

# San Joaquin River Funding Area Disadvantaged Community Needs Assessment Report

December 2019



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## Acronyms and Abbreviations

<b>Abbreviation</b>	<b>Term</b>
ARB	American River Basin
Cal Fire	California Department of Forestry and Fire Protection
CUWA	California Urban Water Agencies
DDW	California Division of Drinking Water
CDP	Census Designated Place
CIWQS	California Integrated Water Quality System
CVP	Central Valley Project
DAC	Disadvantaged Community
DACI	Disadvantaged Community Involvement
Delta	Sacramento-San Joaquin River Delta
DUC	Disadvantaged Unincorporated Communities
DWR	California Department of Water Resources
ECCC	East Contra Costa County
ESJ	Eastern San Joaquin
EDA	Economically Distressed Areas
FEMA	Federal Emergency Management Agency
FRAP	Cal Fire-Fire Resource and Assessment Program
GAMA	Groundwater Ambient Monitoring and Assessment Program
GIS	Geographic Information Systems
GSP	Groundwater Sustainability Plan
HAA5	haloacetic acids
IRWM	Integrated Regional Water Management
IRWMP	Integrated Regional Water Management Plan
LAFCo	Local Agency Formation Commission
MHI	Median Household Income
MHP	Mobile Home Park
MIRWMA	Merced Integrated Regional Water Management Authority
NPDES	National Pollutant Discharge Elimination System
PCE	tetrachloroethylene
Prop 1	Proposition 1: The Water Quality, Supply, and Infrastructure Improvement Act of 2014
SAC	Stakeholder Advisory Committee

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SDAC	Severely Disadvantaged Community
SDWIS	Safe Drinking Water Information System
SJRFA	San Joaquin River Funding Area
SGMA	Sustainable Groundwater Management Act
SWRCB	State Water Resources Control Board
TCE	trichloroethylene
TTHM	total trihalomethanes
UC	University of California
URC	Underrepresented Community
WSJ	Westside-San Joaquin

## Executive Summary

### ES-1 DAC Involvement Program Background

The Disadvantaged Community Involvement (DACI) Program is an element of the California Department of Water Resources' (DWR's) Integrated Regional Water Management (IRWM) Program. The IRWM Program is a collaborative effort to identify and implement water management solutions on a regional scale. This approach is intended to increase regional self-reliance, reduce conflict, and concurrently achieve social, environmental, and economic objectives.

The intent of the DACI Program is to ensure the involvement of DACs, economically distressed areas (EDAs), or underrepresented communities (collectively referred to as DACs) in IRWM planning efforts. DWR established the DACI Program in order to advance the following objectives:

- Work collaboratively to involve DACs, community-based organizations, and stakeholders in IRWM planning efforts to ensure balanced access and opportunity for participation in the IRWM planning process
- Increase the understanding and, where necessary, identify the water management needs of DACs on a Funding Area basis
- Develop strategies and long-term solutions that appropriately address the identified DAC water management needs

The San Joaquin River Funding Area (SJRFA) received funding through the DACI Program. Per the Program requirements, the SJRFA conducted a DAC Needs Assessment. The Needs Assessment is ultimately intended to provide a better understanding of water management needs to help direct resources and funding. This report documents the methods and findings of the Needs Assessment.

### ES-2 San Joaquin River Funding Area Overview

Seven IRWM Regions within the SJRFA are participating in the DACI Program. Participating regions are the Eastern San Joaquin, East Stanislaus, Merced, East Contra Costa, American River Basin, Madera, and Westside-San Joaquin IRWM Regions. The Cosumnes, American, Bear, Yuba (CABY) Region, Tuolumne-Stanislaus Region, and Mokelumne-Amador-Calaveras (MAC) Region are partially within the SJRFA as well but chose not to participate in the grant proposal or Needs Assessment.

The SJRFA includes much of the San Joaquin River drainage area. Water supplies in the SJRFA include both surface water and groundwater. Much of the surface water used in the SJRFA comes from the Central Valley Project (CVP). The tributaries of the San Joaquin River, such as the Merced, Tuolumne, and Stanislaus Rivers, also provide surface water supply to the SJRFA. Groundwater is a highly important water source in the SJRFA. Alluvial aquifers underlie the valley floor to the east and west of the San Joaquin River; these aquifers are tapped by drinking water and agricultural supply wells managed by various agencies, as well as private domestic wells. DWR estimates that roughly 40% of water supply in the San Joaquin River Hydrologic Region is met by groundwater, with most being used for agriculture (DWR, 2014). Land use on the San Joaquin Valley floor is generally agricultural in nature, although urban areas also exist and are expanding. Portions of the SJRFA are susceptible to flooding, which is generally driven by melting of the Sierra snowpack in the spring, and by rainfall events.

The SJRFA is generally rural, with scattered urban areas where the majority of the population resides. Notable cities include Stockton, Antioch, Tracy, Lodi, Modesto, Turlock, Manteca, Lathrop, Merced, Patterson, Los Banos and Madera. Many counties have high proportions of Hispanic or Latino residents; therefore, language accessibility is an important consideration in the SJRFA.



### ES-3 DAC Database Development

The DAC Needs Assessment is intended to provide a better understanding of the water needs of DACs in the area. The Needs Assessment included the development of a database of DACs in the SJRFA, which contains a compilation of data from publicly available sources related to the sources and quality of water supply in DACs.

Within the Needs Assessment database, the project team compiled data on DACs in the SJRFA from local, state, and federal sources. The project team utilized Geographic Information Systems (GIS) to map the location of communities in the SJRFA and other available and relevant data in order to identify needs. Median household income statistics were used to assist in classifying whether communities had a disadvantaged status. The database is a collection of information from DWR, Safe Drinking Water Information System (SDWIS), California Integrated Water Quality System (CIWQS), Provost & Pritchard GIS data resources, as well as other sources. Key data fields within the database include:

- DAC Status (DAC, SDAC or Not DAC)
- Estimated Number of Water Service Connections
- Estimated Population
- Source(s) of Drinking Water Supply
- Estimated Number of Public Wells
- Drinking Water Quality Compliance Status
- Existing Water System versus Private Wells
- Existing Wastewater Treatment Facility

### ES-4 Needs Assessment Findings

As part of the data collection for the DAC Needs Assessment, supplemental and ground-truth data were collected through two Funding Area meetings and single regional community workshops in each of the seven participating IRWM regions. The goal of the first Funding Area meeting was to provide information on the IRWM and DACI program, present preliminary findings of the SJRFA DAC Needs Assessment and the DACI survey, and discuss community water needs. The individual region workshops were intended to ground-truth and expand upon data collected during the DAC database development. These meetings included further information about the IRWM and DACI programs, preliminary findings of the DAC Needs Assessment, and a discussion of community water needs. A community survey was also prepared and disseminated at each workshop. Feedback obtained at these meetings helped characterize the needs of DACs in the SJRFA and develop recommendations for future work under the DACI program. The second Funding-Area wide meeting was held to present the final draft of the Needs Assessment Report and to provide community residents and members of the public an opportunity to ask questions, provide feedback, and make recommendations. The findings from the database and community meetings are summarized below.

#### Preliminary Water Needs in DACs

Based on the data collected for this region, there are 123 DACs identified within the SJRFA, of which 57 are Severely Disadvantaged Communities (SDACs).

The majority of communities within the San Joaquin River Funding Area rely on groundwater for drinking water supply. Of the 123 DACs within the San Joaquin River Funding Area, approximately 93% rely on groundwater that either comes from a public water system, individual private wells, or is purchased from a nearby system and may be conveyed through a single master meter. Approximately 7% rely on surface water that either comes from a public water system or is purchased from a nearby system. The main challenges to DACs within the region related to water supply are an insufficient quantity of water and a lack of redundancy or reliability of the water supply. Water systems that are considered to be the most vulnerable are those that rely on a single source of supply. Approximately 33% of the DACs within the funding area rely on a water system with only one source of water (e.g. One well supplies the entire water system). In addition, approximately 28% of the DACs in the area are not part of a public water system and rely on individual private wells, which are also extremely vulnerable to changes in water conditions because of the shallow nature of most private wells, factors surrounding sustainable water use, and escalating impacts from climate change. Therefore, approximately 61% of the DACs within the funding area are considered to have a water supply vulnerability.

Water quality needs were identified based on whether communities were compliant with applicable water quality standards. Of the DACs with water systems, 61 (69%) are currently in compliance with water quality standards, 20 (22%) are out of compliance, and eight (9%) have returned to compliance. The returned to compliance classification is based on the Human Right to Water portal data, and is typically a system with a previous compliance order that has been resolved since 2012. The main water quality issues for systems that are out of compliance are arsenic and TCP. Other compliance orders are for total trihalomethanes (TTHM), uranium, and haloacetic acids (HAA5).

### Community Meetings and Survey Results

Each individual IRWM region community meeting included an overview of the IRWM and DACI program, information about the Needs Assessment, and a community water needs discussion. Outreach methods used to advertise these meetings included bilingual (English and Spanish) communication materials, including a meeting flyer, invitation emails and social media posts. Outreach also included door-to-door outreach, posting flyers in key locations with heavy foot traffic, phone calls to community leaders asking them to share the information within their community, mailing and emailing flyers, utilizing social media, and posting workshops on Eventbrite.

The following themes emerged from the individual IRWM region meetings:

- Community residents and other stakeholders are interested in continuing to obtain information about the IRWM and the DACI programs. Participants were also interested in obtaining regular updates on IRWM activities and funding opportunities.
- Communities expressed overwhelming interest in obtaining assistance in order to identify, develop and submit funding requests.
- Community members across regions identified specific needs for their individual communities.
- Communities noted that having safe, reliable water is vital for their communities and without projects that help address their needs, communities will continue to deteriorate.
- Meeting attendees in multiple regions expressed interest in water metering programs in order to help communities reduce water usage.
- Attendees discussed the limited resources available to participate in additional programs (both in terms of agency staff availability and community member resources).

