on January 1, 2014 shall be paid by or credited to TLBWSD, including refunds or credits for Off-Aqueduct and Water System Revenue Bond reserves. Any over and under adjustments to payments made by Agency for 2014 and future years attributable to a total of 1,451 acre-feet of annual Table A amounts transferred on January 1, 2014 shall be paid by or credited to Agency.

Transportation capital cost component charges for capacity attributable to the 1,451 acre-feet of TLBWSD's Table A water to reaches downstream of TLBWSD in Reaches 9 through 19 shall be redetermined and allocated to Agency retroactively and prospectively according to the proportionate use of facilities method described in Article 24. Transportation capital cost component charges for capacity attributable to the 1,451 acre-feet of TLBWSD's Table A water for Reaches 20A through 22A shall not be redetermined because Agency has existing East Branch Enlargement capacity available.

For cost allocation and repayment purposes, the attached Exhibits A shows Table A amounts and capacity values for each aqueduct reach in which Agency participates consistent with the limits of Articles 12(b) and 12(c). These redetermined values shall be used to derive the proportionate use of facilities factors as set forth in Table B as designated in Article 24(b). The capacity amounts shown in Exhibit A are estimated values. Actual values will be used by DWR in implementing the terms of this Amendment and in redetermination of Table B of Agency's Water Supply Contract under Article 28.

62 Added: Amendment No. 24

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46.[63] AMENDATORY PROVISIONS

<(a)[64] Surplus Water - Deleted>

<(b)[65] Surcharge Credit - Deleted>

(c)[66] Buttes Reservoir

The Agency may notify the State on or before January 1, 1968, as to whether or not it would desire the Buttes reservoir, contemplated to be constructed by the State to provide the peaking and emergency service to the Agency, to be placed in operation by the State later than the State is scheduling such service, and the State will then postpone the design and construction of said dam and reservoir for the period requested by the Agency: *Provided*, That such postponement will be granted only for a period in (sic) which (1) the existing capacity of the State Water Project enables the State to make deliveries to the Agency on the peaking basis provided for by this contract without reduction in the service and water deliveries to be provided to other contractors during the period of the delayed construction, and (2) the Agency agrees to make any necessary adjustments in its payments to the State to provide compensation for the temporary usage by the Agency of facilities necessary to provide peaking service to other contracting agencies: *Provided further*, That the State may elect for reasons of financing to postpone the design and construction of such dam and reservoir so that the peaking service and/or emergency service for the Agency will require the temporary usage by the Agency of facilities necessary to provide peaking service to other contracting agencies, in which event the Agency agrees to make any necessary adjustments in its payments to the State to provide compensation for such usage, or, in lieu thereof, to notify the State that the Agency does not desire the reservoir to be constructed.

(d)[67] Excess Capacity

The State shall provide in each reach of the project transportation facilities from the Junction, West Branch, California Aqueduct to the beginning of the Peace Valley Pipeline on the West Branch Aqueduct, excess capacity in the amount of nineteen (19) cubic feet per second, which consists of capacity sufficient to carry in any one month of any year seventy-seven one hundredths of one percent (0.77%) of the Agency's maximum annual entitlement including in such increment for each reach capacity required for scheduled outages: *Provided*, That no such excess capacity shall be provided in regulatory storage reservoirs included in such reaches. To the extent made possible by the excess capacity provided in accordance with the preceding sentence, the State shall comply with requests of the Agency to deliver from the project transportation facilities downstream from Pumping Plant VI (Tehachapi Pumping Plant) in any one month of any year a total amount of project water greater than eleven percent (11%) of the Agency's annual entitlement for that year. In no event shall the State be obligated to deliver to the Agency from the project transportation facilities downstream from Pumping Plant VI (Tehachapi Pumping Plant) in any one month of any year a total amount of project water greater than eleven percent (11%) of the Agency's annual entitlement for that year except insofar as the

63 Added: Amendment No. 1
64 Deleted: Amendment 10
65 Amended: Amendment No. 8
66 Amended: Amendment No. 3
67 Amended (d)-(j): Amendment No. 4

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excess capacity provided in accordance with the first sentence of this subdivision (d) makes possible such greater delivery.

(e) Advance Payment for Excess Capacity

The Agency shall each year furnish to the State, in advance of the construction of the aqueduct reaches from the Junction, West Branch Aqueduct, to the beginning of the Peace Valley Pipeline on the West Branch Aqueduct, funds sufficient to cover the costs of providing the excess capacity described in subdivision (d) of this article. Such funds shall be in an amount which bears the same proportion to the total capital costs of each such reach, including the costs of providing such excess capacity, as such capacity bears to the total capacity of such reach, including such excess capacity. The State shall, on or before July 1 of each year, furnish the Agency with a written statement of the charges to the Agency pursuant to this subdivision for the next year: *Provided*, That the first such charge shall include any accumulated capital costs attributable to such increased capacity in prior years, together with interest thereon at the project interest rate compounded annually. The Agency shall pay to the State on or before January 1 of each year one-half of such charge and shall pay the remaining one-half of such charge on or before July 1 of that year.

(f) Allocation of Capital Costs of Reaches in Which Excess Capacity is Provided

The total capital costs of each aqueduct reach in which excess capacity is provided for the Agency pursuant to subdivision (d) of this article shall be allocated among all contractors entitled to delivery of project water from or through the reach in accordance with the provisions of Article 24(d). The values and amounts so allocated shall be subject to redetermination by the State in accordance with Article 28. Such redetermination shall include, without limitation as to other proper adjustments, a recalculation, based on actual costs incurred by the State, of both the estimated costs which would have been incurred had no excess capacity been provided and of the projected actual costs.

(g) Reconciliation of Advance Payments with Cost Allocation

In the event that the funds advanced by the Agency pursuant to subdivision (e) of this article are more or less than the costs allocated to the Agency pursuant to subdivision (f) of this article, the account of the Agency under the capital cost component shall be credited or debited accordingly, with interest thereon from the date of such advance at the applicable average interest rate of the fund in which such money is invested.

(h) Allocation of Minimum Operation, Maintenance, Power, and Replacement Costs of Reaches in Which Excess Capacity is Provided

Subject to the provisions of subdivision (j) of this article, the minimum operation, maintenance, power, and replacement costs for the respective year of each aqueduct reach of the project transportation facilities in which excess capacity has been provided pursuant to subdivision (d) of this article shall be allocated among contractors by the proportionate use of facilities method of cost allocation, in accordance with the provisions of Article 25: *Provided*, That in making such allocation with respect to all such costs other than those for any connected-load charges for power the capacity provided in each reach for the transport and delivery of project water to the Agency and the total capacity provided in each reach shall include the excess capacity provided pursuant to subdivision (d) of this article.

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(i) Allocation of Variable Operation, Maintenance, Power, and Replacement Costs of Reaches in Which Excess Capacity is Provided

Subject to the provisions of subdivision (j) of this article, the variable operation, maintenance, power, and replacement costs for the respective year of each aqueduct reach of the project transportation facilities in which excess capacity has been provided pursuant to subdivision (d) of this article shall be allocated among contractors in accordance with the provisions of Article 26: *Provided*, That the Agency shall make such additional payments with respect to such variable component as may be necessary in order that the present value, when discounted at the project interest rate to the first day of the project repayment period, of payments of any other contractor under the variable operation, maintenance, power, and replacement component of the Transportation Charge will not be greater than the present value, when discounted at the project interest rate to the first day of the project repayment period, of payments under that component of the Transportation Charge that would have been derived for such contractor on the bases provided in its contract in the absence of subdivisions (d) to (j), inclusive, of this article in this contract.

(j) Connected-Load Charges for Power

The connected-load charges for power resulting from the excess capacity provided pursuant to subdivision (d) of this article shall be paid entirely by the Agency and such costs shall not be included in the minimum operation, maintenance, power, and replacement component or the variable operation, maintenance, power, and replacement component of the Transportation Charge to be allocated among contractors: *Provided*, That such costs shall be paid by the Agency at the same times and under the same procedures as the minimum operation, maintenance, power, and replacement component as provided in Article 29.

<47. No such article exists.>

<48. No such article exists.>

49.[68] Enlargement Capacity from Junction, West Branch, California Aqueduct through Devil Canyon Powerplant (Reaches 18A through 26A)

(a) Definitions

When used in this Article 49, the following terms shall have the meanings hereinafter set forth:

(1) East Branch Enlargement Facilities—all of the following:

(A) The facilities remaining to be constructed as part of the East Branch Enlargement construction;

(B) The work done pursuant to the letter agreement between the State and The Metropolitan Water District of Southern California dated November 29, 1966, which consisted of constructing the California Aqueduct between Cottonwood (now known as Alamo) Powerplant and Cedar Springs (now known as Silverwood) Reservoir so that, by future additions to the canal lining,

68 Amended: Amendment No. 15

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siphons, and additional pumping units at Pearblossom Pumping Plant, the capacity could be increased by a then-estimated approximately 700 cubic feet per second;

(C) That portion of the enlargement of the Pearblossom Pumping Plant Forebay and Cofferdam construction which would not have been constructed but for the proposed East Branch Enlargement and which was done pursuant to the letter agreement between the State and The Metropolitan Water District of Southern California, dated January 18, 1984;

(D) That portion of the canal lining work between Alamo Powerplant and Pearblossom Pumping Plant done pursuant to the letter agreements between the State and The Metropolitan Water District of Southern California, dated July 2, 1984 and May 15, 1985 which increased the East Branch Aqueduct capacity beyond that set forth in Table B-2 as shown in State Bulletin 132-70;

(E) That portion of Reach 24 (Silverwood Lake) to be determined by a reallocation of Reach 24 to reflect the additional use to be made of that reach as a result of the East Branch Enlargement operation.

(F) That portion of Reach 25 (San Bernardino Tunnel) to be determined by an allocation of total delivery capability of Reach 25 between the basic East Branch facilities and the East Branch Enlargement as a result of East Branch Enlargement operation.

(2) Participating Contractor - any contractor signing a contract amendment for participating in any East Branch Enlargement Facility.

(b) Sizing and Construction of Enlargement

(1) The State shall construct the East Branch Enlargement Facilities to accommodate flows to at least the capacities contracted for by the State and the Participating Contractors. Capacity provided in each reach of the enlargement for transport and delivery of project water to the Agency shall be as shown in the following table:

REACH (1)	CFS OF CAPACITY
20A	35
20B	35
21	35
22A	35

(1) These numbers apply to the reaches as set forth in Figure B-5 in DWR Bulletin 132-85.

(2) The State shall construct the East Branch Enlargement Facilities in stages, with the first stage providing the Agency in each reach at least fifty percent of the capacity shown in the table set forth in Article 49(b)(1). The State shall determine the specific reach features to be enlarged in consultation with the Participating Contractors. All Participating Contractors which have capital cost repayment obligations in a reach shall be considered to have a minimum delivery capability in each stage. The minimum delivery capabilities of the Participating Contractors in each staged reach shall be in the

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same proportion as the Participating Contractor's proportion of the total enlargement capacity. The State shall not construct Reaches 20A through 22A of the East Branch Enlargement Facilities to capacities greater than shown in the following table provided that power facilities may be constructed to a larger capacity if found by the State to be economically or operationally justifiable after prior consultation with the Participating Contractors.

REACH	CFS CAPACITY
20A	1,541
20B	1,541
21	1,535
22A	1,535

(3) The State shall make all reasonable efforts to complete construction of the first stage of the East Branch Enlargement Facilities as specified above by July 1, 1991. If the State determines that construction of the first stage cannot be accomplished by July 1, 1991 without incurring extra costs, it shall consult with the affected Participating Contractors.

(4) The State shall make all reasonable efforts to complete construction of any East Branch Enlargement Facilities necessary to accommodate the total of the constructed amount which are not completed as part of the first stage. It shall undertake further construction activities upon the earliest of (1) the State's determination that delivery schedules submitted pursuant to Article 12 justify such action or (2) a request by The Metropolitan Water District of Southern California that such action be taken. If the State fails to complete construction of any portion or portions of the East Branch Enlargement Facilities one or more of the agencies may complete construction pursuant to the procedure in Article 17(f).

(5) Upon completion of each stage of construction, the State shall determine whether actual capacity of the East Branch Enlargement Facilities differs from contracted for capacity. If actual capacity differs from contracted for capacity, the capacity provided for transport and delivery of project water shall be proportionately adjusted by the State among the Participating Contractors.

(c) East Branch Enlargement Transportation Charge

The payments to be made by each Participating Contractor entitled to delivery of project water from or through the East Branch Enlargement Facilities shall include an annual charge under the designation East Branch Enlargement Transportation Charge. This charge shall return to the State during the repayment period associated with financing of East Branch Enlargement Facilities, those costs of the East Branch Enlargement Facilities which are allocated to the Participating Contractor in accordance with the cost allocation principles and procedures hereinafter set forth. Wherever reference is made, in connection with the computation, determination, or payment of the East Branch Enlargement Transportation Charge, to the costs of any facility or facilities included in the System, such reference shall be only to those costs of such facility or facilities which are reimbursable by the Participating Contractors as determined

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by the State. The East Branch Enlargement Transportation Charge shall consist of a capital cost component; and a minimum operation, maintenance, power, and replacement component, as these components are defined in and determined under Articles 49(d) and 49(e), respectively. For the purpose of allocations of costs pursuant to said articles, the East Branch Enlargement Facilities shall be segregated into aqueduct reaches as set forth in Figure B-5 in State Bulletin 132-85, provided, however, that Reach 23 may be adjusted after consultation with the contractors as a result of a delivery point for Mojave Water Agency being changed.

(d) East Branch Enlargement Transportation Charge - Capital Cost Component

(1) Method of Computation.

Each Participating Contractor shall be allocated a capital cost component of the East Branch Enlargement Transportation Charge which shall be sufficient to return to the State those capital costs of the East Branch Enlargement Facilities which are allocated to the Participating Contractor pursuant to subdivision (d)(2) of this article. The amount of this charge shall be determined by an allocation of capital costs to the Participating Contractor and a computation of annual payments of such allocated costs and interest, if any, thereon to be made by the Participating Contractor pursuant to this article. The capital costs allocated to the Agency shall be reduced by payments advanced by the Agency pursuant to Article 49(d)(4).

(2) Allocation of Capital Costs Among Participating Contractors.

The total amount of capital costs of each reach of the enlargement to be returned to the State shall be allocated among all Participating Contractors on the basis of the ratio of the capacity provided in that reach of the East Branch Enlargement Facilities for the transport and delivery of project water to the Participating Contractor to the total capacity provided in that reach of the East Branch Enlargement Facilities for the transport and delivery of project water to all Participating Contractors served from or through the reach.

(3) Determination of Capital Cost Component.

The amount of this component shall be determined as follows:

(A) The total amount of capital costs allocated to a Participating Contractor shall be the sum of the products obtained when there is multiplied, for each enlargement reach, the total amount of the capital costs of the enlargement reach to be returned to the State under the capital cost component of the East Branch Enlargement Transportation Charge by the ratio of the East Branch Enlargement capacity provided to make deliveries to the Agency in the reach in cubic feet per second (cfs), as provided in subarticle 49(b)(1), to the total cfs capacity of the reach of enlargement.

(B) The projected amounts of capital costs to be allocated annually to the Agency under the capital cost component of the East Branch Enlargement Transportation Charge shall be determined by the State in accordance with the cost allocation principles and procedures set forth in Article 49(d)(3)(A), which principles and procedures shall be controlling as to allocations of capital costs to

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the Participating Contractors. These amounts shall be subject to redetermination by the State in accordance with Article 49(g).

(4) Financing of Allocated Capital Costs by a Participating Contractor.

(A) The Agency may elect to pay a portion or all of the capital costs of the enlargement construction allocated to the Agency by furnishing funds to the State in advance of the State incurring the capital costs, provided that the total remaining costs to be financed by the State shall not be less than $50 million. The Agency may elect in writing to use this option by June 15 of each year as to any portion of an East Branch Enlargement Facility not yet funded by the State. If the Agency does not elect this option by June 15 of a given year, it may, with the consent of the State elect the option at a later time in that year.

(B) For any year in which the Agency elects this option, the State shall, on or before July 1 furnish the Agency with a written statement of estimated amounts of funds needed by the State in the succeeding year and of the calendar dates by which the State will need the funds. During each succeeding year the State shall, on the first of each month, notify the Agency of funds needed within the succeeding month. The Agency shall pay to the State the requested funds within fifteen calendar days of receipt of notification. The Agency may elect to advance funds to the State on an accelerated schedule acceptable to the State. Unless otherwise agreed to by the Agency and the State, interest earned on any funds advanced pursuant to this paragraph shall be credited to reduce payments due from the Agency under this contract. To the extent practicable, interest earned shall be at the Surplus Money Investment Fund rate. The Agency may terminate its use of this option for a given year with the agreement of the State. If the Agency elects this option, subparagraphs (d)(5) and (d)(6) of this article shall not apply to any portion of capital costs to be paid pursuant to the option.

(C) If the Agency does not elect to pay all of the capital costs of the enlargement allocated to the Agency by furnishing funds to the State in advance, the State, after consultation with the Agency, shall prepare a plan for the State's financing of the East Branch Enlargement and shall give the Agency an opportunity to comment on the plan. The plan shall include but not be limited to the size of any revenue bond issuances and the form of necessary resolutions, articles and covenants.

(5) State Revenue Bond Financing of Allocated Capital Costs.

(A) Revenue Bond Charge

If the Agency does not pay all of the capital costs allocated to the Agency pursuant to subparagraph (3) and the State issues revenue bonds to finance the enlargement construction, the portion of the capital costs not advanced pursuant to subparagraph (4) shall be recovered through a Revenue Bond Charge. The Revenue Bond Charges allocated to the Participating Contractors shall return to the State an amount equal to the financing costs the State incurs for that portion of the East Branch Enlargement Facilities constructed in whole or in part with funds from revenue bonds (including revenue bond anticipation notes). The elements of

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the financing costs shall include but not be limited to bond marketing expenses to the extent not financed from the proceeds of applicable revenue bond sales, interest expense during construction of the East Branch Enlargement Facilities to the extent not provided for from bond proceeds, annual premiums for insurance or other security obtained pursuant to Article 49(d)(5)(E), and all semi-annual East Branch Enlargement Facilities revenue bond requirements including principal and interest and, to the extent not funded in advance of any proposed bond sale, or at any time following such a sale, in accordance with Articles 49(d)(5)(C) and 49(d)(5)(D), any additional requirements for coverage and deposits to reserves as required under applicable resolutions for the issuance of East Branch Enlargement Facilities revenue bonds. Any credits which shall include, but not be limited to, interest earnings or other earnings of the State in connection with such bonds shall when and as permitted by the bond resolution first be utilized for East Branch Enlargement Facilities construction purposes and thereafter all realized earnings shall be paid the Participating Contractors at least semi-annually. Such earnings shall for the purpose of determining each non-defaulting Participating Contractor's portion of any remaining capital costs be credited and paid to each non-defaulting Participating Contractor on the same basis that the capital costs were allocated to each Participating Contractor.

(B) Revenue Bond Charge Computation

The Revenue Bond Charge for the East Branch Enlargement construction payable by the Agency shall be computed as follows. The capital costs allocable to the Agency pursuant to Article 49(d) shall be determined. Any amounts paid by the Agency pursuant to Article 49(d)(4) shall be subtracted. The resulting difference shall be divided by the total of all capital costs to be financed by revenue bonds. The ratio resulting from the division shall be applied to each element of the total revenue bond financing costs. Until such time as the actual costs to be used in the foregoing computation are known, such computation shall be based on estimates of such costs. The Agency's Revenue Bond Charge shall be paid by the Agency semi-annually at least 40 days before the State is required to make the corresponding semi-annual payment to the bondholders.

(C) Excess Coverage

If the amount of coverage on any issue of revenue bonds, and interest earned on the coverage, is in excess of that required under the applicable bond resolution, articles or covenants, each participating contractor's share of the excess shall be in the same proportion as charges were paid by each participating contractor pursuant to Article 49(d)(5)(B) for the portion of the facilities financed by said issue of revenue bonds. When and as permitted by the terms of the bond resolution, the share of excess coverage together with any realized interest earnings, shall at the Participating Contractor's option be returned to the Participating Contractor or be utilized to fund remaining East Branch Enlargement construction costs to the extent not otherwise provided for. To the extent practicable, interest earned shall be at the Surplus Money Investment Fund rate.

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(D) Reserves

The State shall maintain revenue bond reserve funds no greater than necessary, as required under the applicable bond resolution, articles or covenants. In determining the level of revenue bond reserves to be maintained the State may, to the extent allowable under the applicable bond resolution, articles, or covenants, take account of any restricted reserve funds, other than replacement reserve funds, maintained by the individual Participating Contractors for the payment of State water contract payment obligations. Interest earned on revenue bond reserves maintained by the State and any excess reserve funds shall be credited promptly thereon to each Participating Contractor by the State. Upon retirement of any issue of revenue bonds and in accordance with the terms of the bond resolution, reserves maintained by the State on account of such issue, together with interest earnings thereon, shall be used to pay the final net annual debt service for such issue. Any reserves maintained by the State on account of an issue of revenue bonds and remaining after retirement of such issue, shall be repaid to the Participating Contractors in proportion to the total reserves that each Participating Contractor paid. To the extent practicable, interest earned shall be at the Surplus Money Investment Fund rate.

(E) Insurance

To the extent economically justifiable, as determined by the State after consultation with the Participating Contractors, the State shall obtain insurance or maintain other security protecting bondholders and Participating Contractors against costs resulting from the failure of any Participating Contractor to make the payments required by this Article 49(d)(5).

(6) State Non-Revenue Bond Financing of Allocated Capital Costs.

The State may use any of its available funds other than revenue bonds, to finance all, or a portion of the capital costs of the enlargement construction. Until revenue bonds or other debt instruments are issued, the Participating Contractors shall pay interest at the Surplus Money Investment Fund rate on whatever funds are used. Any State debt instrument other than revenue bonds or bond anticipation notes shall only be used after consultation with the Participating Contractors.

(7) Reallocation of Costs.

No later than the date of completion of the first stage of the East Branch Enlargement Facilities, the State shall in consultation with the contractors participating in the repayment of the reaches, reallocate costs for Reach 24 (Silverwood Lake) and Reach 26A (South Portal San Bernardino Tunnel through Devil Canyon Powerplant). Such reallocation of costs shall apply to years beginning with the date of completion of the first stage of the East Branch Enlargement Facilities. The State shall also reallocate at the same time the costs of Reach 25 (San Bernardino Tunnel) among all contractors participating in repayment of such reach, to reflect the redistribution of flow capacity necessary for the East Branch Enlargement Facilities. Such reallocation shall include historical as well as future costs as appropriate. By the same date the State, in consultation with the contractors participating in the repayment of the reaches, shall also

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reallocate all costs associated with the work done pursuant to the letter agreement between the State and The Metropolitan Water District of Southern California dated November 29, 1966, as described in Subarticle 49(a)(1)(B).

(8) Allocation and Payment of Improvement Costs.

Using the procedure provided in Article 24 (Transportation Charge—Capital Cost Component) the State shall, as of the effective date of Article 49, allocate among all contractors entitled to delivery of project water from or through the affected reaches those design and construction costs encompassed in letter agreements dated January 18, 1984, July 2, 1984, and May 15, 1985, between the State and The Metropolitan Water District of Southern California which would have been incurred irrespective of East Branch Enlargement Facilities. The Agency shall pay the State the charges as determined pursuant to this provision with interest at the project interest rate.

(e) East Branch Enlargement Transportation Charge - Minimum Operation, Maintenance, Power, and Replacement Component

(1) The minimum operation, maintenance, power, and replacement component of the East Branch Enlargement Transportation Charge shall return to the State those minimum operation, maintenance, power, and replacement costs which in the judgment of the State are incurred solely because of construction, operation and maintenance of the East Branch Enlargement Facilities, and which are based on the proportional capital cost allocation to the Agency for such enlargement facilities, by reach. Other costs which cannot be attributed solely to East Branch facilities provided for pursuant to Article 17(a) shall be shared in accordance with a formula to be developed by the State in consultation with contractors participating in the repayment of the capital costs of the affected reaches. The State may establish reserve funds to meet anticipated minimum replacement costs in the same manner provided for in Article 25(a).

(2) The total projected minimum operation, maintenance, power and replacement costs of each reach of the East Branch Enlargement Facilities for the respective year shall be allocated among all Participating Contractors on the basis of the ratio of the capacity provided in the East Branch Enlargement Facilities reach for the transport and delivery of project water to each Participating Contractor to the total capacity provided in the East Branch Enlargement Facilities reach for the transport and delivery of project water to all Participating Contractors served from or through the reach.

(3) Notwithstanding the provisions of subdivisions (e)(1) and (e)(2) of this article, or of Article 1(s), the costs of off-aqueduct power facilities associated with deliveries of water through East Branch Enlargement Facilities shall be included in the determinations and allocations pursuant to Article 25(d). There shall be no separate off-aqueduct power facilities determination and allocation for East Branch Enlargement Facilities.

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(f) East Branch Enlargement Variable Operation, Maintenance, Power, and Replacement Costs

The variable operation, maintenance, power, and replacement costs associated with deliveries of water through East Branch Enlargement Facilities shall be included in the determinations and allocations pursuant to Article 26. There shall be no separate variable operation, maintenance, power, and replacement component of the East Branch Enlargement Transportation Charge.

(g) Redetermination of Charges

(1) Determinative Factors Subject to Retroactive Charge

The State shall redetermine the values and amounts chargeable to Participating Contractors in 1988 or the year following the year in which this article is effective, whichever is later, and each year thereafter as needed in order that the East Branch Enlargement charges to the Agency accurately reflect the increases or decreases from year to year in projected costs, properly attributable to each Participating Contractor. In addition, each such redetermination shall include an adjustment of the components of the charges to be paid by each Participating Contractor for succeeding years which shall account for the differences, if any, between those factors used by the State in determining the amounts of such components for all preceding years and the factors as then currently known by the State. Such adjustment shall be computed by the State and paid by the Participating Contractor or credited to the Participating Contractor's account in the manner described in Articles 49(g)(2) and 49(g)(3) below.

(2) Adjustment: East Branch Enlargement Transportation Charge – Capital Cost Component

Adjustments for prior underpayments or overpayments of the capital cost component of the East Branch Enlargement Transportation Charge to the Participating Contractor, together with accrued interest charges or credits thereon computed at the then current Surplus Money Investment Fund rate on the amount of the underpayment or overpayment and compounded annually for the number of years from the year the underpayment or overpayment occurred to and including the year following the redetermination, shall be paid in the year following the redetermination.