- The cost of water quality testing (driven partly by the frequency of testing) emerged as a significant issue for small water systems where additional testing has been mandated.
- Many attendees noted the difficulty of tracking and navigating the many disparate funding and technical assistance programs that exist. Assistance programs from various state agencies have different requirements and no “one-stop shop” resource exists for the assistance options that could help meet agency and community needs.<sup>1</sup>

Community survey results were also analyzed for the Needs Assessment. A total of 47 community surveys were submitted. Main topics assessed in the survey were: preferred language for correspondence, respondent classification, knowledge of IRWM, current IRWM participation, participation barriers and recommendations, interest in participating in IRWM activities, and community improvements and water needs. The majority of the survey respondents identified as community residents, with water district/company staff making up another large portion of the respondents.

The survey included an open-ended question that asked participants what motivates them to participate in the IRWM program and IRWM region meetings. Respondents shared that their participation is tied to their job responsibility, desire to continue their education on water management, interest in working with other communities, building resiliency for their community, as well as identifying projects and securing funding for community improvements needs. For those who did not participate, three reasons that arose were lack of information, lack of resources, and competing priorities. Of these, the top response was the lack of information. For example, several survey respondents said that they were not aware of the program or the meetings and that they would have participated if they had known.

Participants also provided recommendations to help support and improve community participation in IRWM planning efforts. Comprehensively, some of the common recommendations included conducting more outreach and engagement specifically on the topics of planning for the future, additional funding sources through IRWM, and importance of participation. The recommendations also included the need to secure resources to help community residents and district staff participate in IRWM activities; establish and maintain a contact database; provide translated materials—at minimum Spanish—while also considering other languages as needed; and provide technical assistance.

## ES-5 Recommendations

The following recommendations were identified during the Needs Assessment. These can inform future work under the DACI program. IRWM regions can also consider these recommendations as they continue work for their IRWM programs or within their individual agencies and communities.

- Gather and incorporate data for other types of water systems (e.g., school water systems) and other systems and characteristics (e.g., stormwater facilities, rate affordability, private well depth and water quality, metering).
- Gather information that would identify additional DAC areas that may not have been included in the data sources accessed for this document, primarily through outreach and income surveys.

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<sup>1</sup> Note that Assembly Bill (AB) 2252 mandates that the California State Library create one website by July 1, 2020, where all current grants opportunities being offered by California State departments can be found.

- Given the number of households/communities relying on private domestic wells and lack of water quality information available for these homes, consider establishing a free water-sampling program for low-income households.
- Consider establishing a DAC Outreach and Education Program, including community-specific meetings, and contact database.
- Provide DACs the technical assistance they need in order to seek appropriate funding sources and implement community water solutions. This may include assisting with project identification, project development, and funding applications.
- Increase DAC participation in the IRWM program.
  - Consider appointing community leaders who have expressed interest in participating in IRWM and the DACI program to the IRWM Stakeholder Advisory Committee group.
  - Encourage DAC and IRWM Group coordination. Consider potential ways to bridge identified barriers to participation to encourage more participation by DACs, and foster IRWM group understanding of DAC needs.
  - Consider funding DAC participation by allocating funds to assist DAC representatives to attend meetings. Many DACs encounter economic and financial constraints and find it difficult to identify individuals that are willing to volunteer their time or pay for travel expenses out of pocket in order to attend meetings that are held many miles away.
  - Make meetings accessible to DACs by hosting more localized IRWM meetings. Due to the vast geographic extent of the IRWM regions within the SJRFA, the location of the meetings can cause travel constraints to communities that are further out from the localized areas.
  - Eliminate language barriers by ensuring the availability of translated materials and translation services. To minimize language barriers, the availability of translated materials and providing interpreting services is essential.
  - Encourage utilities, water districts, and municipal agencies to incorporate these findings in their outreach plans and to support DAC project development and implementation.

## Section 1. Introduction

This Disadvantaged Community (DAC) Needs Assessment Report was prepared under an agreement between the Contra Costa Water District and the California Department of Water Resources (DWR) with funding from Proposition 1: The Water Quality, Supply, and Infrastructure Improvement Act of 2014 (Prop 1). Prop 1 authorized \$510 million in Integrated Regional Water Management (IRWM) funding statewide, including \$31 million that was allocated to the San Joaquin River Funding Area (SJRFA). Of this, 10% was earmarked to be awarded through the DAC Involvement (DACI) Program. Within the SJRFA, this funding has been allocated to perform this region-wide DAC Needs Assessment, as well as projects within each IRWM Region that will improve DAC involvement in the IRWM planning process.

Through the Needs Assessment, the SJRFA aims to gain a better understanding of the water and wastewater management needs of DACs. The Needs Assessment synthesizes publicly available data, spatial information, surveys, and community outreach, including regional community meetings, to characterize the needs of DACs in the SJRFA. This work was conducted during 2018 and 2019. The themes and recommendations that emerge from the DAC Needs Assessment will help guide the development of future project development within each IRWM Region and the SJRFA as a whole.

The Needs Assessment Report provides background information about the DACI Program and the SJRFA. The Report then presents details about data collection and community outreach work conducted as part of the Needs Assessment. Lastly, the Report presents findings on the state of water resources in DACs, including both qualitative and quantitative information, and makes recommendations for future work.

## Section 2. Background

This section provides background information on the IRWM Program, the DACI Program, and the relationship between the two. It also includes a brief summary of the SJRFA in terms of geography, water supply, land use, demographics, and other characteristics to contextualize the Needs Assessment Report.

### 2.1 DAC Involvement Program Background

#### 2.1.1 IRWM Program

The DACI Program is an element of DWR's IRWM Program. IRWM, or Integrated Regional Water Management, is a collaborative effort to identify and implement water management solutions on a regional scale. This approach is intended to increase regional self-reliance, reduce conflict, and concurrently achieve social, environmental, and economic objectives.

The IRWM Program was founded by DWR in 2004. In order to become eligible for grants awarded through the IRWM Program, IRWM Regions were formed. Each IRWM Region is a contiguous geographic area encompassing the service areas of multiple local agencies. Regions are established in such a way as to maximize the opportunities to integrate water management activities. Once established, Regions prepare Integrated Regional Water Management Plans (IRWMPs) according to a set of guidelines established by DWR. IRWMPs characterize the water-related resources, challenges, goals, and solutions of the Region. IRWMPs consolidate regional information, encourage discussion among stakeholders, and evaluate projects that may be implemented in the Region. IRWMPs are required to include a prioritized list of projects that would provide water-related benefits within the Region. Once DWR approves a Region's IRWMP, the Region is eligible to submit grant applications for those projects through the IRWM Grant Program.

#### 2.1.2 DACI Program

The intent of the DACI Program is to ensure the involvement of DACs, economically distressed areas (EDAs), or underrepresented communities (collectively referred to as DACs) in IRWM planning efforts. DWR established the DACI Program in order to advance the following objectives:

- Work collaboratively to involve DACs, community-based organizations, and stakeholders in IRWM planning efforts to ensure balanced access and opportunity for participation in the IRWM planning process
- Increase the understanding and, where necessary, identify the water management needs of DACs on a Funding Area basis
- Develop strategies and long-term solutions that appropriately address the identified DAC water management needs

With this objective in mind, DWR earmarked 10% of the overall Prop 1 IRWM Program funds (\$51 million of a total \$510 million) for the DACI Program. These funds were allocated to each of 12 Funding Areas identified in Prop 1, with the SJRFA receiving an allocation of \$3.1 million. Of the ten IRWM regions within the SJRFA, seven chose to participate in the DACI Grant Proposal to secure this funding. The participating Regions are American River Basin (ARB), East Contra Costa County (ECCC), Eastern San Joaquin (ESJ), Westside-San Joaquin (WSJ), East Stanislaus, Madera, and Merced. These Regions convened a Stakeholder Advisory Committee (SAC) to facilitate interregional coordination throughout the DACI work. These Regions submitted their grant proposal to DWR in 2018. Funds were distributed among a number of projects that will improve DAC involvement in the IRWM planning process. Per the DACI Program requirements, the proposal included funding for a DAC

Needs Assessment in the SJRFA. The Needs Assessment is ultimately intended to provide a better understanding of water management needs to help direct resources and funding. This report documents the methods and findings of the Needs Assessment.

## 2.2 San Joaquin River Funding Area Overview

This section provides a high-level overview of the SJRFA, including geography, water supply, water quality, flooding, land use, and demographics. For further detail on these topics, the individual IRWMPs for each Region may be consulted.

### 2.2.1 IRWM Regions

Figure 1 shows the IRWM Regions within the SJRFA. The Eastern San Joaquin, East Stanislaus, and Merced IRWM Regions are entirely within the SJRFA; and the East Contra Costa, ARB, Madera, and Westside-San Joaquin IRWM Regions are partially within the SJRFA. The Cosumnes, American, Bear, Yuba Region, Tuolumne-Stanislaus Region, and Mokelumne-Amador-Calaveras Region are partially within the SJRFA as well but chose not to participate in the grant proposal or Needs Assessment.

### 2.2.2 Geographic Extent

The SJRFA lies in the Central Valley and extends from the Coast Range in the west to the Sierra Nevada in the east. The SJRFA's northern boundary extends from the northwest portion of Contra Costa County to the northeast, passing south of Sacramento. In the south, the boundary travels roughly east-west south of Madera and north of Fresno. The SJRFA covers all or part of the following counties: Contra Costa, San Joaquin, Sacramento, Stanislaus, Merced, Madera, Fresno, Calaveras, Amador, Mariposa, Tuolumne, San Benito, and Alameda.