(3) Adjustment: East Branch Enlargement Transportation Charge - Minimum Operation, Maintenance, Power, and Replacement Component

One-twelfth of the adjustments for prior underpayments or overpayments of the Participating Contractor's minimum operation, power, and replacement component of the East Branch Enlargement Transportation Charge for each year shall be added or credited and paid in the corresponding month of the year following the redetermination, together with accrued interest charges or credits thereon computed at the then current Surplus Money Investment Fund rate on the amount of the underpayment or overpayment and compounded annually for the number of years from the year when the underpayment or overpayment occurred to and including the year following the redetermination.

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(h) East Branch Operation

Requests for delivery of water through the East Branch Enlargement Facilities shall be subject to Article 12. Except as otherwise provided, the East Branch Enlargement Facilities shall be operated as an integral part of the East Branch Aqueduct and shall be subject to the same criteria. To the extent that then-current deliveries involve rates of flow within the limitations of Article 12(b) or involve capacities less than those on which the contractor's capital charges are based, the State shall provide the deliveries with no power peaking charges. To the extent delivery capability is available to permit then-current deliveries at a rate of flow in excess of the lesser of that provided in (a) Article 12(b), or (b) of the sum of the capacities on which the Agency's capital charges are based in the basic East Branch Aqueduct Facilities and the Agency's proportional share of the operational capacity of the East Branch Enlargement Facilities, such deliveries will be allowed if such deliveries do not adversely affect the ability of other contractors to receive entitlement deliveries. However, if such excess deliveries would cause increased power costs to any other contractors, the Agency shall pay the power costs that would otherwise increase power costs to the other water contractors. These power costs resulting from such excess deliveries will be based upon administrative cost allocation procedures adopted by the Director of the Department of Water Resources after consultation with the contractors. Before beginning deliveries that would involve extra power peaking charges, the State shall consult with the Agency to determine if the Agency desires (a) a change in its delivery schedule or (b) modifications in East Branch Aqueduct or Enlargement operation to avoid the increased power costs.

(i) Failure to Meet Payment Obligations Under Article 49

(1) If a Participating Contractor defaults in payments due under Article 49 and the costs of other Participating Contractors would as a consequence be increased, the State shall, in addition to any actions taken pursuant to Articles 32 and 34, notify the defaulting Participating Contractor that if the Participating Contractor fails to cure the default within 30 days, the State will offer the capacity provided for the Participating Contractor to the other Participating Contractors. If the Participating Contractor fails to cure the default within thirty (30) days of notice by the State, the State shall offer to each Participating Contractor, in proportion to the contractor's degree of participation in the enlargement, the opportunity to assume responsibility for the capital charges and delivery capability on which the defaulting contractor's capital costs were based. If Participating Contractors fail to cure the default, The Metropolitan Water District of Southern California shall assume responsibility for the capital charges on which the defaulting contractor's capital costs were based, and shall receive the capacity associated with such capital charges. Article 49(b)(1) shall be appropriately adjusted.

(2) No credits shall be assigned to a Participating Contractor under this article while the Participating Contractor is in default of any payment to the State under this article for a period of more than thirty (30) days.

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50.[69] WATER SYSTEM REVENUE BOND FINANCING COSTS

(a) <Cost Provisions>

Charges to the Agency for water system revenue bond financing costs shall be governed by provisions of this article. Charges to all contractors for water system revenue bond financing costs shall return to the State an amount equal to the annual financing costs the State incurs in that year for water system revenue bonds (including water system revenue bond anticipation notes). Annual financing costs shall include, but not be limited to, any annual principal and interest on water system revenue bonds plus any additional requirements for bond debt service coverage, deposits to reserves, and annual premiums for insurance or other security obtained pursuant to subdivision (f) of this article. The State shall provide credits to the contractors for excess reserve funds, excess debt service coverage, interest, and other earnings of the State in connection with repayment of such revenue bond financing costs, when and as permitted by the bond resolution. When such credits are determined by the State to be available, such credits shall be promptly provided to the contractors and shall be in proportion to the payments under this article from each contractor. Reserves, bond debt service coverage, interest, and other earnings may be used in the last year to retire the bonds.

(b) <Annual Charges>

Annual charges to recover water system revenue bond financing costs shall consist of two elements.

(1) The first element shall be an annual charge to the Agency for repayment of capital costs of water system facilities as determined under Articles 22 and 24 of this contract with interest at the project interest rate. For conservation facilities, the charge shall be a part of the capital cost component of the Delta Water Charge in accordance with Article 22. For transportation facilities, the charge shall be a part of the capital cost component of the Transportation Charge in accordance with Article 24.

(2) The second element shall be the Agency's share of a Water System Revenue Bond Surcharge to be paid in lieu of a project interest rate adjustment. The total annual amount to be paid by all contractors under this element shall be the difference between the total annual charges under the first element and the annual financing costs of the water system revenue bonds. The amount to be paid by each contractor shall be calculated annually as if the project interest rate were increased to the extent necessary to produce revenues from all contractors sufficient to pay such difference for that year. In making that calculation, adjustments in the Agency's Transportation capital cost component charges for prior overpayments and underpayments shall be determined as if amortized over the remaining years of the project repayment period.

(c) <Agency Invoice>

The Water System Revenue Bond Surcharge will be identified by component and charge in the Agency's invoice.

69 Amended: Amendment No. 16

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(d) Timing of Payments

Payments shall be made in accordance with Article 29(f) of this contract.

(e) Reduction in Charges

The Water System Revenue Bond Surcharge under Article 50(b)(2) shall cease for each series of water system revenue bonds when that series is fully repaid. However, the annual charge determined pursuant to Article 50(b)(1) shall continue to be collected for the time periods otherwise required under Articles 22 and 24.

After the Department has repaid the California Water Fund in full and after each series of Water System Revenue Bonds is repaid, the Department will reduce the charges to all contractors in an equitable manner in a total amount that equals the amount of the charges under Article 50(b)(1) that the Department determines is not needed for future financing of facilities of the System which, in whole or in part, will serve the purposes of the water supply contract with the Agency.

(f) <Default Protection>

To the extent economically feasible and justifiable, as determined by the State after consultation with contractors, the State shall maintain insurance or other forms of security protecting bondholders and non-defaulting contractors against costs resulting from the failure of any contractor to make the payments required by this article.

(g) <Bond Issuing Process>

Before issuing each series of water system revenue bonds, the State shall consult with the contractors, prepare a plan for the State's future financing of water system facilities, and give the Agency an opportunity to comment on the plan. The plan shall include but not be limited to the size of any water system revenue bond issuances and the form of any necessary resolutions or supplements.

(h) Defaults

(1) If a contractor defaults partially or entirely on its payment obligations calculated under this article and sufficient insurance or other security protecting the non-defaulting contractors is not provided under Article 50(f), the State shall allocate a portion of the default to each non-defaulting contractor. The Agency's share of the default shall be equal to an amount determined by multiplying the total default amount to be charged to all non-defaulting contractors by the ratio that the Agency's maximum Table A entitlement bears to the maximum Table A entitlements of all non-defaulting contractors. However, such amount shall not exceed in any year 25 percent of the Water System Revenue Bond financing costs that are otherwise payable by the Agency in that year. The amount of default to be charged to non-defaulting contractors shall be reduced by any receipts from insurance protecting non-defaulting contractors and bond debt service coverage from a prior year and available for such purpose.

(2) If a contractor defaults partially or entirely on its payment obligations under this article, the State shall also pursuant to Article 20, upon six months' notice to the defaulting contractor, suspend water deliveries under Article 20 to the defaulting contractor so long as the default continues. The suspension of water deliveries shall be

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proportional to the ratio of the default to the total water system revenue bond payments due from the defaulting contractor. However, the State may reduce, eliminate, or not commence suspension of deliveries pursuant to this subparagraph if it determines suspension in the amounts otherwise required is likely to impair the defaulting contractor's ability to avoid further defaults or that there would be insufficient water for human consumption, sanitation, and fire protection. The State may distribute the suspended water to the non-defaulting contractors on terms it determines to be equitable.

(3) During the period of default, credits otherwise due the defaulting contractor shall be applied to payments due from the defaulting contractor.

(4) Except as otherwise provided in Article 50(h)(3), the defaulting contractor shall repay the entire amount of the default to the State with interest compounded annually at the Surplus Money Investment Fund rate before water deliveries that had been suspended shall be fully resumed to that contractor. If the defaulting contractor makes a partial repayment of its default, the Department may provide a proportional restoration of suspended deliveries. The amount of the default to be repaid shall include any amounts previously received by the State from insurance proceeds, bond debt service coverage, or other reserves, and payments from other contractors pursuant to this subparagraph (h). The defaulting contractor shall not be entitled to any make-up water deliveries as compensation for any water deliveries suspended during the period when the contractor was in default.

(5) At such time as the default amount is repaid by the defaulting contractor, the non-defaulting contractors shall receive credits in proportion to their contributions towards the amount of the default with interest collected by the State on the defaulted amount.

(6) In the event there is an increase in the amount a non-defaulting contractor contributes to reserves and/or bond debt service coverage, such increase shall be handled in the same manner as provided in Article 50(a).

(7) Action taken pursuant to this subarticle shall not deprive the State of or limit any remedy provided by this contract or by law for the recovery of money due or which may become due under this contract.

(i) Power of Termination

(1) The Department and the Agency agree to negotiate in good faith the development of a means to provide adequate protection for the Department's cash flow into priorities one and two for revenues under Water Code Section 12937(b) with the goal of obtaining agreement by April 1, 1987. The Department and the Agency agree to continue negotiations beyond April 1, 1987 if necessary to meet their common goal of arriving at agreement.

(2) If such an agreement has not been reached by April 1, 1987, and if the Director of Water Resources determines that adequate progress has not been made toward such an agreement, the Director may give notice to the Agency and other contractors that he intends to exercise the power to terminate provided in this subarticle 50(i). The Director's authority to give such a notice shall terminate on July 1, 1988.

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(3) After six months from the date of issuing the notice of intent to terminate, but in no event later than January 1, 1989, the Director may terminate the authority of the Department to issue additional series of water system revenue bonds using the repayment provisions of Article 50. The Department shall promptly notify the Agency and other contractors that the Director has exercised the power of termination.

(4) No additional series of water system revenue bonds shall be issued under the provisions of this Article 50 after the Director has exercised the power to terminate, but Article 50 shall remain in effect as to any series of water system revenue bonds issued prior to the time the Director exercises the power to terminate.

(5) An exercise of the power to terminate provided in this subarticle 50(i) shall also rescind any changes made by this amendment in the schedule of payment of overpayment or underpayment of capital costs resulting from a change in the project interest rate and shall also rescind the addition of item (7) to Article 1(r). However, if the Department has borrowed any funds under Article 1(r)(7), Article 1(r)(7) shall remain in effect as to that and only that borrowing. Upon the exercising of the power to terminate, subarticles 28(e) and (f) shall be rescinded and Article 1(r) shall read as it previously read as shown on Attachment Number 1 to this amendment. <Attachment 1 is included at the end of this contract.>

(6) At any time before January 1, 1989, so long as the Director has not already exercised the power of termination, the Director may irrevocably waive his right to exercise the power of termination or may rescind any previously issued notice of intention to terminate.

(7) If the Director does not exercise the power of termination before January 1, 1989, this Subarticle 50(i) shall expire, and the remainder of this Article 50 shall remain in effect. Changes made by this amendment to other articles shall also remain in effect.

(j)[70] <Payments Unaffected by Article 51>

Amounts payable under this article shall not be affected by any reductions in payments pursuant to Article 51.

51.[71] FINANCIAL ADJUSTMENTS

(a) General Operating Account

(1) The State shall maintain a General Operating Account to provide the moneys needed to pay obligations incurred by the State of the types described in Water Code sections 12937(b)(1) and (2) in the event of emergency or cash flow shortages.

(2) An initial deposit of $15 million shall be made available from revenue bond reserves that are no longer required by revenue bond covenants and that would otherwise be credited to the contractors including the Agency. In 1998 or when the funds become available an additional $7.7 million will be deposited in the General Operating Account from revenue bond reserves that are no longer required by revenue bond

70 Amended: Amendment No. 19
71 Amended: Amendment No. 19

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covenants and that would otherwise be credited to the contractors including the Agency, bringing the deposits to that account under this article to $22.7 million.

(3) The balance in the General Operating Account will increase pursuant to subdivision (e)(3)(v) of this article to an amount determined by the State but not in excess of $32 million. However, after the year 2001, the maximum amount of the fund may increase or decrease annually by not more than the same percentage as the increase or decrease in the charges, other than power charges for pumping water, to all the contractors for the previous year from the charges for the year before that for obligations under subdivisions (c)(2)(ii) and (iii) of this article.

(b) State Water Facilities Capital Account

(1) The State shall establish a State Water Facilities Capital Account to be funded from revenues available under Water Code section 12937(b)(4). Through procedures described in this article and as limited by this article, the State may consider as a revenue need under subdivision (c)(2)(v) of this article and may deposit in the State Water Facilities Capital Account the amounts necessary to pay capital costs of the State Water Facilities for which neither general obligation bond nor revenue bond proceeds are available, including but not limited to planning, reconnaissance and feasibility studies, the San Joaquin Valley Drainage Program and, through the year 2000, the CALFED Bay-Delta Program.

(2) The Director of the Department of Water Resources shall fully consult with the contractors and consider any advice given prior to depositing funds into this account for any purposes. Deposits into this account shall not exceed the amounts specified in subdivision (c)(2)(v) of this article plus any amounts determined pursuant to subdivision (e)(1)(iii) of this article.

(3) The State shall use revenue bonds or other sources of moneys rather than this account to finance the costs of construction of any major capital projects.

(c) Calculation of Financial Needs

(1) Each year the State shall calculate in accordance with the timing provisions of Articles 29 and 31 the amounts that would have been charged (but for this article) to each contractor as provided in other provisions of this contract.

(2) Each year the State shall also establish its revenue needs for the following year for the following purposes, subject to the following limitations:

(i) The amount required to be collected under the provisions of this contract, other than this article, with respect to all revenue bonds issued by the State for Project Facilities.

(ii) The amount required for payment of the reasonable costs of the annual maintenance and operation of the State Water Resources Development System and the replacement of any parts thereof as described in Water Code section 12937(b)(1). These costs shall not include operation and maintenance costs of any Federal Central Valley Project facilities constructed by the United States and acquired by the State of California after 1994, other than the State's

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share of the joint use facilities which include San Luis Reservoir, the San Luis Canal and related facilities.

(iii) The amount required for payment of the principal of and interest on the bonds issued pursuant to the Burns-Porter Act as described in Water Code section 12937(b)(2).

(iv) Any amount required for transfer to the California Water Fund in reimbursement as described in Water Code section 12937(b)(3) for funds utilized from said fund for construction of the State Water Resources Development System.

(v) For the years 1998 and thereafter, the amount needed for deposits into the State Water Facilities Capital Account as provided in subdivision (b) of this article, but (A) not more than $6 million per year for the years 1998, 1999 and 2000, and (B) not more than $4.5 million per year for the years 2001 and thereafter.

(3) Subject to the provisions of subdivision (e) of this article, the State shall reduce the annual charges in the aggregate for all contractors by the amounts by which the hypothetical charges calculated pursuant to subdivision (c)(1) above exceed the revenue needs determined pursuant to subdivision (c)(2) above. The reductions under this article shall be apportioned among the contractors as provided in subdivisions (d), (e), (f) and (g) of this article. Reductions to contractors shall be used to reduce the payments due from the contractors on each January 1 and July 1; *Provided,* however, that to the extent required pursuant to subdivision (h) of this article, each Agricultural Contractor shall pay to the Agricultural Rate Management Trust Fund an amount equal to the reduction allocated to such Agricultural Contractor. Any default in payment to the trust fund shall be subject to the same remedies as any default in payment to the State under this contract.

(4) The State may submit a supplemental billing to the Agency for the year in an amount not to exceed the amount of the prior reductions for such year under this article if necessary to meet unanticipated costs for purposes identified in Water Code section 12937(b)(1) and (2) for which the State can issue billings under other provisions of this contract. Any supplemental billing made to the Agency for these purposes shall be in the same proportion to the total supplemental billings to all contractors for these purposes as the prior reduction in charges to the Agency in that year bears to the total reductions in charges to all contractors in that year and shall be treated as reducing the amount of the reduction made available for that year to the Agency by the amount of the supplemental bill to the Agency.

(5) The State may also submit a supplemental billing to the Agency for the year if necessary to meet unanticipated costs for revenue bond debt service and coverage for which the State can issue a statement of charges under provisions of this contract other than this article. The relative amounts of any supplemental billing made to the Agency and to other contractors for revenue bond purposes shall be governed by such other applicable provisions of this contract.

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(6) Payment of any supplemental billing shall be due thirty days after the date of the invoice. Delinquency and interest on delinquent amounts due shall be governed by Article 32.

(d) Apportionment of Reductions between Agricultural and Urban Contractors

(1) Reductions available under this article are projected to begin to occur in 1997**.** The numbers and percentages in this subdivision reflect certain estimates of dollars and sharing of reductions. The actual reductions may vary slightly from the amounts described below. The State shall determine the availability of reductions for each year in accordance with this article.

(2) Reductions shall be phased in as follows:

(i) In 1997 reductions in the amount of $14 million are projected to be available and shall be applied as follows: the first $10 million of reductions shall be apportioned among the Agricultural Contractors, and the remaining reductions shall be apportioned among the Urban Contractors.

(ii) In 1998 reductions in the amount of $17 million are projected to be available and shall be applied as follows: the first $10 million of reductions shall be apportioned among the Agricultural Contractors, and the remaining reductions shall be apportioned among the Urban Contractors.

(iii) In 1999 reductions in the amount of $32 million are projected to be available and shall be applied as follows**:** the first $10 million of reductions shall be apportioned among the Agricultural Contractors, and the remaining reductions shall be apportioned among the Urban Contractors.

(iv) In 2000 reductions in the amount of $33 million are projected to be available and shall be applied as follows: the first $10 million of reductions shall be apportioned among the Agricultural Contractors, and the remaining reductions shall be apportioned among the Urban Contractors.

(3)

(i) In the event that the aggregate amount of reductions in any of the years 1997 through 2000 is less than the respective amount projected for such year in subdivision (d)(2) above, the shortfall shall be taken first from reductions that would have been provided to Urban Contractors. Only after all reductions to Urban Contractors have been eliminated in a given year shall the remaining shortfall be taken from reductions scheduled for Agricultural Contractors. Any projected reductions not made available due to such shortfalls in the years 1997 through 2000 shall be deferred with interest at the project interest rate to the earliest subsequent years when reductions in excess of those projected for those years are available. Such deferred reductions with interest at the project interest rate shall be applied to the charges of the contractors whose reductions have been deferred.

(ii) In the event that the aggregate amount of reductions available in any of the years 1997 through 2000 is greater than the sum of (A) the respective

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amount projected for such year in subdivision (d)(2) above, plus (B) the amount of any shortfall with accrued interest at the project interest rate, remaining from any prior year to be applied, the excess shall be applied for the purposes and in the amounts per year described in subdivisions (e)(3)(iii), (iv), (v) and (vi) of this article, in that order.

(4) In 2001 and in each succeeding year reductions equal to or in excess of $40.5 million are projected to be available and shall be applied as follows:

(i) If reductions are available in an amount that equals or exceeds $40.5 million, $10 million of reductions shall be apportioned among the Agricultural Contractors, and $30.5 million of reductions shall be apportioned among the Urban Contractors. If reductions are available in an amount greater than $40.5 million, the excess shall be applied as provided in subdivision (e)(3) of this article, subject however to subdivision (e)(1).

(ii) If reductions are available in an amount less than $40.5 million in any of these years, the reductions shall be divided on a 24.7% - 75.3% basis between the Agricultural Contractors and the Urban Contractors respectively. Any such reductions not made due to shortages shall be applied without interest in the next year in which reductions in an amount in excess of $40.5 million are available pursuant to subdivision (e)(3) of this article with any remainder that is not available carried over without interest to be applied in the earliest subsequent years when reductions in excess of $40.5 million are available.

(5) Annual charges to a contractor shall only be reduced prospectively from and after the date it executes the Monterey Amendment to this contract. Apportionments of reductions shall be calculated on the assumption that all contractors have executed such amendment.

(e) Review of Financial Requirements

(1) In 2001 and every fifth year thereafter the Director of the Department of Water Resources, in full consultation with the contractors, will review the financial requirements of the State Water Resources Development System and determine the following:

(i) The amount of revenues that are needed for State Water Resources Development System purposes in addition to those needed for the purposes specified in subdivisions (c)(2)(i), (ii), (iii), and (iv) of this article;

(ii) If the aggregate amount that would have been charged to all contractors in any year but for this article exceeds the sum of (A) the amount of revenues needed for the purposes specified in subdivisions (c)(2)(i), (ii), (iii) and (iv), plus (B) $40.5 million, plus (C) the amount determined pursuant to subdivision (c)(2)(v) of this article, the amount of such excess.

(iii) The amount of the excess determined in subdivision (e)(1)(ii) above that should be collected by the State for additional State Water Resources Development System purposes and the amount of such excess that should be used for further annual charge reductions.

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(2) After making the determinations required above, the State may collect the revenues for additional State Water Resources Development System purposes in the amount determined pursuant to subdivision (e)(1)(iii) above.

(3) If and to the extent that as a result of such determinations, the aggregate amount to be charged to contractors is to be reduced by more than $40.5 million per year, the following priorities and limitations shall apply with respect to the application of such additional reductions:

(i) First, reductions shall be allocated to make up shortfalls in reductions from those projected for the years 1997 through 2000 with interest at the project interest rate pursuant to subdivision (d)(3)(i).

(ii) Second, reductions shall be allocated to make up shortfalls in reductions from those projected for the years beginning with 2001 without interest pursuant to subdivision (d)(4)(ii).

(iii) Third, additional reductions in the amount of $2 million per year shall be apportioned among the Urban Contractors until a total of $19.3 million in such additional reductions have been so applied.

(iv) Fourth, reductions up to an additional $2 million per year shall be allocated to make up any shortfalls in the annual reductions provided for in subdivision (e)(3)(iii).

(v) Fifth, $2 million per year shall be charged and collected by the State and deposited in the General Operating Account to bring the account ultimately up to an amount determined by the State but not in excess of $32 million with adjustments as provided in subdivision (a) of this article. Any amount in the account in excess of this requirement shall be returned to general project revenues.

(vi) Sixth, remaining amounts if any shall be used for reductions divided on a 24.7% - 75.3% basis between the Agricultural Contractors and the Urban Contractors respectively.

(f) Apportionment of Reductions among Urban Contractors

Reductions in annual charges apportioned to Urban Contractors under subdivisions (d) and (e) of this article shall be further allocated among Urban Contractors pursuant to this subdivision. The amount of reduction of annual charges for each Urban Contractor shall be based on each Urban Contractor's proportionate share of total allocated capital costs as calculated below, for both project conservation and project transportation facilities, repaid by all Urban Contractors over the project repayment period.

(1) The conservation capital cost component of the reduction allocation shall be apportioned on the basis of maximum annual entitlement. Each Urban Contractor's proportionate share shall be the same as the percentage of that contractor's maximum annual entitlement to the total of all Urban Contractors' maximum annual entitlements.

(2) The transportation capital cost component of the reduction allocation shall be apportioned on the basis of transportation capital cost component repayment

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obligations, including interest over the project repayment period. Each Urban Contractor's proportionate share shall be the same as the percentage that the contractor's total transportation capital cost component repayment obligation is of the total of all Urban Contractors' transportation capital cost component repayment obligations.

(i) Recalculations shall be made annually through the year 1999. Beginning in the year 2000 recalculations shall be made every five years unless an Urban Contractor requests a recalculation for an interim year and does so by a request in writing delivered to the Department by January 1 of the year in which the recalculation is to take place.

(ii) The transportation capital cost component repayment obligations, for purposes of this Article 51(f), shall be based in the year of recalculation on the then most recent Department of Water Resources Bulletin 132, Table B-15, "Capital Cost Component of Transportation Charge for Each Contractor," or its equivalent, excluding any costs or entitlement associated with transfers of entitlement from Agricultural Contractors pursuant to Article 53.

(3) To reflect the relative proportion of the conservation capital cost component and the transportation capital cost component to the total of all capital cost repayment obligations, the two cost components shall be weighted as follows:

(i) The conservation capital cost component shall be weighted with a thirty percent (30%) factor. The weighting shall be accomplished by multiplying each Urban Contractor's percentage of maximum annual entitlements as calculated in subdivision (f)(1) of this article by thirty percent (30%).

(ii) The transportation capital cost component shall be weighted with a seventy percent (70%) factor. The weighting shall be accomplished by multiplying each Urban Contractor's percentage of transportation capital cost component repayment obligations as calculated in subdivision (f)(2) of this article by seventy percent (70%).

(iii) A total, weighted capital cost percentage shall be calculated for each Urban Contractor by adding the weighted conservation capital cost component percentage to their weighted transportation capital cost component percentage.

(4) The total amount of the annual charges to be reduced to Urban Contractors in each year shall be allocated among them by multiplying the total amount of annual charges to be reduced to the Urban Contractors by the total, weighted capital cost percentages for each such contractor. If the amount of the reduction to an Urban Contractor is in excess of that contractor's payment obligation to the Department for that year, such excess shall be reallocated among the other Urban Contractors.

(5) In the case of a permanent transfer of urban entitlement, the proportionate share of annual charge reductions associated with that entitlement shall be transferred with the entitlement to the buying contractor. In the case of an entitlement transfer by either Santa Barbara County Flood Control and Water Conservation District or San Luis Obispo County Flood Control and Water Conservation District, the reductions in annual

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charges to that agency shall be allocated (a) on the basis of that entitlement being retained by that agency which bears Coastal Branch Phase II transportation costs, (b) on the basis of that entitlement being retained by that agency which does not bear Coastal Branch Phase II transportation costs, and (c) on the basis of the balance of that agency's entitlement which also does not bear Coastal Branch Phase II transportation costs.