### 2.2.3 Hydrology

The SJRFA corresponds roughly to the San Joaquin River Hydrologic Region defined by DWR (although the SJRFA does not extend into the Sierra Nevada, while the Hydrologic Region does). The SJRFA includes much of the San Joaquin River drainage area. The San Joaquin River, roughly 300 miles long, is one of the longest rivers in California. It begins on the western slope of the Sierra Nevada, flowing down to the San Joaquin Valley floor and turning northwest toward the Sacramento-San Joaquin River Delta (Delta). Other major rivers in the SJRFA include the Mokelumne, Stanislaus, Tuolumne, and Merced rivers, which flow from the Sierra Nevada into the San Joaquin River. The Chowchilla and Fresno rivers also originate in the Sierra Nevada and flow westward toward the San Joaquin River. In the west of the SJRFA, along the Coast Range, creeks drain eastward into the San Joaquin River, including Del Puerto Creek, Orestimba Creek, and Panoche Creek.

### 2.2.4 Water Supply

Water supplies in the SJRFA include both surface water and groundwater. Much of the surface water used in the SJRFA comes from the Central Valley Project (CVP). The tributaries of the San Joaquin River, such as the Merced, Tuolumne, and Stanislaus Rivers, also provide surface water supply to the SJRFA. Groundwater is a highly important water source in the SJRFA. Alluvial aquifers underlie the valley floor to the east and west of the San Joaquin River; these aquifers are tapped by drinking water and agricultural supply wells managed by various agencies, as well as private domestic wells. DWR estimates that roughly 40% of water supply in the San Joaquin River Hydrologic Region is met by groundwater, with most being used for agriculture (DWR, 2014). Under the Sustainable Groundwater Management Act (SGMA), governments and water agencies in high- and medium-priority groundwater subbasins are required to develop Groundwater Sustainability Plans (GSPs) to ensure that their use of groundwater can be sustainability maintained without undesirable results. GSPs are

required for all groundwater subbasins in the SJRFA (Figure 2). Additionally, certain subbasins have been designated as “critically overdrafted,” and are required to complete their GSPs on an expedited schedule (with GSPs due to DWR by January 31, 2020 versus January 31, 2022 for non-critically overdrafted subbasins). Significant efforts to comply with SGMA are being undertaken throughout the SJRFA, in many instances with Groundwater Sustainability Agencies (GSAs) being composed of or working with DAC representatives and stakeholders for GSP development and GSP implementation.



Figure 1: IRWM Regions in the San Joaquin River Funding Area

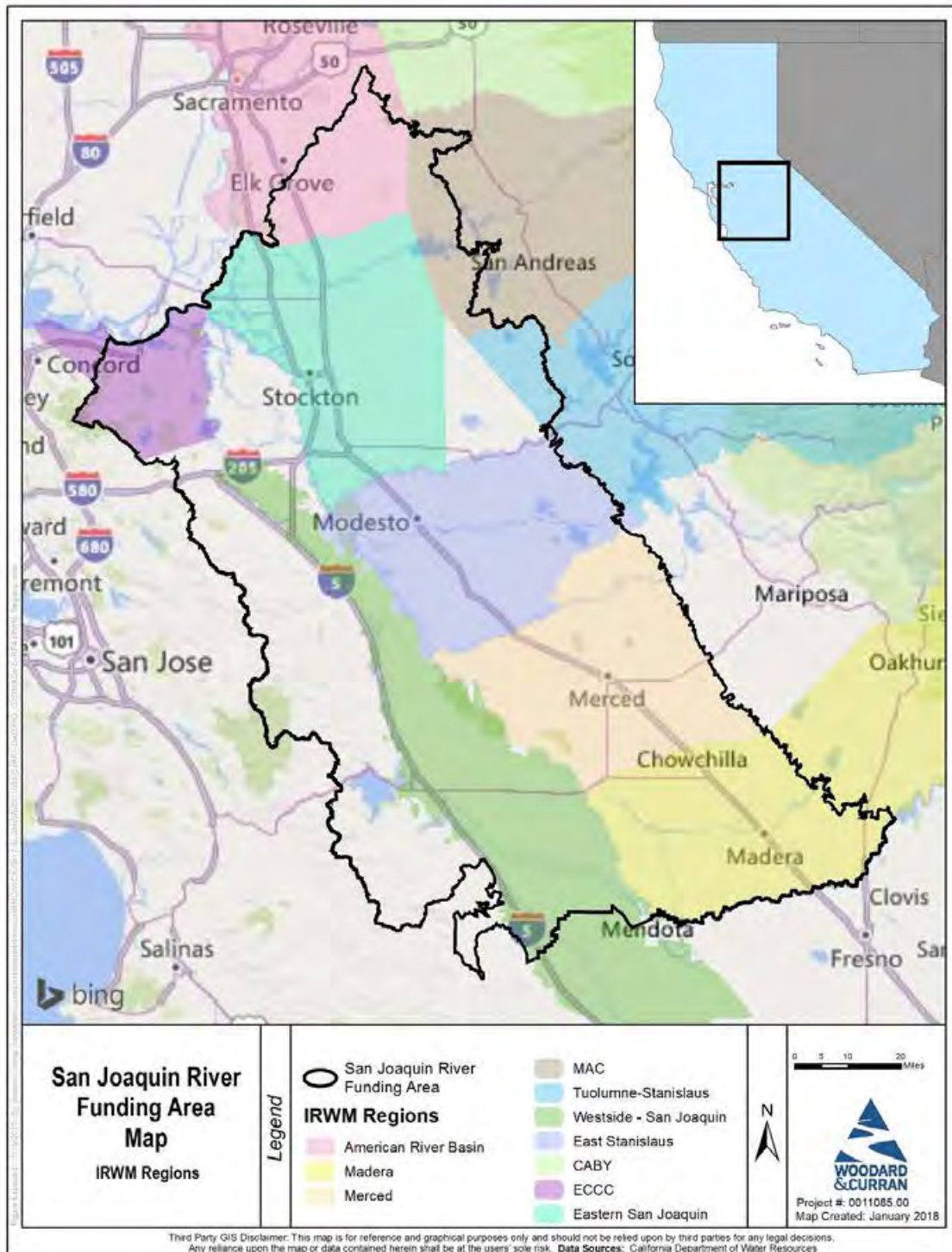


Figure 2: Groundwater Basins and Prioritization

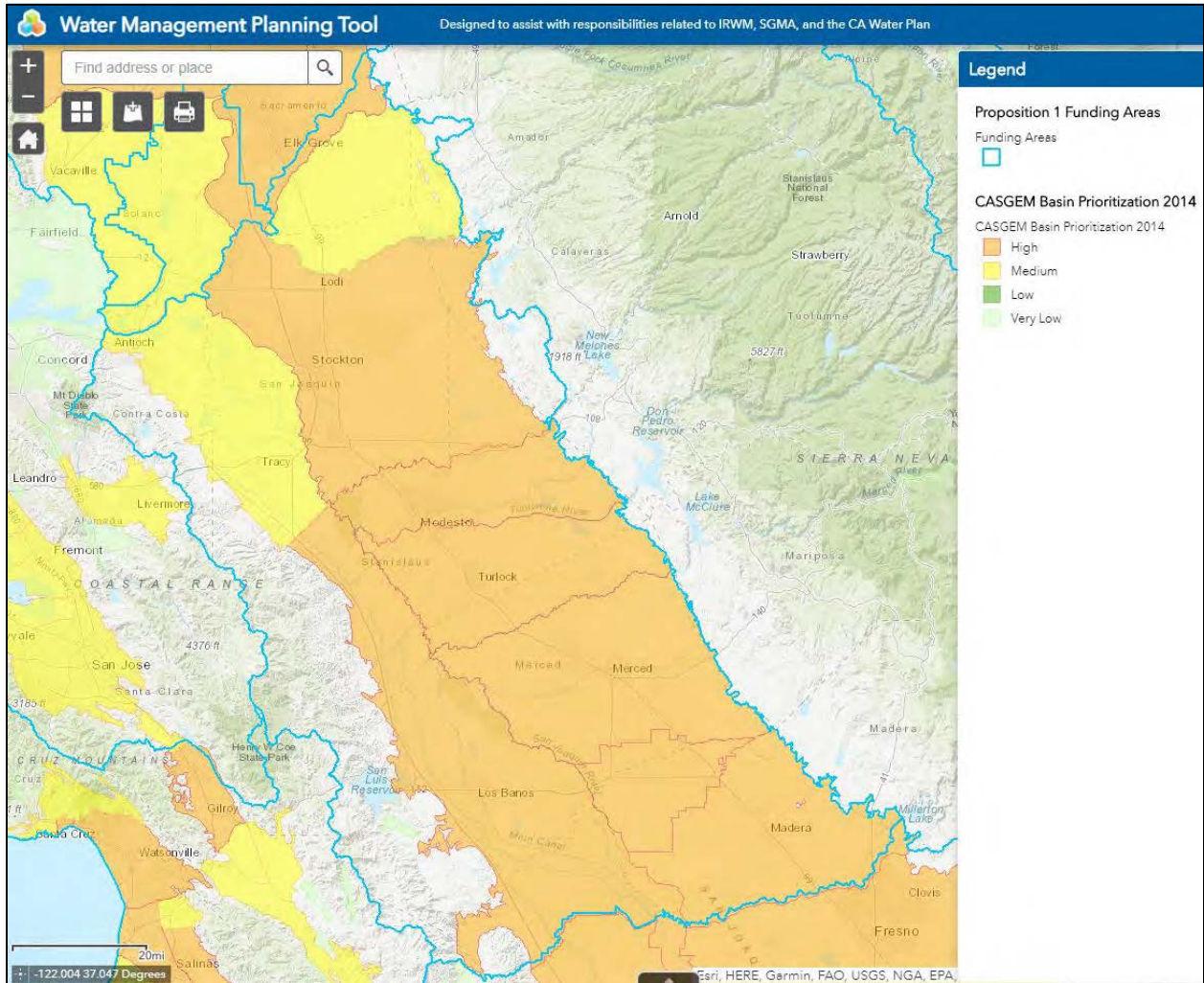


Figure Source: DWR Water Management Planning Tool, <https://gis.water.ca.gov/app/boundaries/>

### 2.2.5 *Water Infrastructure*

Water infrastructure in the SJRFA includes reservoirs, canals, levees, aqueducts, pipelines, and wells that provide water supply and flood management to the San Joaquin Valley. Reservoirs on the east side of the Valley, such as New Melones Lake, Don Pedro Reservoir, and Lake McClure, serve to store water, prevent flooding, generate electricity, and provide recreational area. Many other reservoirs exist throughout the SJRFA and provide one or more of these benefits. Levees provide flood protection throughout the SJRFA, particularly in the Delta. Along the west side of the SJRFA, the Delta-Mendota Canal and California Aqueduct carry CVP and State Water Project (SWP) water supplies south for municipal and agricultural use.