(g) Apportionment of Reductions Among Agricultural Contractors

(1) Reductions in annual charges apportioned to Agricultural Contractors under subdivisions (d) and (e) of this article shall be allocated among the Agricultural Contractors pursuant to this subdivision. The amount of reduction of annual charges for each Agricultural Contractor for the years 1997 through 2001 shall be based on each Agricultural Contractor's estimated proportionate share of the total project costs, excluding the variable operation, maintenance, power and replacement components of the Delta Water Charge and the Transportation Charge and also excluding off-aqueduct power charges, to be paid by all Agricultural Contractors for the years 1997 through 2035, calculated without taking into account this article. For purposes of these calculations, Kern County Water Agency's and Dudley Ridge Water District's estimated project costs shall not include any costs associated with the 45,000 acre-feet of annual entitlement being relinquished by those contractors pursuant to subdivision (i) of Article 53. Also, for purposes of these calculations, an Agricultural Contractor's estimated project costs shall not be reduced by the transfer of any of the 130, 000 acre-feet of annual entitlements provided for in subdivisions (a) through (i) of Article 53. The proportionate shares for 1997 through 2001 shall be calculated as follows:

(i) Each Agricultural Contractor's statement of charges received on July 1, 1994, shall be the initial basis for calculating the proportionate shares for the five years 1997 through 2001.

(ii) Each Agricultural Contractor's estimated capital and minimum components of the Delta Water Charge and the Transportation Charge (excluding off-aqueduct power charges) and Water Revenue Bond Surcharge shall be totaled for the years 1997 through 2035.

(iii) Kern County Water Agency and Dudley Ridge Water District totaled costs shall be reduced for the 45,000 acre-feet of annual entitlement being relinquished by them.

(iv) Any reductions in an Agricultural Contractor's totaled costs resulting from the transfer of any of the 130,000 acre-feet of annual entitlement shall be re-added to that contractor's costs.

(v) Each Agricultural Contractor's proportionate share shall be computed by dividing that contractor's total costs by the total costs for all Agricultural Contractors determined pursuant to subparagraphs (ii), (iii) and (iv) above.

(2) The reductions in annual charges, for 1997 through 2001, shall be calculated using the method described in subdivision (g)(1) of this article.

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(3) The allocation shall be recalculated using the same method described in subdivision (g)(1) of this article every five years beginning in 2002, if any Agricultural Contractor requests such a recalculation. Any recalculation shall be based on project cost data beginning with the year that the recalculation is to become effective through 2035.

(h) Agricultural Rate Management Trust Fund

(1) **Establishment.** Through a trust agreement executed contemporaneously with this amendment, the State and the Agricultural Contractors that sign the Monterey Amendments shall establish the Agricultural Rate Management Trust Fund with a mutually agreed independent trustee.

(2) **Separate Accounts**. The trustee shall maintain within the trust fund a separate account for each Agricultural Contractor that signs the trust agreement to hold deposits made pursuant to this article.

(3) **Deposits.** Each Agricultural Contractor that signs the trust agreement shall deposit into such contractor's account within the trust fund, at the same time as payments would otherwise be required by this contract to be made to the State, an amount equal to the amount by which such contractor's charges under this contract have been reduced by reason of this article, until the balance in such contractor's account within the trust fund is the same percentage of $150,000,000 as such contractor's percentage share of reductions made available to all Agricultural Contractors as specified in subdivision (g) of this article. In 2002 and every fifth year thereafter, the Agricultural Contractors will review the maximum accumulation in the trust fund (the "Cap") and determine whether the cap should be adjusted. However, the Cap shall not be reduced below an aggregate of $150,000,000 for all Agricultural Contractor accounts.

(4) **Trust Fund Disbursements.**

(i) In any year in which the State's allocation of water to an Agricultural Contractor by April 15th of that year is less than one-hundred percent (100%) of the contractor's requested annual entitlement for that year, the trustee shall, to the extent there are funds in that contractor's account, distribute to the State from such account for the benefit of that contractor an amount equal to the percentage of the total of that contractor's statement of charges for that year, as redetermined by the State on or about May 15th of that year, for (a) the Delta Water Charge; (b) the capital cost and minimum operation, maintenance, power and replacement components of the Transportation Charge (including off-aqueduct power charges); and (c) the water system revenue bond surcharge, that is equal to the percentage of that contractor's annual entitlement for that year that was not allocated to it by the State by April 15th of that year.

(ii) In addition to the provisions of subdivision (h)(4)(i) of this article, if on April 15 of any year any of the irrigable land within the Tulare Lake Basin Water Storage District (Tulare) is flooded, and Tulare in writing requests the trustee to do so, the trustee shall, to the extent there are funds in Tulare's account, distribute to the State from such account for the benefit of Tulare an amount equal to the percentage of the total of Tulare's statement of charges for that year, as redetermined by the State on or about May 15th of that year, for (a) the Delta

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Water Charge; (b) the capital cost and minimum components of the Transportation Charge (including off-aqueduct power charges); and (c) the water system revenue bond surcharge, that is equal to the percentage of the irrigable land within Tulare that is flooded on April 15.

(iii) Each Agricultural Contractor shall remain obligated to make payments to the State as required by other articles in this contract. Any amount to be disbursed pursuant to subdivisions (h)(4)(i) and (h)(4)(ii) shall be paid by the trustee to the State on July 1 of the year involved and shall be credited by the State toward any amounts owed by such respective Agricultural Contractor to the State as of that date. However, an Agricultural Contractor may direct the trustee to make the disbursement to that Agricultural Contractor which shall in turn make the payment to the State as required by other provisions of this contract. If the amount to be disbursed exceeds the amount owed to the State by such contractor as of July 1, the excess shall be disbursed by the Trustee to the State at the time of and in payment of future obligations owed to the State by such contractor. Alternatively, upon the request of such contractor, all or part of the excess shall be paid by the trustee to that contractor in reimbursement of prior payments by the contractor to the State for that year.

(5) **Payment of Supplemental Bills.** In any year in which a supplemental bill has been submitted to an Agricultural Contractor pursuant to subdivision (c)(4) of this article, such supplemental bill shall be treated as reducing by an equal amount the obligation of such contractor for that year to make payments into the Agricultural Rate Management Trust Fund. To the extent that such contractor has already made payments to the trust fund in an amount in excess of such contractor's reduced trust fund payment obligation, such contractor may request the trustee to use the excess from the trust fund to pay the supplemental bill.

(6) **Discharge of Payment Obligation.** Each payment to the State by the trust fund shall discharge and satisfy the Agricultural Contractor's obligation to pay the amount of such payment to the State. No reimbursement of the trust fund by the Agricultural Contractor for such payments shall be required. However, each Agricultural Contractor shall continue to make deposits to the trust fund matching the amount of each year's reductions as provided in subdivision (d) of this article so long as the amount in that contractor's account is less than its share of the Cap.

(7) **Distribution of Funds in Excess of the Cap**. Whenever accumulated funds (including interest) in an Agricultural Contractor's account in the trust fund exceed that contractor's share of the Cap, or the estimated remaining payments the contractor is required to make to the State prior to the end of the project repayment period, that contractor may direct the trustee to pay such excess to the contractor.

(8) **Termination of Trust Fund.** At the end of the project repayment period, the Agricultural Rate Management Trust Fund shall be terminated and any balances remaining in the accounts for each of the Agricultural Contractors shall be disbursed to the respective Agricultural Contractors.

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(i) Definitions

For the purposes of this article, the following definitions will apply:

(1) "Agricultural Contractor" shall mean the following agencies as they now exist or in any reorganized form:

(i) County of Kings,
(ii) Dudley Ridge Water District,
(iii) Empire West Side Irrigation District,
(iv) Kern County Water Agency for 993,300 acre-feet of its entitlement,
(v) Oak Flat Water District,
(vi) Tulare Lake Basin Water Storage District.

(2) "Urban Contractor" shall mean every other agency having a long term water supply contract with the State as they exist as of the date of this amendment or in any reorganized form as well as Kern County Water Agency for 119,600 acre-feet of its entitlement.

(j) <No Subtitle>

Except as provided in subdivisions (c)(4) and (c)(5), this article shall not be interpreted to result in any greater State authority to charge the contractors than exists under provisions of this contract other than this article.

52.[72] KERN WATER BANK

(a) <No Subtitle>

The State shall convey to the Kern County Water Agency (KCWA) in accordance with the terms set forth in the agreement between the State of California Department of Water Resources and Kern County Water Agency entitled "Agreement for the Exchange of the Kern Fan Element of the Kern Water Bank" (the Kern Water Bank Contract), the real and personal property described therein.

(b) <No Subtitle>

Subject to the approval of KCWA, other contractors may be provided access to and use of the property conveyed to KCWA by the Kern Water Bank Contract for water storage and recovery. Fifty percent (50%) of any project water remaining in storage on December 31, 1995, from the 1990 Berrenda Mesa Demonstration Program and the La Hacienda Water Purchase Program shall be transferred to KCWA pursuant to the Kern Water Bank Contract. The remaining fifty percent (50%) of any such water (approximately 42,828.5 acre-feet) shall remain as project water and the State's recovery of such project water shall be pursuant to the provisions of a separate recovery contract. Any other Kern Water Bank demonstration program water shall remain as project water and the State's recovery of such water shall be pursuant to the provisions of the respective contracts for implementation of such demonstration programs.

72 Amended: Amendment No. 19

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53.[73] PERMANENT TRANSFERS AND REDUCTIONS OF ENTITLEMENT

(a) <No Subtitle>

Article 41 provides that no assignment or transfer of a contract or any part thereof, rights thereunder or interest therein by a contractor shall be valid unless and until it is approved by the State and made subject to such reasonable terms and conditions as the State may impose. In accordance with State policy to assist water transfers, the State and the County of Kings, Dudley Ridge Water District (DRWD), Empire West Side Irrigation District, Kern County Water Agency (KCWA), Oak Flat Water District and Tulare Lake Basin Water Storage District (for the purposes of this article the "Agricultural Contractors") shall, subject to the conditions set forth in this article, expeditiously execute any necessary documents and approve all contracts between willing buyers and willing sellers until permanent transfers totaling 130,000 acre-feet of annual entitlements of the Agricultural Contractors and, to the extent provided in such contracts, rights in project transportation facilities related to such annual entitlement have been made to other contractors (the "Urban Contractors") or noncontractors in accordance with the provisions of this article. Such approval requirement shall apply to all contracts executed prior to January 1, 2011. KCWA shall be responsible for approval of such transfers for any portion of the 130,000 acre-feet not previously made available under this article by the other Agricultural Contractors. A contract between a willing buyer and a willing seller shall mean a contract between (1) a buyer which is an Urban Contractor or, to the extent provided in subdivision (e) of this article, a noncontractor and (2) a seller which is an Agricultural Contractor or a public entity which obtains project water from an Agricultural Contractor.

(b) <No Subtitle>

The State shall not be obligated to approve any transfer of annual entitlements if in its judgment the transfer would impair the security of the State's bondholders and the State may impose conditions on any transfer as necessary to make the delivery of the water operationally feasible and to assure that the transportation costs associated with the transferred entitlement are fully repaid. Transfers not approved by the State shall not be considered as part of the 130,000 acre-feet of annual entitlements provided for in this article.

(c) <No Subtitle>

KCWA member units shall have 90 days to exercise a right of first refusal to purchase any annual entitlements being offered for sale to Urban Contractors by another KCWA member unit pursuant to this article, other than those annual entitlements made available to Urban Contractors by subdivision (d) of this article, by agreeing to pay the same price offered by the buyer. Any such sales to KCWA member units exercising such right of first refusal shall not be considered a part of the 130,000 acre-feet of annual entitlements provided for in this article.

(d) <No Subtitle>

Any permanent transfers of annual entitlements by Agricultural Contractors to noncontractors, including transfers to KCWA urban member units or to KCWA's Improvement District Number 4, other than transfers pursuant to subdivision (c) of this article, will be considered a part of the 130,000 acre-feet of annual entitlements provided for in this article if the

73 Amended: Amendment No. 19

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Urban Contractors have been given a right of first refusal to purchase such annual entitlements as well as transportation rights in accordance with the following terms and procedure:

(1) The Agricultural Contractor shall provide the State a copy of a bona fide contract or Proposed Contract (the "Proposed Contract") and the State shall, within five working days of receipt, provide copies of such Proposed Contract to all Urban Contractors together with a Notice of Proposed Contract stating the date on or before which a Notice of Intent to Exercise a Right of First Refusal (NOI) must be delivered to both the State and the seller, which date shall be 90 days from the date the State mails the Notice of Proposed Contract.

(2) The Proposed Contract shall provide for the transfer of rights in project transportation facilities sufficient to deliver to the seller's service area in any one month eleven percent (11%) of the annual entitlement being transferred or such greater amount as the seller determines to sell; *Provided,* however, that sellers shall not be obligated to sell any transportation rights in the Coastal Aqueduct.

(3) To exercise the right of first refusal, an Urban Contractor shall deliver to the State and the seller its NOI within the time period stated in the Notice of Proposed Contract and shall proceed in good faith to try to complete the transfer to the Urban Contractor. If two or more Urban Contractors deliver NOI's to the State, the amount of annual entitlement and transportation rights being sold shall be allocated among those Urban Contractors that are prepared to perform the purchase by the Performance Date provided for herein in proportion to their maximum annual entitlements, or in another manner acceptable to the Urban Contractors delivering the NOIs. An offer by an Urban Contractor in its NOI to purchase less than the entire annual entitlement and transportation right being transferred shall not be deemed to be an effective exercise of the right of first refusal unless other Urban Contractors submit NOIs to purchase the remainder of the annual entitlement and transportation right or the noncontractor buyer agrees to purchase the remainder at the same unit price and on the same terms and conditions provided for in the Proposed Contract. The Performance Date shall be the date upon which the Urban Contractor is prepared to perform the purchase, which date shall be the later of: (1) 180 days after the delivery of the NOI or (2) the date set forth in the Proposed Contract for the noncontractor buyer to perform the purchase.

The Performance Date shall be extended at the request of the Urban Contractor if a temporary restraining order or preliminary injunction is in effect as a result of a lawsuit challenging the execution of the contract on the basis of noncompliance with the California Environmental Quality Act. Such extensions shall continue until five days after the temporary restraining order or injunction expires or until the Urban Contractor requests it be discontinued, whichever occurs first. The Urban Contractor shall be liable for any damages suffered by the seller as a result of such extensions of the Performance Date.

(4) If the seller and the noncontractor buyer under the Proposed Contract make any substantive changes in the Proposed Contract, such changes shall constitute a new Proposed Contract that cannot be performed without compliance with all of the procedures set forth in this article.

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(5) If an Urban Contractor issuing a NOI fails to complete its exercise of the Right of First Refusal by the Performance Date, the seller shall be free to sell its entitlement in substantial conformance with the terms and conditions set forth in the Proposed Contract. An Urban Contractor issuing a NOI may assign its rights to exercise a right of first refusal to another Urban Contractor and the assignee shall have the same rights as the assignor to complete the purchase by the Performance Date.

(6) In exercising the Right of First Refusal, an Urban Contractor, at its option, may either agree to perform the Proposed Contract in its entirety, including all of its terms and conditions, or agree to pay the price offered under the Proposed Contract for the annual entitlement and transportation rights without condition and without being entitled to enforce or being subject to any other provisions of the Proposed Contract.

(e) <No Subtitle>

As used in this article, "price" shall mean the dollar amount of consideration provided for in the Proposed Contract.

(f) <No Subtitle>

Upon the effective date of any such transfer, the seller shall be relieved of and the buyer shall become liable to the State for all prospective Delta Water Charges, the related Transportation Charges and any other charges for the annual entitlements and associated transportation rights transferred unless the seller and buyer provide otherwise in the contract for the transfer and the State approves such other provisions. However, the contractor making the sale shall remain obligated to the State to make the payments if the buyer defaults on its payments to the State related to the water transferred and is not a party to a long term water supply contract of the type contained in Department of Water Resources Bulletin Number 141. If the contractor making the sale is required to make any payments to the State as a result of the buyer's default, the entitlement transferred to the defaulting buyer shall, if provided for in the Proposed Contract, revert back to the contractor making the sale. The buyer may also be liable for any charges imposed pursuant to subdivision (g) of this article.

(g) <No Subtitle>

A contractor which is a buyer of annual entitlement pursuant to this article may receive deliveries using any portion of the capacity previously provided by the State in each reach of the project transportation facilities for such contractor that is necessary for transporting the entitlement purchased by it on the same basis as any other entitlement provided for in its Table A in effect prior to the date of the Monterey Amendment. Such contractor may also use any transportation rights transferred to it by a seller in the same manner as the seller was entitled to use them and any unused capacity in any of the reaches specified in this paragraph so long as project operations and/or priority of service of water to other contractors participating in repayment of capital costs in such reaches is not adversely affected. The State shall not be responsible for any resulting adverse impacts upon its ability to provide such contractor peaking capacity. The capital cost and minimum, operation, maintenance, power and replacement components of the Transportation Charge allocated to a buying contractor needing transportation capacity in excess of the capacity factors on which its charges are based in any reach shall be determined prospectively based upon the increase in the buying contractor's annual entitlement resulting from the purchase, and service of water to fulfill annual entitlement to other contractors

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shall not be impaired. The capital cost and minimum operation, maintenance, power and replacement components of the Transportation Charges shall then be reallocated among the other entities participating in repayment of costs of that reach. For the purposes of this determination, all payments received by the State from the seller relating to the annual entitlement sold shall be deemed to have been received from the buying contractor. Any increased Transportation minimum operation, maintenance, power and replacement component charges allocated to the buying contractor pursuant to this subdivision (g) shall begin January 1 of the year following the effective date of the transfer.

(h) <No Subtitle>

Individual contractors may transfer entitlements among themselves in amounts in addition to those otherwise provided for in this article. The State shall expeditiously execute any necessary documents and approve all contracts involving permanent sales of entitlements among contractors, including permanent sales among Urban Contractors. Such sales shall be subject to the provisions of subdivisions (b), (f) and (g) of this article; *Provided,* however, that for a buying contractor needing transportation capacity in excess of the capacity factors on which its charges are based in any reach, reallocation of the Transportation capital cost component charges for transfers other than (i) the 130,000 acre-feet provided for in this article and (ii) the approximate 33,000 acre-feet of transfers proposed from contractors located in Santa Barbara or San Luis Obispo counties, shall be determined both prospectively and retroactively.

(i) <No Subtitle>

On January 1 following the year in which such Monterey Amendments take effect and continuing every year thereafter until the end of the project repayment period: (i) Kern County Water Agency's (KCWA) annual entitlement for agricultural use as currently designated in Table A-1 of its contract shall be decreased by 40,670 acre-feet; (ii) Dudley Ridge Water District's (DRWD) annual entitlement as currently designated in Table A of its contract shall be decreased by 4,330 acre-feet; and (iii) the State's prospective charges (including any adjustments for past costs) for the 45,000 acre-feet of annual entitlements to be relinquished by KCWA and DRWD thereafter shall be deemed to be costs of project conservation facilities and included in the Delta Water Charge for all contractors in accordance with the provisions of Article 22. If by November 20, 1995 and each October 1 thereafter until the Monterey Amendments of both KCWA and DRWD take effect, KCWA and DRWD at their option notify the State in writing that they will relinquish up to their shares of 45,000 acre-feet of annual entitlements for the following calendar year beginning before the Monterey Amendments take effect, the State, when and if the Monterey Amendments take effect, shall adjust the charges retroactively for the acre-feet relinquished by KCWA and DRWD to January 1 of each year for which water was relinquished. The delivery points for the 45,000 acre-feet of annual entitlement to be relinquished shall be identified for the State by KCWA and DRWD to enable the State to calculate the transportation costs for the 45,000 acre-feet to be included in the Delta Water Charge.

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54.[74] Usage of Lakes Castaic and Perris

(a) <No Subtitle>

The State shall permit the contractors participating in repayment of the capital costs of Castaic Lake (Reach 30) and Lake Perris (Reach 28J) to withdraw water from their respective service connections in amounts in excess of deliveries approved pursuant to other provisions of the state water contracts. Each such contractor shall be permitted to withdraw up to a Maximum Allocation from the reach in which it is participating. The contractors participating in repayment of Castaic Lake may withdraw a collective Maximum Allocation up to 160,000 acre-feet pursuant to this article, which shall be apportioned among them pursuant to the respective proportionate use factors from the Department of Water Resources' Bulletin 132-94, Table B-1 upon which capital cost repayment obligations are based, as follows:

Castaic Lake

Participating Contractor	Proportionate Use Factor	Maximum Allocation (Acre Feet)
The Metropolitan Water District of Southern California	0.96212388	153,940
Ventura County Flood Control and Water Conservation District	0.00860328	1,376
Castaic Lake Water Agency	0.02927284	4,684
Total	1.00000000	160,000

The Metropolitan Water District of Southern California, as the only contractor participating in repayment of Lake Perris, shall be allocated a Maximum Allocation at Lake Perris of 65,000 acre-feet based upon a proportionate use factor of 1.00000000.

The Maximum Allocation totals of 160,000 acre-feet and 65,000 acre-feet shall not be subject to adjustment. The individual contractor's Maximum Allocations shall be adjusted only as agreed to among the contractors desiring to adjust their Maximum Allocations. Adjustments between the contractors shall be subject to approval of the State which approval shall be given unless there are adverse impacts upon another contractor participating in the reach which are unacceptable to such contractor. The participating contractors will, in consultation with the State, cooperate with each other in an effort to promote efficient utilization of Castaic Lake, and to minimize any adverse impacts to each other, through coordination of deliveries pursuant to other provisions of the State Water Contract as well as withdrawals of allocations pursuant to this article.

(b) <No Subtitle>

The State shall operate Castaic and Perris Reservoirs as transportation facilities in a manner consistent with this article. A contractor desiring to withdraw a portion or all of its Maximum Allocation shall furnish the State with a proposed delivery schedule. The proposed schedule may be submitted as part of the preliminary water delivery schedule submitted pursuant

74 Amended: Amendment No. 19

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to Article 12(a)(1). Upon receipt of a schedule the State shall promptly review it to ensure that the amounts, times and rates of delivery will be consistent with the State's ability to operate the reach. The contractor may modify its proposed delivery schedule at any time, and the modified schedule shall be subject to review in the same manner. If necessary, the State may modify the schedule after consultation with the contractor and other contractors participating in repayment of that reach but may not change the total quantity of water to be withdrawn. As part of the consultation, the State shall advise a contractor if it determines a withdrawal will adversely impact the rate of delivery provided for the contractor in this contract. The State shall not be responsible for any such impacts.

(c) <No Subtitle>

A contractor may withdraw all or a portion of its Maximum Allocation. It shall restore any withdrawn portion of such allocation by furnishing an equivalent amount of replacement water to the reservoir from which the water was withdrawn within five years from the year in which the withdrawal takes place. The unused portion of the allocation, in addition to any replacement water furnished to the reservoir, shall remain available for subsequent withdrawal. The State shall keep an accounting of the contractor's storage withdrawals and replacements. In any year, the State shall permit a contractor to withdraw an amount equivalent to the contractor's Maximum Allocation minus remaining replacement water requirements due to previous withdrawals. If the contractor fails to schedule and replace the withdrawn water within the five-year return period, the State shall provide the replacement water from water scheduled for delivery to the contractor in the sixth year or as soon as possible thereafter. The total amount of scheduled annual entitlement which a contractor can use in any one year for restoring its Maximum Allocation and storing water in surface storage facilities outside of its service area pursuant to Article 56 shall be the sum of the maximum amount the contractor can add to storage that year pursuant to Article 56 and the amount of acre-feet shown in column 2 of the following table, depending on the State's final water supply allocation percentage as shown in column 1.

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1. Final Water Supply Allocation Percentage	2. Maximum Acre-Feet of Scheduled Entitlement for Restoring Maximum Allocation*
50% or less	100,000
51%	98,000
52%	96,000
53%	94,000
54%	92,000
55%	90,000
56%	88,000
57%	86,000
58%	84,000
59%	82,000
60%	80,000
61%	78,000
62%	76,000
63%	74,000
64%	72,000
65%	70,000
66%	68,000
67%	66,000
68%	64,000
69%	62,000
70%	60,000
71%	58,000
72%	56,000
73%	54,000
74%	52,000
75 to 99%	50,000
100%	no limit

* Excludes the maximum amount that can be added to storage in a year pursuant to Article 56, which may be used in addition to the amounts in this table to restore Maximum Allocation.

A contractor may use any of this total amount for replacement water but cannot use any more than that provided for in Article 56 to add to storage in project surface conservation facilities and in nonproject surface storage facilities. There shall be no limit under this article on the amount of scheduled annual entitlement a contractor can use to restore its Maximum Allocation in a year when its percentage of annual water supply allocation is one-hundred percent (100%), nor shall there be any limit under this article on the amount of interruptible water, nonproject water or water obtained through an exchange which a contractor can use to restore its Maximum Allocation.

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(d) <No Subtitle>

For any replacement water furnished to reservoir storage pursuant to this article, the responsible contractor shall pay the State charges for the conservation, if any, and transportation of such replacement water as are associated with the type of replacement water that is furnished, as if such water were delivered to the turnout at the reservoir to which the replacement water is furnished. Adjustments from estimated to actual costs shall be subject to provisions applicable to the type of replacement water. The State shall not charge contractors for water withdrawn pursuant to this article.

(e) <No Subtitle>

The State shall operate capacity in Castaic and Perris Reservoirs, not required for purposes of Maximum Allocation deliveries, in compliance with the requirement of Article 17(b) of The Metropolitan Water District of Southern California's water supply contract with the State to maintain an amount of water reasonably sufficient to meet emergency requirements of the contractors participating in repayment of that reach. A contractor receiving water pursuant to this article accepts that the State shall not be liable for any damage, direct or indirect, arising from shortages in the amount of water to be made available from that reservoir to meet the contractor's actual emergency requirements as a result of prior storage withdrawals by that contractor pursuant to this article. Nothing in this article shall permit or require the State to adjust allocations or deliveries under Article 18.

(f) <No Subtitle>

To the extent a contractor, during a calendar year, uses all or a portion of its Maximum Allocation, the State may, to the extent necessary to service project purposes, reduce that contractor's requested peaking service. Such reduction in peaking service shall only occur to the extent such usage of Maximum Allocation causes the State to be unable to provide all peaking service requested. This paragraph shall not apply to the extent the contractor requested usage of Maximum Allocation as part of the preliminary water delivery schedule submitted pursuant to Article 12(a)(1).

(g) <No Subtitle>

The State may reduce water stored in Castaic Lake and Lake Perris to the extent necessary for maintenance and to respond to emergencies resulting from failure of project transportation facilities or of other supply importation facilities serving the State project service area. The State shall promptly replace water within the Maximum Allocation as soon as the need for the reduction terminates.