### 2.2.6 *Land Use*

Land use on the San Joaquin Valley floor is generally agricultural in nature, although urban areas also exist and are expanding (Figure 3). A diverse array of crops is grown in the SJRFA, including nuts, rice, cotton, grapes, tomatoes, and many more. In the Coast Range, oak woodlands, grasslands, and chaparral are found, much of which is used as rangeland. Riparian areas exist throughout the SJRFA along rivers, streams, canals and sloughs, as well as within the Delta. Roughly half of the Delta falls within the SJRFA. Wetlands also exist in the SJRFA, which are mostly wildlife refuges or privately managed waterfowl hunting areas.

### 2.2.7 *Flooding*

Portions of the SJRFA are susceptible to flooding, which is generally driven by melting of the Sierra snowpack in the spring, and by rainfall events. The 100-year floodplain, as defined by the Federal Emergency Management Agency (FEMA), covers large sections of the SJRFA, particularly in the Delta, but also along the San Joaquin River and its tributaries to the east (Figure 4). Much of Merced and Madera counties would be susceptible to a 100-year flood as would riverside areas throughout the SJRFA. Some urban and small-stream flooding is likely to occur with each large storm, with more damaging flooding possible in more extreme events (DWR, 2014).

Figure 3: Land Use

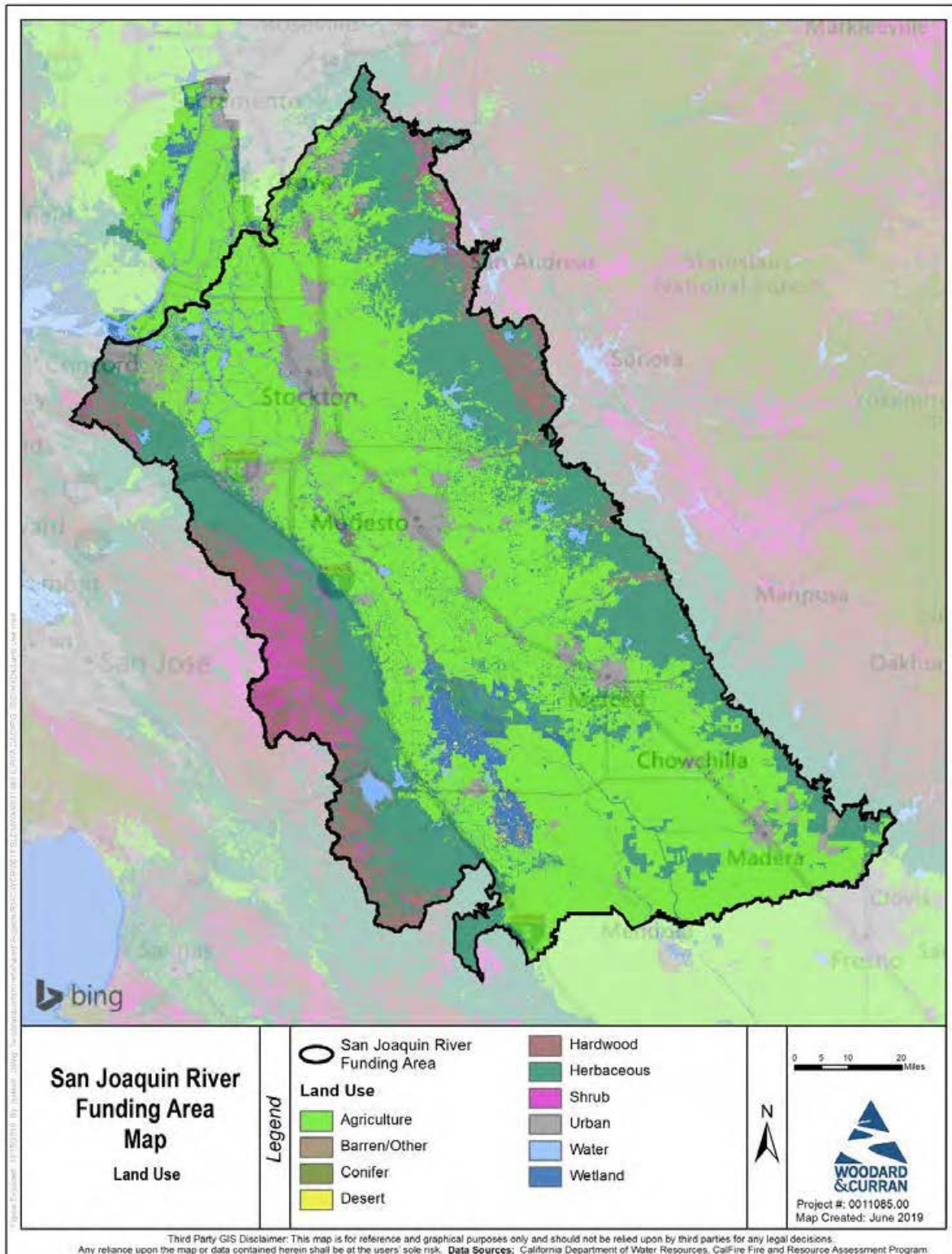
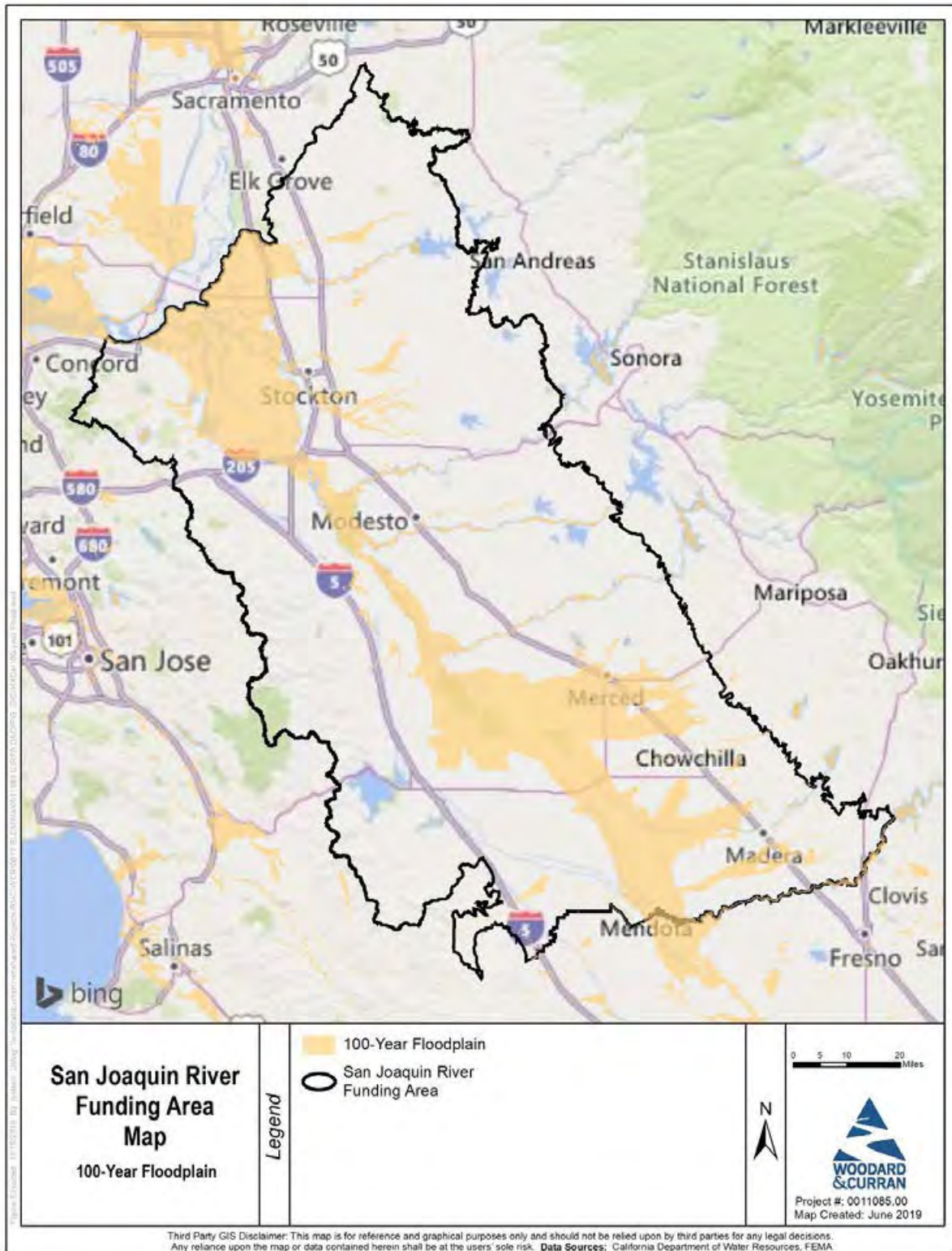


Figure 4: 100-Year Floodplain



### 2.2.8 Water Quality

Water quality in the SJRFA varies depending upon the source. Surface water from the east side of the valley that originates in the Sierra Nevada is generally of high quality. Flows from the west side of the valley, originating from the Coast Range, consist largely of agricultural return flows which are often lower in quality. Regional geology also contributes to poor water quality due to higher concentration of salts in ancient marine sediments that underlie the area. Salt management is a key water quality issue throughout the SJRFA. Constituents of concern in surface water supplies include salts, boron, selenium, pesticides, metals, nutrients, bacteria, and sediment (DWR, 2014). In groundwater, constituents of concern are salts, nitrate, arsenic, 1,2,3 trichloropropane (TCP), uranium, and chromium 6. Localized groundwater contamination by tetrachloroethylene (PCE) and trichloroethylene (TCE) also exists.

### 2.2.9 Demographics

The SJRFA is generally rural, with scattered urban areas where the majority of the population resides. Notable cities include Stockton, Antioch, Tracy, Lodi, Modesto, Turlock, Manteca, Lathrop, Merced, Patterson, Los Banos and Madera. An overview of demographic information by county is shown in Table 1. These data include information from the counties as a whole and not only the portion within the SJRFA. Many counties have high proportions of Hispanic or Latino residents; these are included in Table 1 as language accessibility is an important consideration in the SJRFA and Spanish translation services are typically required at community meetings with DAC members.

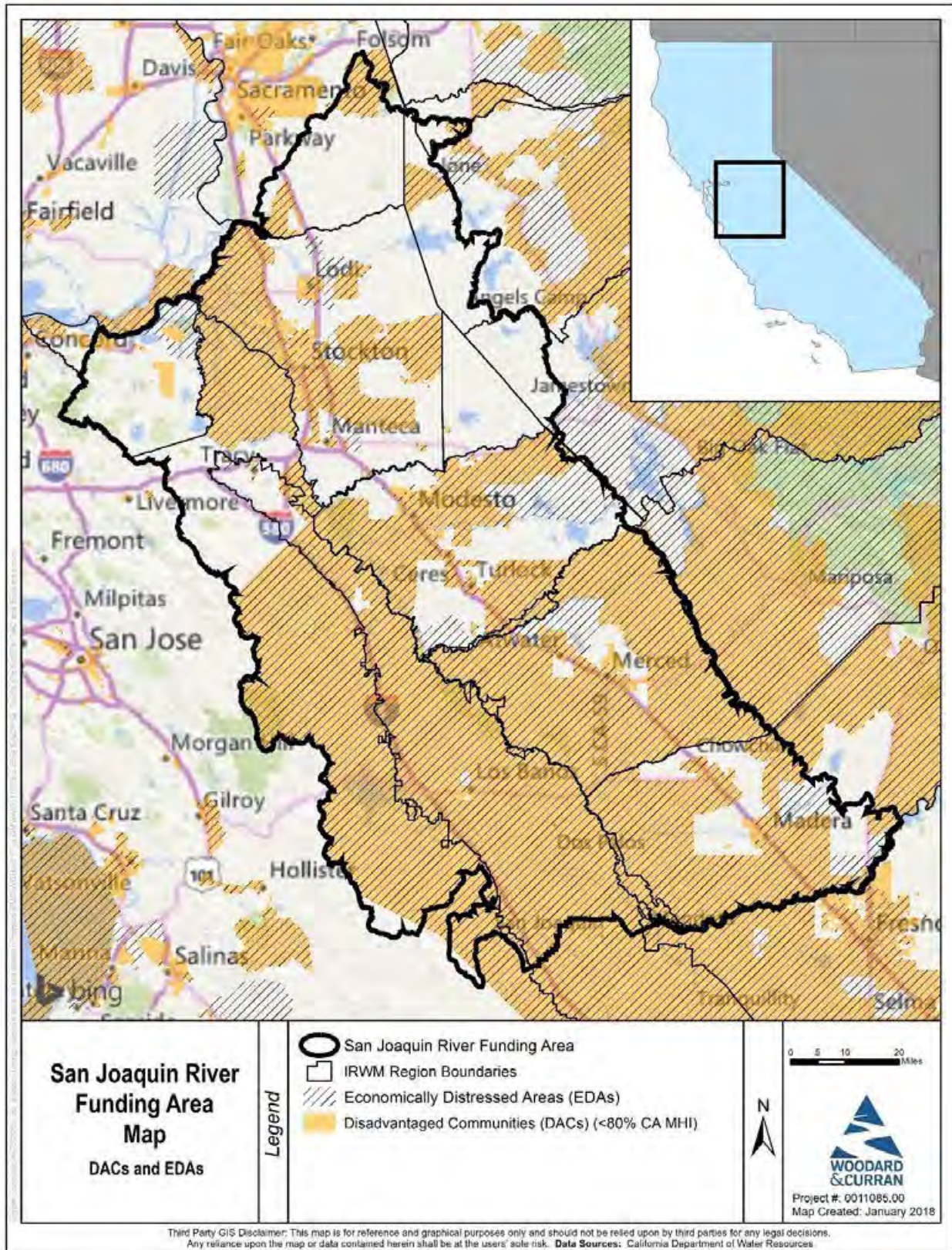
**Table 1: Demographic Data Overview by County**

County	Population	Median Household Income (\$)	Percent of population that is Hispanic or Latino
Alameda County	1,629,615	85,743	22.5%
Amador County	37,306	60,636	13.2%
Calaveras County	45,057	54,800	11.5%
Contra Costa County	1,123,678	88,456	25.3%
Fresno County	971,616	48,730	52.4%
Madera County	154,440	48,210	56.9%
Mariposa County	17,658	51,385	10.6%
Merced County	267,390	46,338	58.2%
Sacramento County	1,495,400	60,239	22.8%
San Benito County	58,671	80,760	58.9%
San Joaquin County	724,153	57,813	40.8%
Stanislaus County	535,684	54,260	45.0%
Tuolumne County	53,899	54,325	11.8%
Data source: 2013-2017 American Community Survey 5-Year Estimates. Data is for each County as a whole, not only the portion within the SJRFA.			

A DAC, as defined by Prop 1, is a community with a Median Household Income (MHI) less than 80% of the California statewide MHI. DACs comprise a significant portion of the SJRFA. An economically distressed area (EDA), as defined in Prop 1, is a “municipality with a population of 20,000 persons or less, a rural county, or a reasonably isolated and divisible segment of a larger municipality where the segment of the population is 10,000 persons or less, with an annual MHI that is less than 85% of the statewide MHI, and with one or more of the following conditions as determined by the department: financial hardship; unemployment rate at least two percent higher than the statewide average; or low population density. Underrepresented communities (URCs) are those that are not included in an IRWM Region and/or areas where populations are small and dispersed. For the purposes of this Needs Assessment, DACs, EDAs, and URCs are collectively referred to as DACs.

Figure 5 shows the DACs and EDAs within the SRJFA. These areas were identified using American Community Survey data (2012-2016 five-year estimates) as compiled in DWR’s DAC Mapping Tool and EDA Mapping Tool. These mapping tools include MHI data at three geography levels: census designated place, census block group, and census tract. These three geography levels have been combined to obtain the complete extent of DAC and EDA area, as shown in Figure 5. This map depicts all DAC and EDA areas, not solely incorporated areas or defined unincorporated communities. DACs and EDAs make up the majority of the SJRFA, especially in the southern portion of the SJRFA. URCs are found in Stanislaus, San Joaquin, Alameda, Merced, San Benito, and Fresno Counties. Much of the underrepresented areas lie in the eastern side of the Coast Range. Other URCs are found just west of Stockton and in Stanislaus County, north of the Stanislaus River. The Needs Assessment covered the entire SJRFA (not just the geographic area covered by the IRWM Regions), and thus includes evaluation of URC needs. The DAC database described in Section 3 evaluates DAC needs on a community level. The term “community” may refer to incorporated areas, unincorporated census-designated places, or other discrete portions of the SJRFA (e.g., locations that share a water system). Additional detail on the database and data sources is provided in Section 3.

Figure 5. DACs and EDAs in the San Joaquin River Funding Area





### 2.2.10 DAC Needs Overview

The seven participating IRWM Regions within the SJRFA identified specific DAC water management needs through their IRWM planning processes and associated outreach efforts; these needs informed the IRWM planning processes and provided important context for future planning and implementation projects. Most DAC water needs are driven by infrastructure demands, supply diversification, and declining groundwater elevations and/or quality.

- **Water supply reliability:** Some portions of the SJRFA lack reliable water supplies because they do not have diversified sources of supply. For example, Del Puerto Water District, located in the Westside-San Joaquin IRWM Region and whose almost entire service area is considered a DAC, relies exclusively on the Central Valley Project for water supplies (with local residents relying on shallow groundwater wells). In past years, Del Puerto Water District and other CVP contractors have received 0% allocations during multiple drought years. Other communities, such as the communities of Grayson and Santa Nella, depend mainly on groundwater, leaving them vulnerable to declining groundwater levels, well failures or water quality issues. Events that impact the quality or quantity of water supply could threaten the regional economy and thus DACs.
- **Access to water:** Related to the issue of water supply reliability, access to water for DACs at the household level can be an issue. In some cases, lack of infrastructure may be the problem while, for others, DACs may have access only to low-quality water. Poor access to suitable water can impact the health and safety of DACs and can also result in DACs turning to more expensive options (i.e. bottled water).
- **Water quality:** Groundwater quality is a concern in some portions of the SJRFA, especially when groundwater is a community's only source of water. Quality issues include elevated nitrate and arsenic levels and pesticides, among other constituents. Salinity levels in the Central Valley and Delta islands also continue to be of concern because excess salinity can impact food production, water/wastewater treatment, and water quality. Surface water quality is also an issue in the SJRFA; additionally, disinfection of surface water may result in byproducts such as haloacetic acids and trihalomethanes, which are of concern.
- **Water affordability/Infrastructure updates:** As aging water infrastructure requires replacement, many water suppliers face financial difficulties. Agencies must pass their rising costs on to customers, which can be problematic for DACs, leading to financial burden to ratepayers or resulting in projects being economically infeasible. Furthermore, infrastructure updates that are required to provide supply reliability and/or meet regulatory or safety requirements are especially necessary in DACs as many of these communities are unincorporated and may lack centralized water supply, wastewater, or stormwater infrastructure. The small size of many DACs also means that projects in these areas cannot take advantage of economies of scale and that the cost implications to each customer are greater than for a larger community or city.
- **Flood risk management:** Much of the SJRFA is at high risk of damaging floods. DACs are particularly vulnerable to flood risk as they are frequently located in floodplains. Lack of resources hinders a community's ability lessen the immediate impact of and to recover after a flood event. Many DACs do not have a Flood Control Agency responsible for the implementation of flood-related projects.
- **Small water systems and/or private wells:** Small water systems with a single source of supply disproportionately exist in DACs, and these systems are vulnerable in the event of mechanical failure or source contamination as they may not have redundancy or a back-up

water supply. Similarly, there are many communities without a water system, that rely on private wells. Residences that rely on an individual private well are also vulnerable to failure of that well, as they may not have a back-up water supply.