55.[75] Transportation of Nonproject Water

(a) <No Subtitle>

Subject to the delivery priorities in Article 12(f), contractors shall have the right to receive services from any of the project transportation facilities to transport water procured by them from nonproject sources for delivery to their service areas and to interim storage outside their service areas for later transport and delivery to their service areas: *Provided,* that except to

75 Amended: Amendment No. 19

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the extent such limitation in Section 12931 of the Water Code be changed, a contractor shall not use the project transportation facilities under this option to transport water the right to which was secured by the contractor through eminent domain unless such use be approved by the Legislature by concurrent resolution with the majority of the members elected to each house voting in favor thereof.

(b) <No Subtitle>

For any nonproject water delivered pursuant to this article, contractors shall pay the State the same (including adjustments) for power resources (including on-aqueduct, off-aqueduct, and any other power) incurred in the conservation and transportation of such water as if such nonproject water were entitlement water, as well as all incremental operation, maintenance, and replacement costs, and any other incremental costs, which may include an administrative or contract preparation charge, all as determined by the State. Incremental costs shall mean those nonpower costs which would not be incurred if nonproject water were not scheduled for or delivered to contractors. Only those contractors not participating in the repayment of a reach shall be required to pay a use of facilities charge for the delivery of nonproject water from or through that reach. Costs for transporting water placed into interim storage shall be paid in the same manner provided for in subdivision (c)(6) of Article 56.

(c) <No Subtitle>

The amounts, times and rates of delivery of nonproject water shall be provided for pursuant to a water delivery schedule to be issued in the same manner as provided for in Article 12. The costs specified in this article shall be paid for at the same time the corresponding project water costs are paid.

56.[76] Use, Storage and Sale of Project Water Outside of Service Area and Storage of Water in Project Surface Conservation Facilities

(a) State Consent to Use of Project Water Outside of Service Area

Notwithstanding the provisions of Article 15(a), the State hereby consents to the Agency storing project water outside its service area for later use within its service area in accordance with the provisions of subdivision (c) of this article and to the Agency selling project water for use outside its service area in accordance with the provisions of subdivision (d) of this article.

(b) Groundwater Storage Programs

The Agency shall cooperate with other contractors in the development and establishment of groundwater storage programs.

(c) Storage of Project Water Outside of Service Area

(1) A contractor may elect to store project water outside its service area for later use within its service area, up to the limits and in accordance with the provisions provided for in this subdivision (c) and any applicable water right laws, by setting forth on the preliminary water delivery schedule submitted to the State on or before October 1 of each year pursuant to Article 12(a) the quantity of project water it wishes to store in the next succeeding year. There shall be no limit on the amount of project water a

76 Amended: Amendment No. 19

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contractor can store outside its service area during any year in a then existing and operational groundwater storage program. The amount of project water a contractor can add to storage in project surface conservation facilities and in nonproject surface storage facilities located outside the contractor's service area each year shall be limited to the lesser of the percent of the contractor's Table A annual entitlement shown in column 2 or the acre-feet shown in column 3 of the following table, depending on the State's final water supply allocation percentage as shown in column 1. However, there shall be no limit to storage in nonproject facilities in a year in which the State's final water supply allocation percentage is one hundred percent. These limits shall not apply to water stored pursuant to Article 12(e).

1. Final Water Supply Allocation Percentage	2. Maximum Percent of Agency's Annual Entitlement That Can be Stored	3. Maximum Acre-Feet That Can be Stored
50% or less	25%	100,000
51%	26%	104,000
52%	27%	108,000
53%	28%	112,000
54%	29%	116,000
55%	30%	120,000
56%	31%	124,000
57%	32%	128,000
58%	33%	132,000
59%	34%	136,000
60%	35%	140,000
61%	36%	144,000
62%	37%	148,000
63%	38%	152,000
64%	39%	156,000
65%	40%	160,000
66%	41%	164,000
67%	42%	168,000
68%	43%	172,000
69%	44%	176,000
70%	45%	180,000
71%	46%	184,000
72%	47%	188,000
73%	48%	192,000
74%	49%	196,000
75% or more	50%	200,000

(2) Storage capacity in project surface conservation facilities at any time in excess of that needed for project operations shall be made available to requesting contractors for storage of project and nonproject water. If such storage requests exceed the available storage capacity, the available capacity shall be allocated among contractors requesting storage in proportion to their annual entitlements designated in their Table A's

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for that year. A contractor may store water in excess of its allocated share of capacity as long as capacity is available for such storage.

(3) If the State determines that a reallocation of excess storage capacity is needed as a result of project operations or because of the exercise of a contractor's storage right, the available capacity shall be reallocated among contractors requesting storage in proportion to their annual entitlements designated in their Table A's for that year. If such reallocation results in the need to displace water from the storage balance for any contractor or noncontractor, the water to be displaced shall be displaced in the following order of priority:

First, water, if any, stored for noncontractors.

Second, water stored for a contractor that previously was in excess of that contractor's allocation of storage capacity.

Third, water stored for a contractor that previously was within that contractor's allocated storage capacity.

The State shall give as much notice as feasible of a potential displacement.

(4) Any contractor electing to store project water outside its service area pursuant to this subdivision may not sell project water under the provisions of subdivision (d) of this article during the year in which it elected to store project water. This limitation shall not apply to replacement water furnished to Castaic and Perris Reservoirs pursuant to Article 54, nor to the storage of water introduced into a groundwater basin outside a contractor's service area if recovery is intended to occur within that contractor's service area.

(5) The restrictions on storage of project water outside a contractor's service area provided for in this subdivision (c), shall not apply to storage in any project offstream storage facilities constructed south of the Delta after the date of this amendment.

(6) For any project water stored outside its service area pursuant to this subdivision (c), a contractor shall pay the State the same (including adjustments) for power resources (including on-aqueduct, off-aqueduct, and any other power) incurred in the transportation of such water as the contractor pays for the transportation of annual entitlement to the reach of the project transportation facility from which the water is delivered to storage. If annual entitlement is stored, the Delta Water Charge shall be charged only in the year of delivery to interim storage. For any stored water returned to a project transportation facility for final delivery to its service area, the contractor shall pay the State the same for power resources (including on-aqueduct, off-aqueduct, and any other power) incurred in the transportation of such water calculated from the point of return to the aqueduct to the turn-out in the contractor's service area. In addition, the contractor shall pay all incremental operation, maintenance, and replacement costs, and any other incremental costs, as determined by the State, which shall not include any administrative or contract preparation charge. Incremental costs shall mean those nonpower costs which would not be incurred if such water were scheduled for or delivered to the contractor's service area instead of to interim storage outside the service

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area. Only those contractors not participating in the repayment of a reach shall be required to pay a use of facilities charge for use of a reach for the delivery of water to, or return of water from, interim storage.

(7) A contractor electing to store project water in a nonproject facility within the service area of another contractor shall execute a contract with that other contractor prior to storing such water which shall be in conformity with this article and will include at least provisions concerning the point of delivery and the time and method for transporting such water.

(d) Sale of Project Water For Use Outside Service Area

(1) If in any year a contractor has been allocated annual entitlement that it will not use within its service area, the contractor has not elected to store project water in accordance with the provisions of subdivision (c) of this article during that year, and the contractor has not elected to carry over entitlement water from the prior year pursuant to the provisions of Article 12(e), the contractor may sell such annual entitlement for use outside its service area in accordance with the following provisions.

(2) Each year the State shall establish an annual entitlement water pool (the Pool) for contractors wishing to sell or buy project water pursuant to the provisions of this subdivision. The Pool shall constitute the exclusive means of selling portions of annual entitlements not desired by contractors that year. Contractors willing to sell to or buy water from the Pool shall notify the State in writing of their desire to do so indicating the quantity to be sold or purchased. Contractors shall have the first priority to purchase all water placed in the Pool. The State may purchase any water remaining in the Pool not purchased by contractors at the same price available to contractors and use such water for the purpose of providing additional carryover storage for contractors: *Provided,* that the State shall consult with the contractors prior to making any such purchases.

(3) Each year, the price per acre-foot to be paid by the State to contractors selling water placed in the Pool on or before February 15 that is purchased by a contractor requesting such purchase by March 1 or by the State on March 1 shall be equal to fifty percent (50%) of the Delta water rate as of that date. The price per acre-foot to be paid to the State for the purchase of water from the Pool by a contractor placing a request for such purchase on or before March 1 shall be equal to fifty percent (50%) of the Delta water rate as of that date. Any water placed in the Pool on or before February 15 that is not purchased by contractors or the State by March 1 may be withdrawn from the Pool by the selling contractor.

(4) Each year the price per acre-foot to be paid by the State to contractors selling water remaining in the Pool or placed in the Pool after February 15, but on or before March 15 that is purchased by a contractor requesting such purchase by April 1 or by the State on April 1 shall be equal to twenty-five percent (25%) of the Delta water rate as of that date. The price per acre-foot to be paid to the State for the purchase of water from the Pool by a contractor placing a request for such purchase between March *2* and April 1 shall be equal to twenty-five percent (25%) of the Delta water rate as of the later date. Any water placed in the Pool on or before March 15 that is not purchased by a contractor or the State by April 1 may be withdrawn from the Pool by the selling contractor.

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(5) If there are more requests from contractors to purchase water from the Pool than the amount in the Pool, the water in the Pool shall be allocated among those contractors requesting such water in proportion to their annual entitlements for that year up to the amount of their requests. If requests to purchase water from the Pool total less than the amount of water in the Pool, the sale of Pool water shall be allocated among the contractors selling such water in proportion to their respective amounts of water in the Pool.

(6) Any water remaining in the Pool after April 1 that is not withdrawn by the selling contractor shall be offered by the State to contractors and noncontractors and sold to the highest bidder: *Provided,* that if the highest bidder is a noncontractor, all contractors shall be allowed fifteen days to exercise a right of first refusal to purchase such water at the price offered by the noncontractor. The price to be paid to the selling contractor shall be the amount paid by the buyer exclusive of the amount to be paid by the buyer to the State pursuant to subdivision (d)(7) of this article.

(7) For any water delivered from the Pool to contractors, the buyer shall pay the State the same for power resources (including on-aqueduct, off-aqueduct, and any other power) incurred in the transportation of such water as if such water were entitlement water, as well as all incremental operation, maintenance, and replacement costs, and any other incremental costs, as determined by the State, which shall not include any administrative or contract preparation charge. Incremental costs shall mean those nonpower costs which would not be incurred if such water were not scheduled for or delivered to the buyer. Only those buyers not participating in the repayment of a reach shall be required to pay any use of facilities charge for the delivery of such water from or through the reach. Adjustments from estimated to actual costs shall be computed by the State pursuant to these provisions and shall be paid by the buyer or credited to the buyer at the times and interest rates described in Article 28(c).

(e) Continuance of Article 12(e) Carry-over Provisions

The provisions of this article are in addition to the provisions of Article 12(e), and nothing in this article shall be construed to modify or amend the provisions of Article 12(e). Any contractor electing to sell project water during any year in accordance with the provisions of subdivision (d) of this article, shall not be precluded from using the provisions of Article 12(e) for carrying over water from the last three months of that year into the first three months of the succeeding year.

(f) Bona Fide Exchanges Permitted

Nothing in this article shall be deemed to prevent the Agency from entering into bona fide exchanges of project water for use outside the Agency's service area with other parties for project water or nonproject water if the State consents to the use of the project water outside the Agency's service area. Also, nothing in this article shall be deemed to prevent the Agency from continuing those exchange or sale arrangements entered into prior to September 1, 1995, which had previously received any required State approvals. A "bona fide exchange" shall mean an exchange of water involving a contractor and another party where the primary consideration for one party furnishing water to another is the return of a substantially similar amount of water, after giving due consideration to the timing or other nonfinancial conditions of the return.

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Reasonable payment for costs incurred in effectuating the exchange and reasonable deductions from water delivered, based on expected storage or transportation losses may be made. A "bona fide exchange" shall not include a transfer of water from one contractor to another party involving a significant payment unrelated to costs incurred in effectuating the exchange. The State, in consultation with the contractors, shall have authority to determine whether transfers of water constitute "bona fide exchanges" within the meaning of this paragraph and not disguised sales.

(g) Other Transfers

Nothing in this article shall be deemed to modify or amend the provisions of Article 15(a), or Article 41, except as expressly provided for in subdivisions (c) and (d) of this article.

57.[77] <Intentionally Left Blank for Future Use.>

58.[78] Determination of Dependable Annual Supply of Project Water to be Made Available by Existing Project Facilities

In order to provide current information regarding the delivery capability of existing project conservation facilities, commencing in 2003 and every two years thereafter the State shall prepare and mail a report to all contractors, and all California city, county, and regional planning departments and agencies within the contractors' project service areas. This report will set forth, under a range of hydrologic conditions, estimates of overall delivery capability of the existing project facilities and of supply availability to each contractor in accordance with other provisions of the contractors' contracts. The range of hydrologic conditions shall include the delivery capability in the driest year of record, the average over the historic extended dry cycle and the average over the long-term. The biennial report will also include, for each of the ten years immediately preceding the report, the total amount of project water delivered to all contractors and the amount of project water delivered to each contractor.

77 Amended: Amendment No. 21
78 Amended: Amendment No. 21

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IN WITNESS WHEREOF, the parties hereto have executed this contract on the date first above written.

STATE OF CALIFORNIA

By _____
Governor

Approved as to legal form
and sufficiency:

_____
Chief Counsel
Department of Water Resources

STATE OF CALIFORNIA
DEPARTMENT OF WATER RESOURCES

By _____
Director

Attest:

SAN BERNARDINO VALLEY MUNICIPAL
WATER DISTRICT

_____
Secretary
San Bernardino Valley
Municipal Water District

By _____
President

Approved as to form
and execution:

By _____
General Manager

_____
Counsel
San Bernardino Valley
Municipal Water District

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TABLE A[79]
ANNUAL AMOUNTS
ANTELOPE VALLEY-EAST KERN WATER AGENCY

Year	Acre-feet
1 (1972)	20,000
2 (1973)	25,000
3 (1974)	30,000
4 (1975)	35,000
5 (1976)	44,000
6 (1977)	50,000
7 (1978)	57,000
8 (1979)	63,000
9 (1980)	69,200
10 (1981)	75,000
11 (1982)	81,300
12 (1983)	87,700
13 (1984)	35,000
14 (1985)	40,000
15 (1986)	42,000
16 (1987)	44,000
17 (1988)	46,000
18 (1989)	125,700
19 (1990)	132,100
20 (1991)	138,400
21 (1992)	138,400
22 (1993)	138,400
23 (1994)	138,400
24 (1995)	138,400
25 (1996)	138,400
26 (1997)	138,400
27 (1998)	138,400
28 (1999)	138,400
29 (2000)	138,400
30 (2001)	138,400
31 (2002-2013)	141,400
32 (2014)	144,844
and each succeeding year thereafter, until December 31, 2035 for:	144,844

[80]In any year, the amounts designated in this Table A shall not be interpreted to mean that the State is able to deliver those amounts in all years. Article 58 describes the State's process for providing current information for project delivery capability.

79 Amended: Amendments No. 1, 14, 20, 23, and 24
80 Added: Amendment No. 21

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TABLE B

ALLOCATED PROPORTION OF COSTS OF PROJECT TRANSPORTATION FACILITIES
<Placeholder: Table B, shown in Agency's 1962 Contract, without numbers.>
<Table B is published as Tables B-1 & B-2 in Bulletin 132.>

TABLE C

PROJECTED ALLOCATION OF CAPITAL COST OF PROJECT TRANSPORTATION FACILITIES
<Placeholder: Table C, shown in Agency's 1962 Contract, without numbers.>
<Table C is published as Table B-14 in Bulletin 132.>

TABLE D

TRANSPORTATION CHARGE - CAPITAL COST COMPONENT
<Placeholder: Table D, shown in Agency's 1962 Contract, without numbers.>
<Table D is published (Unadjusted) as Table B-15 in Bulletin 132.>

TABLE E

TRANSPORTATION CHARGE - MINIMUM OPERATION, MAINTENANCE, POWER, AND REPLACEMENT COMPONENT
<Placeholder: Table E, shown in Agency's 1962 Contract, without numbers.>
<Table E is published as Table B-16A in Bulletin 132.>

TABLE F

TRANSPORTATION CHARGE—VARIABLE OPERATION, MAINTENANCE, POWER, AND REPLACEMENT COMPONENT
<Placeholder: Table F, shown in Agency's 1962 Contract, without numbers.>
<Table F is published in summary form as Table B-18 in Bulletin 132.>

TABLE G

PAYMENT SCHEDULE
<Placeholder: Table G, shown in Agency's 1962 Contract, without numbers.>
<Table G is published in summary form as Table B-19 in Bulletin 132.>

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TABLE H[81]

PROJECT FACILITIES

ANTELOPE VALLEY-EAST KERN WATER AGENCY

A San Joaquin Valley-Southern California Aqueduct extending to a turnout near [82]Peace Valley Pipeline on the West Branch Aqueduct defined below, and extending to a turnout near the Pearblossom Pumping Plant on the East Branch Aqueduct defined below, to the extent such Aqueduct is determined by the State to be required for water transportation.

(1) "East Branch Aqueduct" shall mean that portion of the San Joaquin Valley-Southern California Aqueduct specified in Section 12934(d)(2) of the Water Code extending from the Junction of East and West Branches to a terminus in the vicinity of Perris, Riverside County.

(2) "West Branch Aqueduct" shall mean that portion of the San Joaquin Valley-Southern California Aqueduct specified in Section 12934(d)(2) of the Water Code extending from the Junction of East and West Branches to a terminus in the vicinity of Newhall, Los Angeles County.

81 Amended: Amendments No. 2 and 3
82 Amended: Amendment No. 4

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TABLE I [83]

AQUEDUCT REACHES

ANTELOPE VALLEY-EAST KERN WATER AGENCY

Aqueduct Reach	Major Features of Reach
Delta through Bethany Reservoir	Intake Channel, Fish Protective Facilities, Delta Pumping Plant, Aqueduct, Bethany Reservoir
Bethany Reservoir to San Luis Forebay	Aqueduct
San Luis Forebay to Mile 18 Pumping Plant	Forebay, Aqueduct, Los Banos Creek Detention Dam
Mile 18 Pumping Plant to Panoche Creek	Mile 18 Pumping Plant, Aqueduct, Little Panoche Creek Detention Reservoir, Little Panoche Creek Siphon
Panoche Creek to Five Points	Panoche Creek Siphon, Aqueduct
Five Points to Arroyo Pasajero	Aqueduct
Arroyo Pasajero to Kettleman City	Aqueduct
Kettleman City to Avenal Gap	Aqueduct
Avenal Gap to Twisselman Road	Aqueduct
Twisselman Road to near Lost Hills	Aqueduct
Near Lost Hills to near Seventh Standard Road	Aqueduct
Near Seventh Standard Road to Elk Hills Road	Aqueduct
Elk Hills Road to Tupman	Aqueduct
Tupman to Buena Vista Pumping Plant	Aqueduct
Buena Vista Pumping Plant to Santiago Creek	Buena Vista Intake Channel and Pumping Plant, Sunset Railroad Siphon, Aqueduct
Santiago Creek to Old River Road	Aqueduct
Old River Road to Wheeler Ridge Pumping Plant	Old River Road Siphon, Maricopa Highway Siphon, Aqueduct
Wheeler Ridge Pumping Plant to Wind Gap Pumping Plant	Wheeler Ridge Intake Channel and Pumping Plant, Aqueduct
Wind Gap Pumping Plant to Tehachapi Pumping Plant	Wind Gap Intake Channel and Pumping Plant, Standard Oil Road Siphon, Grapevine Creek Siphon, Aqueduct
Tehachapi Pumping Plant to South Portal Tehachapi Tunnel No. 3	Tehachapi Forebay, Intake Channel and Pumping Plant, Penstocks, Tunnel No. 1, Siphon No. 1, Tunnel No. 2, Pastoria Siphon, Tunnel No. 3
South Portal Tehachapi Tunnel No. 3 to Junction, East and West Branches	Tehachapi Siphon No. 3, Carley V. Porter Tunnel, Tehachapi Afterbay, Junction West Branch Aqueduct
Continued, next page	

83 Amended: Amendments No. 2

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Aqueduct Reach	Major Features of Reach
EAST BRANCH	
Junction, East and West Branches Through Cottonwood Powerplant	Cottonwood Intake Channel, Powerplant and Tailrace Canal, Aqueduct
Cottonwood Powerplant to Fairmont	Neenach Fill, Aqueduct
Buttes Junction (near Fairmont) through Buttes Reservoir[84]	Siphon, Buttes Dam, Buttes Reservoir
Fairmont to 70th Street West[85]	Canal and siphons
70th Street West to Palmdale[86]	Canal and siphons
Palmdale to Littlerock Creek[87]	Canal and siphons
Littlerock Creek to Pearblossom Pumping Plant[88]	Canal and siphons
Pearblossom Pumping Plant to West Fork Mojave River[89] (Reach 22B)	Pearblossom Pumping Plant, Aqueduct, Tejon Siphon, Big Rock Creek Siphon, Antelope Siphon
WEST BRANCH[90]	
Junction, East and West Branches through Oso Pumping Plant	Oso Siphon, Oso Canal, Pumping Plant & Penstocks, Aqueduct
Oso Pumping Plant to Peace Valley Pipeline	Quail Canal, Quail Regulating Pool

84 Amended: Amendment No. 3 <Note: Buttes Reservoir was never built>
85 Amended: Amendment No. 3
86 Amended: Amendment No. 3
87 Amended: Amendment No. 3
88 Amended: Amendment No. 3
89 Amended: Amendment No. 22
90 Amended: Amendment No. 4

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ATTACHMENT 1

<Amendment No 16>

<Only would apply if condition in Article 50(i)(5) met.>

Article 1(r) is amended to read:

(r) Project Interest Rate

"Project interest rate" shall mean the weighted average interest rate of (1) through (6) below computed by dividing (i) the total interest cost required to be paid or credited by the State during the life of the indebtedness or advance by (ii) the total of the products of the various principal amounts and the respective terms in years of all such amounts:

(1) general obligation bonds issued by the State under the Bond Act,

(2) revenue bonds issued by the State under the Central Valley Project Act after May 1, 1969,

(3) bonds issued by the State under any other authority granted by the Legislature or the voters,

(4) bonds issued by any agency, district, political subdivision, public corporation, or nonprofit corporation of this State,

(5) funds advanced by any contractor without the actual incurring of bonded debt therefor, for which the net interest cost and terms shall be those which would have resulted if the contractor had sold bonds for the purpose of funding the advance, as determined by the State, and

(6) funds borrowed from the General Fund or other funds in the Treasury of the State of California, for which the total interest cost shall be computed at the interest rate earned over the period of such borrowing by moneys in the Pooled Money Investment Account of such Treasury invested in securities, to the extent the proceeds of any such bonds, advances or loans are for construction of the State Water Facilities defined in Section 12934(d) of the Water Code, the additional project conservation facilities, and the supplemental conservation facilities, (except off-aqueduct power facilities and advances for delivery structures, measuring devices and excess capacity) and without regard to any premiums received on the sale of bonds under item (1) above. The "project interest rate" shall be computed as a decimal fraction to five places.

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Exhibit A

(for informational purposes only)

ANTELOPE VALLEY - EAST KERN WATER AGENCY
ANNUAL TABLE A AND CAPACITY VALUES FOR EACH REACH
FOR COST ALLOCATION AND REPAYMENT PURPOSES (a
EFFECTIVE JANUARY 1, 2014 THRU DECEMBER 31, 2035

The values related to this transfer are estimated to be as follows:

Repayment Reach (b	Before Transfer		East Branch Enlargement Capacity (c	Table A Transferred to AVEK	Capacity Acquired From TLBWSD	Capacity Required to move add'l Table A (d	After Transfer	
	Table A Capacity (AF) (1)	Flow Capacity (cfs) (2)	(cfs) (3)	(AF) (4)	(cfs) (5)	(cfs) (6)	Total Table A Capacity (AF) (7)	Total Flow Capacity (cfs) (8)
California Aqueduct								
Reach 1	143,393	206		1,451	4		144,844	210
Reach 2A	143,393	206		1,451	4		144,844	210
Reach 2B	143,393	206		1,451	4		144,844	210
Reach 3	143,393	206		1,451	4		144,844	210
Reach 4	143,393	206		1,451	4		144,844	210
Reach 5	143,393	206		1,451	4		144,844	210
Reach 6	143,393	206		1,451	4		144,844	210
Reach 7	143,393	206		1,451	4		144,844	210
Reach 8C	143,393	206		1,451	4		144,844	210
Reach 8D	143,393	206		1,451	4		144,844	210
Reach 9	143,393	198		1,451		2	144,844	200
Reach 10A	143,393	198		1,451		2	144,844	200
Reach 11B	143,393	198		1,451		2	144,844	200
Reach 12D	143,393	198		1,451		2	144,844	200
Reach 12E	143,393	198		1,451		2	144,844	200
Reach 13B	143,393	198		1,451		2	144,844	200
Reach 14A	143,393	198		1,451		2	144,844	200
Reach 14B	143,393	198		1,451		2	144,844	200
Reach 14C	143,393	198		1,451		2	144,844	200
Reach 15A	143,393	198		1,451		2	144,844	200
Reach 16A	143,393	198		1,451		2	144,844	200
Reach 17E	143,393	198		1,451		2	144,844	200
Reach 17F	143,393	198		1,451		2	144,844	200
East Branch Aqueduct								
Reach 18A	143,393	198		1,451		2	144,844	200
Reach 19	143,393	198		1,451		2	144,844	200
Reach 20A	68,800	95	35	1,451			70,251	130
Reach 20B	21,700	30	35	1,451			23,151	65
Reach 21	21,700	30	35	1,451			23,151	65
Reach 22A	10,900	15	35	1,451			12,351	50
Reach 22B (e	1,700	2.4		---	---	---	~~7,000~~ 1,700	2.4

a) Does not include capacity for outages and losses.

b) These numbers apply to the reaches as set forth in Bulletin 132, Figure B-4, "Repayment Reaches and Descriptions. Project Transportation Facilities."

c) The cumulative East Branch Enlargement capacity that is used for transfers is 8.9 cfs.

d) Transferred flow capacity of 8.33% capacity.

e) The capacity shown reflects delivery up to 1,700 acre-feet per year at continuous flowrate in accordance with Article 45(b).

State Water Project Analysis Office
June 6, 2013

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