- **Agricultural job security:** Many DAC members are employed in the agricultural sector and the SJRFA's economy as a whole relies heavily on this industry. The area's agriculture depends on sound water management and continued supply.

## Section 3. DAC Database Data Collection and Methods

The DAC Needs Assessment is intended to provide a better understanding of the water needs of DACs in the area. The Needs Assessment included the development of a database of DACs in the SJRFA, which contains a compilation of data from publicly available sources related to the sources and quality of water supply in DACs. While Figure 5 above shows Census tracts and block groups, the database is focused on Census Designated Places and other identifiable communities rather than generalized areas.

Detailed maps of the SJRFA are available in Appendix A.

### 3.1 DAC Database Overview

A database was developed of communities identified in the SJRFA. The project team compiled data from local, state, and federal sources to create the database. Geographic Information Systems (GIS) was utilized to map the location of communities in the SJRFA and other available and relevant data in order to identify needs. Median household income statistics were used to assist in classifying whether communities had a disadvantaged status. The database is a collection of information from DWR, Safe Drinking Water Information System (SDWIS), California Integrated Water Quality System (CIWQS), Provost & Pritchard GIS data resources, as well as other sources.

DAC boundaries were developed based on California Department of Forestry (Cal Fire) incorporated communities data, California Division of Drinking Water (DDW) water system service areas, US Census Places, University of California (UC), Davis Disadvantaged Unincorporated Communities (DUC) study data, and local knowledge. Data describing these communities by certain attributes were then gathered from the various datasets identified.

Key data fields within the database include:

- DAC Status (DAC, SDAC or Not DAC)
- Estimated Number of Water Service Connections
- Estimated Population
- Source(s) of Drinking Water Supply
- Estimated Number of Public Wells
- Drinking Water Quality Compliance Status
- Existing Water System versus Private Wells
- Existing Wastewater Treatment Facility

### 3.2 Data Sources

The following data sources were used in the development of the database:

1. DWR IRWM Prop 1 Funding Areas - San Joaquin River Funding Area
2. DWR IRWM Region Boundaries
3. Cal Fire-Fire Resource and Assessment Program (FRAP) - County Boundaries and Incorporated Communities
4. State Water Resources Control Board (SWRCB) DDW - Water Systems Service Areas
5. DWR 2012-2016 Census Place/Block Group/Tract
6. SWRCB GAMA (Groundwater Ambient Monitoring and Assessment) Groundwater Information System – Public Potable Drinking Water Sources
7. US Census Bureau 2017 Places (Incorporated and Census Designated Places (CDP))
8. SWRCB Public Potable Water Systems Data
9. UC Davis DUC Data

## 10. SWRCB Exceedance/Compliance Violation Data

### 3.3 Database Development

A comprehensive community boundaries layer was developed within the SJRFA by combining incorporated communities' extents from Cal Fire (item #3 above) and unincorporated communities' extents from US Census Places (item #7). Water systems data (item #4) were integrated into the boundaries layer, which included public water system identification numbers, water system names, and number of connections, if applicable (some communities do not have water systems).

Once public water system identification numbers were associated with the community shapes, information about the public potable water systems (item #8) were joined with the GIS, including population, water system status, and type. DWR provided the 2012-2016 Census Data to associate the MHI statistics to communities. Based on the MHI, DAC classifications were established for each community. DACs are communities whose MHI is less than 80% of the statewide MHI, but greater than 60% of the statewide MHI (between \$38,270-\$51,026). Severely Disadvantaged Community (SDAC) are those that have a MHI of 60% or less of the statewide MHI (below \$38,270). Areas that were not considered a DAC are those with an MHI above \$51,026.

Additional communities were located with the UC Davis DUC shapefiles (item #9). They were compared with the community shapes already developed above. New community shapes were digitized based on aerial imagery (Google Maps) and UC Davis community shapes to determine the best estimate of a community footprint. These community shapes were then assigned correlating attributes (IRWM region, County, MHI, and DAC status).

Once a preliminary dataset was developed, the following steps were taken to improve the database:

- Reviewed each of the IRWM plans to cross reference the list of DACs in comparison with the database.
- Reviewed Wikipedia pages or County Local Agency Formation Commission (LAFCo) web sites for each county within the SJRFA and found a list of what the County considered to be its incorporated cities, CDPs, and unincorporated communities.
  - Integrated unincorporated communities that were not already in the dataset.
- Upon completion of adding in these new unincorporated communities by aerial verification, the community shapes were assigned correlating attributes (IRWM region, County, MHI, and DAC status).

The updated list of communities and corresponding data were subsequently updated with additional data gathered, specific to the water supply system. This effort included the following steps:

- Contact information for the Public Water Systems: downloaded a SDWIS Public Water Systems file and joined to the communities based on the public water system identification number.
- PWS Compliance Status: downloaded the violations/compliance status from the Human Right to Water Portal.
  - Violation type determined for PWS that are out of compliance or returned to compliance.
- Wastewater treatment facility locations: downloaded facilities with active waste discharge requirements from CIWQS Regulated Facilities Report.

### 3.4 Database Limitations

The database includes currently available data, but it is not a complete and comprehensive database of all water supply systems in the SJRFA, and as such, should be considered a work in progress for future updating. It is likely that there are communities and/or systems with water quality problems that have not been specifically identified because water quality data were limited or not available. Very small water systems (15 connections and fewer) are likely to have the greatest limitations in data available, and data for households with individual wells were also not available.

Data that has been collected and compiled are linked together using a unique identification number assigned to each community. The information included in the database consists primarily of simplified numeric data. It does not provide explanation or comment on the possible unique circumstances associated with the data.

Water systems that are not permitted by DDW, such as individual wells for single family homes, may not be fully represented in the database. The lack of data for individual, unregulated systems precludes the precise determination of the population of DACs affected by water quality issues.

The database does not contain information regarding the volume of water produced and consumed at the listed water systems. Thus, it is difficult to determine whether a system has sufficient water supply capacity.

Because of the limitations discussed above, the primary use of the database is to statistically evaluate drinking water contamination issues in the SJRFA. Accordingly, the primary value of the database search is to indicate the general occurrence of the problems faced by DACs, to identify the magnitude of the problems and general location, and to identify the major constituents of concern.

For each community, water source and respective water quality is unique. Each water system is unique. There is no “standard” solution that will apply for each water system with a given issue. This database therefore provides general background from which to start, but specific community outreach and feasibility studies will need to be conducted on a community-by-community basis in order to develop the appropriate solution for each community.

## Section 4. Needs Assessment Findings

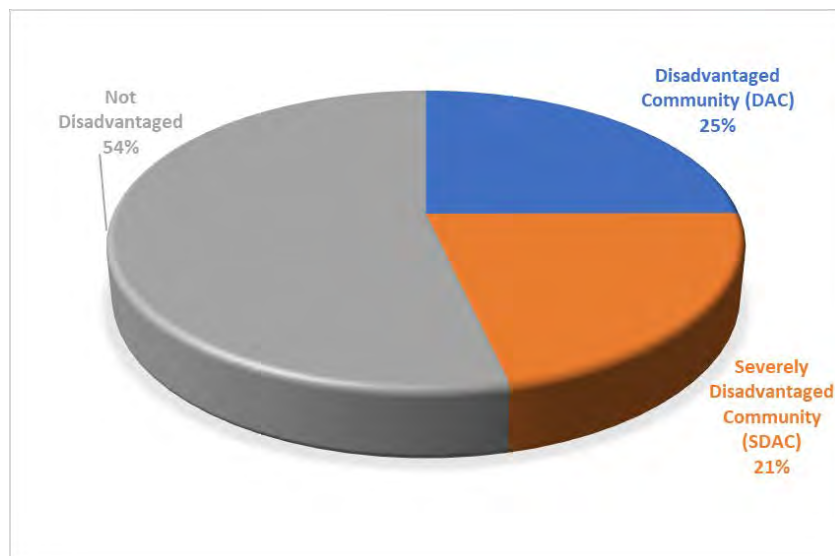
The following subsections discuss the Needs Assessment findings, including information obtained from the DAC database and information gathered from the community survey and workshops.

### 4.1 Preliminary Water Needs in DACs

Based on the data collected for this region, there are 123 DACs identified within the SJRFA, of which 57 are SDACs. Collectively, disadvantaged and severely disadvantaged communities are referred to as DACs. A summary count of communities by type is shown in Table 2 and summarized in Figure 6. Disadvantaged communities within the SJRFA are shown by IRWM group in Section A of Appendix A, the San Joaquin River Funding Area Map Book. The DACs within the SRJFA are also listed by IRWM Region in Table 3.

These tables do not include consolidated systems, which are presented later in this section. Communities that are assumed to be consolidated with a neighboring water system are shown in the map book (Appendix A) and are still shown on maps so that communities and/or issues are represented spatially. However, they are not included in these summary tables to avoid duplication.

**Figure 6: Summary of Community DAC Status in SJRFA**



**Table 2: Summary of Community DAC Status, Population, and Water Service Connections**

Type of Community	Count	Population	Water Service Connections
Disadvantaged Community (DAC)	66	703,940	197,614
Severely Disadvantaged Community (SDAC)	57	217,865	57,542
Not Disadvantaged	142	778,532	240,979
Total	265	1,700,337	496,135

**Table 3: Disadvantaged Communities by IRWM Region**

Community Name	DAC Status	Population <sup>2</sup>	Connections <sup>3</sup>	County	IRWM Region
Angler S Ranch #3	SDAC	60	30	Contra Costa	East Contra Costa County
Anglers Subdivision 4	SDAC	210	99	Contra Costa	East Contra Costa County
Bethel Island	SDAC	149	45	Contra Costa	East Contra Costa County
Flamingo Mobile Manor	SDAC	200	62	Contra Costa	East Contra Costa County
Riverview Water Association	SDAC	230	86	Contra Costa	East Contra Costa County
Russos Mobile Park	SDAC	110	20	Contra Costa	East Contra Costa County
Sandmound Mutual	SDAC	160	65	Contra Costa	East Contra Costa County
Santiago Island Village	SDAC	400	211	Contra Costa	East Contra Costa County
Willow Mobile Home Park	SDAC	350	173	Contra Costa	East Contra Costa County
Ballico	SDAC	238	73	Merced	East Stanislaus
Buehner	DAC	150	50	Stanislaus	East Stanislaus
Ceres	DAC	47,639	11,297	Stanislaus	East Stanislaus
Ceres West Mobile Home Park (MHP)	SDAC	161	46	Stanislaus	East Stanislaus
Chemurgic	DAC	unknown	NA	Stanislaus	East Stanislaus
Cobles Corner	DAC	50	20	Stanislaus	East Stanislaus
Country Villa Apts	DAC	30	23	Stanislaus	East Stanislaus
Country Western Mobile Home Park	DAC	90	60	Stanislaus	East Stanislaus
Cowan	SDAC	unknown	NA	Stanislaus	East Stanislaus
Delhi	DAC	8,625	2,361	Merced	East Stanislaus
Fisherman's Bend MHP	SDAC	80	87	Stanislaus	East Stanislaus
Grayson	SDAC	865	274	Stanislaus	East Stanislaus
Green Run Mobile Estates	DAC	100	46	Stanislaus	East Stanislaus
Hickman	DAC	565	181	Stanislaus	East Stanislaus
Hills Ferry	SDAC	unknown	NA	Stanislaus	East Stanislaus
Kerr Park	SDAC	26	4	Stanislaus	East Stanislaus
Keyes	DAC	4,805	1,296	Stanislaus	East Stanislaus

<sup>2</sup> Population data was not collected for communities that do not have a public water system.

<sup>3</sup> Connections refers to the number of public water system connections. The number of connections for communities that do not have a public water system is not applicable (NA).

Community Name	DAC Status	Population <sup>2</sup>	Connections <sup>3</sup>	County	IRWM Region
La Grange	DAC	195	59	Stanislaus	East Stanislaus
Langworth	SDAC	unknown	NA	Stanislaus	East Stanislaus
Lazy B Mobilehome Park	SDAC	125	49	Stanislaus	East Stanislaus
Martin's Mobile Home Court	SDAC	60	20	Stanislaus	East Stanislaus
Mobile Plaza Park	DAC	125	50	Stanislaus	East Stanislaus
Modesto	DAC	211,903	69,141	Stanislaus	East Stanislaus
Monterey Park Tract	DAC	186	50	Stanislaus	East Stanislaus
Montpelier	SDAC	unknown	NA	Stanislaus	East Stanislaus
Orchard Village MHP	DAC	75	49	Stanislaus	East Stanislaus
Riverdale Park	SDAC	610	178	Stanislaus	East Stanislaus
Sunrise Village MHP	SDAC	339	103	Stanislaus	East Stanislaus
Waterford	DAC	8,686	2,112	Stanislaus	East Stanislaus
Waterford-River Pointe	DAC	1,046	319	Stanislaus	East Stanislaus
A1 Winstons Mobile Home Park	SDAC	75	30	San Joaquin	Eastern San Joaquin
Arbor Mobile Home Park	DAC	340	173	San Joaquin	Eastern San Joaquin
Avalos	SDAC	30	15	San Joaquin	Eastern San Joaquin
B&G Mobile Home Park	DAC	50	22	San Joaquin	Eastern San Joaquin
Big Wheel Mobile Home Park	DAC	120	55	San Joaquin	Eastern San Joaquin
Caribou Mobile Park	DAC	180	72	San Joaquin	Eastern San Joaquin
Century Mobile Home Park	SDAC	50	16	San Joaquin	Eastern San Joaquin
Cherry Lane Trailer Park	SDAC	100	43	San Joaquin	Eastern San Joaquin
Collierville	DAC	unknown	NA	San Joaquin	Eastern San Joaquin
Country Squire Mobile Estates	DAC	64	47	San Joaquin	Eastern San Joaquin
Double L Mobile Estates	DAC	320	150	San Joaquin	Eastern San Joaquin
El Pinal	SDAC	unknown	NA	San Joaquin	Eastern San Joaquin
El Rio Mobile Home Park	SDAC	60	28	San Joaquin	Eastern San Joaquin
Glenwood Mobile Home Park	SDAC	100	50	San Joaquin	Eastern San Joaquin
Homestead	SDAC	unknown	NA	San Joaquin	Eastern San Joaquin
Kennedy	SDAC	unknown	NA	San Joaquin	Eastern San Joaquin
King Island Trailer Park	DAC	200	76	San Joaquin	Eastern San Joaquin
Larson	SDAC	unknown	NA	San Joaquin	Eastern San Joaquin



Community Name	DAC Status	Population <sup>2</sup>	Connections <sup>3</sup>	County	IRWM Region
Lockeford	DAC	2,500	833	San Joaquin	Eastern San Joaquin
Lockeford Mobilehome Park	DAC	100	44	San Joaquin	Eastern San Joaquin
Lodi Homes	DAC	39	15	San Joaquin	Eastern San Joaquin
Mapache Trailer Park	SDAC	275	99	San Joaquin	Eastern San Joaquin
Mormon	DAC	unknown	NA	San Joaquin	Eastern San Joaquin
New Hope Landing	DAC	unknown	NA	San Joaquin	Eastern San Joaquin
Rancho San Joaquin	DAC	141	51	San Joaquin	Eastern San Joaquin
Riverside Mobile Home Park	DAC	55	28	San Joaquin	Eastern San Joaquin
Sahara Mobile Court	SDAC	300	175	San Joaquin	Eastern San Joaquin
San Juan Vista	DAC	100	73	San Joaquin	Eastern San Joaquin
Shady Rest Trailer Court	SDAC	120	53	San Joaquin	Eastern San Joaquin
Stockton*	SDAC	171,253	42,910	San Joaquin	Eastern San Joaquin
Stockton	DAC	175,530	48,568	San Joaquin	Eastern San Joaquin
Terminus	DAC	1,010	202	San Joaquin	Eastern San Joaquin
Thornton	SDAC	957	292	San Joaquin	Eastern San Joaquin
V & P Trailer Court Water System	SDAC	35	15	San Joaquin	Eastern San Joaquin
Walnut Acres	DAC	100	30	San Joaquin	Eastern San Joaquin
Walthal	SDAC	unknown	NA	San Joaquin	Eastern San Joaquin
Bonadelle Rancho Five	DAC	unknown	NA	Madera	Madera
Chowchilla	SDAC	13,220	3,960	Madera	Madera
Fairmead	SDAC	568	162	Madera	Madera
Gregg	DAC	unknown	NA	Madera	Madera
Irrigosa	DAC	unknown	NA	Madera	Madera
La Vina	DAC	350	99	Madera	Madera
Madera	DAC	66,082	13,695	Madera	Madera
Md 36 Eastin Arcola	DAC	80	16	Madera	Madera
Parksdale	SDAC	1,555	532	Madera	Madera
Parkwood	SDAC	1,637	496	Madera	Madera
Ripperdan	DAC	48	17	Madera	Madera
Sharon	DAC	unknown	NA	Madera	Madera
Storey	SDAC	unknown	NA	Madera	Madera

Community Name	DAC Status	Population <sup>2</sup>	Connections <sup>3</sup>	County	IRWM Region
Trigo	DAC	unknown	NA	Madera	Madera
Valeta	DAC	45	20	Madera	Madera
Arena	DAC	unknown	NA	Merced	Merced
Atwater	DAC	30,406	6780	Merced	Merced
Bear Creek	SDAC	unknown	NA	Merced	Merced
El Nido	SDAC	unknown	NA	Merced	Merced
El Nido Mobile Home Park	SDAC	137	50	Merced	Merced
Franklin	DAC	6,309	1,668	Merced	Merced
Le Grand	DAC	1,700	456	Merced	Merced
Merced	DAC	80,542	20,963	Merced	Merced
Plainsburg	DAC	unknown	NA	Merced	Merced
Planada	DAC	4,500	1,095	Merced	Merced
Snelling	DAC	unknown	NA	Merced	Merced
Stevinson	DAC	unknown	NA	Merced	Merced
The Grove	DAC	unknown	NA	Merced	Merced
Winton	DAC	8,500	3,081	Merced	Merced
Crows Landing	SDAC	500	138	Stanislaus	Westside - San Joaquin
Dos Palos	SDAC	7,452	2,540	Merced	Westside - San Joaquin
Dos Palos Y	SDAC	150	3	Merced	Westside - San Joaquin
Firebaugh	SDAC	7,619	1,642	Fresno	Westside - San Joaquin
Gustine	SDAC	5,546	1,878	Merced	Westside - San Joaquin
Hamburg Farms	DAC	unknown	NA	Merced	Westside - San Joaquin
Hammonds Ranch	DAC	unknown	NA	Fresno	Westside - San Joaquin
Ingomar	SDAC	unknown	NA	Merced	Westside - San Joaquin
Las Deltas	SDAC	375	107	Fresno	Westside - San Joaquin
Los Banos	DAC	39,359	11,720	Merced	Westside - San Joaquin
Oro Loma	DAC	unknown	NA	Fresno	Westside - San Joaquin
Pacheco	DAC	unknown	NA	Fresno	Westside - San Joaquin
San Luis Hills	DAC	300	66	Merced	Westside - San Joaquin
Santa Nella	SDAC	1,308	648	Merced	Westside - San Joaquin
Westley	SDAC	70	35	Stanislaus	Westside - San Joaquin

<b>Community Name</b>	<b>DAC Status</b>	<b>Population<sup>2</sup></b>	<b>Connections<sup>3</sup></b>	<b>County</b>	<b>IRWM Region</b>
Wood Ranch	SDAC	unknown	NA	Fresno	Westside - San Joaquin
New Jerusalem	DAC	unknown	NA	San Joaquin	Outside IRWM
San Joaquin River Club	DAC	600	385	San Joaquin	Outside IRWM
Valley Home	DAC	unknown	NA	Stanislaus	Outside IRWM

\* The northern and southern portions of the City of Stockton are served by the City's system. The central portion of Stockton is served by California Water Service.

4.1.1 Needs Assessment Template Table

DWR provided an example template for the DAC Needs Assessment (see Table 4). Each funding area was required to conduct a Needs Assessment; however, it was left up to the Funding Area to determine the scope of the Needs Assessment based on the specific needs and desires of that area.

**Table 4: DWR Needs Assessment Template Table**

Community Characteristics					Drinking Water						
Community	County	IRWM region	Describe community characteristics (i.e. MHI, population, or other DAC indicators)	Describe involvement with local IRWM Governance	Source(s) of water	Estimate number of private wells	Estimate number of public wells	Water supply treatment (i.e. carbon, RO, etc.)	Accessible for community (y/n)	Affordable for community (y/n)	Identify any drinking water system issues
1											
2											
3											
4											
5											
6											
7											
8											

(continued)

Wastewater		Stormwater	Other		Water System Financing	
Type of system	Describe any insufficient wastewater system issues	Identify stormwater/ urban water runoff/ flood management issues	Identify drinking water, wastewater, or stormwater regulatory/ compliance issues	Identify other conditions/ issues (drought, etc.)	Identify the rate structure (i.e. block, tiered)	Describe system financing needs (i.e. operation and maintenance costs)

The SJRFA elected to conduct a Needs Assessment with a focused scope in the first phase of work. Based on the findings of the current Needs Assessment, the SJRFA will determine if there are additional tasks associated with the Needs Assessment that would be included in a second phase of work through the DACI Program. The scope of the Needs Assessment for the SJRFA included the following in the first phase of work:

- Data Collection and Analysis
  - Define DAC for the San Joaquin River Funding Area
  - Develop a Database of DACs in the Funding Area
  - Collect Data Regarding the State of Water Resources in the Funding Area
  - Data Mapping, including maps of DACs, Water Quality Issues, and Water Supply Issues
  - Supplement and Ground-Truth the Data through Community Outreach
  - Summarize and Evaluate the Needs Assessment Data
- Prepare Draft Needs Assessment Report
- Prepare Final Needs Assessment Report and Submit to DWR

The data collection effort that was conducted for the SJRFA is shown in Table 5.

**Table 5: San Joaquin River Funding Area Needs Assessment Template Table**

Community Characteristics									Drinking Water			Waste water
Community	Water	Water	County	IRWM Region	Population	Connections	MHI	DAC Status	Source(s) of Water	Number of	Compliance	WWTFs
Name	System Name	System Number					(DWR/Census)		(GW/SW)	Public Wells	Status	

#### 4.1.2 Water Supply

The majority of communities within the SJRFA rely on groundwater for drinking water supply. Of the 123 DACs within the SJRFA, approximately 93% rely on groundwater that either comes from a public water system, private wells, or is purchased from a nearby system and may be conveyed through a single master meter. Approximately 7% rely on surface water that either comes from a public water system or is purchased from a nearby water system. A summary of DAC water sources is provided in Table 6.

**Table 6: Summary of DAC Water Sources**

Source	DACs	DAC Water Systems with 1 Source
Groundwater	78	34
Groundwater Purchased	3	2
Surface Water	6	4
Surface Water Purchased	2	0
Private Well Communities	34	NA <sup>1</sup>
<b>Total</b>	<b>123</b>	<b>40</b>

1. Private well communities are communities that rely on individual private wells for water supply. These communities do not have a water system, and therefore this is not applicable.

The main challenges to DACs within the region related to water supply are an insufficient quantity of water and a lack of redundancy or reliability of the water supply. Water systems that are considered to be the most vulnerable are those that rely on a single source of supply. Approximately 33% of the DACs within the funding area rely on a water system with only one source of water. In addition, approximately 28% of the DACs in the area are not part of a public water system and rely on individual private wells, which are also extremely vulnerable to changes in water conditions because of the shallow nature of most private wells. Therefore, approximately 61% of the DACs within the funding area have a water supply vulnerability. Table 7 shows the DACs that rely on only one source for their water supply, while Table 8 shows the DACs that rely on private wells. These are summarized graphically in Figure 7 and Figure 8.

**Table 7: Disadvantaged Community Water Systems with a Single Water Source**

Community Name	DAC Status	Water Source	County	IRWM
Angler S Ranch #3	SDAC	Groundwater	Contra Costa	East Contra Costa County
Flamingo Mobile Manor	SDAC	Groundwater	Contra Costa	East Contra Costa County
Russos Mobile Park	SDAC	Groundwater	Contra Costa	East Contra Costa County
Santiago Island Village	SDAC	Groundwater	Contra Costa	East Contra Costa County
Willow Mobile Home Park	SDAC	Groundwater	Contra Costa	East Contra Costa County
Ballico	SDAC	Groundwater	Merced	East Stanislaus
Buehner	DAC	Groundwater	Stanislaus	East Stanislaus
Ceres West MHP	SDAC	Groundwater	Stanislaus	East Stanislaus
Cobles Corner	DAC	Groundwater	Stanislaus	East Stanislaus
Country Villa Apts	DAC	Groundwater	Stanislaus	East Stanislaus
Country Western Mobile Home Park	DAC	Groundwater	Stanislaus	East Stanislaus
Fisherman's Bend MHP	SDAC	Groundwater	Stanislaus	East Stanislaus
Kerr Park	SDAC	Groundwater	Stanislaus	East Stanislaus
Martin's Mobile Home Court	SDAC	Groundwater	Stanislaus	East Stanislaus
Riverdale Park	SDAC	Groundwater	Stanislaus	East Stanislaus
A1 Winstons Mobile Home Park	SDAC	Groundwater	San Joaquin	Eastern San Joaquin
Arbor Mobile Home Park	DAC	Groundwater	San Joaquin	Eastern San Joaquin
Avalos	SDAC	Groundwater	San Joaquin	Eastern San Joaquin
B&G Mobile Home Park	DAC	Groundwater	San Joaquin	Eastern San Joaquin
Century Mobile Home Park	SDAC	Groundwater	San Joaquin	Eastern San Joaquin
Cherry Lane Trailer Park	SDAC	Groundwater	San Joaquin	Eastern San Joaquin
Country Squire Mobile Estates	DAC	Groundwater	San Joaquin	Eastern San Joaquin
Glenwood Mobile Home Park	SDAC	Groundwater	San Joaquin	Eastern San Joaquin
King Island Trailer Park	DAC	Groundwater	San Joaquin	Eastern San Joaquin
Lockeford Mobile Home Park	DAC	Groundwater	San Joaquin	Eastern San Joaquin
Mapache Trailer Park	SDAC	Groundwater	San Joaquin	Eastern San Joaquin
Sahara Mobile Court	SDAC	Groundwater	San Joaquin	Eastern San Joaquin
San Juan Vista	DAC	Groundwater	San Joaquin	Eastern San Joaquin
Shady Rest Trailer Court	SDAC	Groundwater	San Joaquin	Eastern San Joaquin
Terminus	DAC	Surface Water	San Joaquin	Eastern San Joaquin
V & P Trailer Court Water System	SDAC	Groundwater	San Joaquin	Eastern San Joaquin
Parkwood	SDAC	Groundwater	Madera	Madera
Ripperdan	DAC	Groundwater	Madera	Madera
Valeta	DAC	Groundwater	Madera	Madera

<b>Community Name</b>	<b>DAC Status</b>	<b>Water Source</b>	<b>County</b>	<b>IRWM</b>
Dos Palos	SDAC	Surface Water	Merced	Westside - San Joaquin
Dos Palos Y	SDAC	Groundwater	Merced	Westside - San Joaquin
Las Deltas	SDAC	Groundwater Purchased	Fresno	Westside - San Joaquin
San Luis Hills	DAC	Surface Water	Merced	Westside - San Joaquin
Santa Nella	SDAC	Surface Water	Merced	Westside - San Joaquin
Westley	SDAC	Groundwater Purchased	Stanislaus	Westside - San Joaquin

**Table 8: Disadvantaged Communities Relying on Individual Private Wells**

<b>Community Name</b>	<b>County</b>	<b>IRWM Region</b>
Chemurgic	Stanislaus	East Stanislaus
Cowan	Stanislaus	East Stanislaus
Hills Ferry	Stanislaus	East Stanislaus
Langworth	Stanislaus	East Stanislaus
Montpelier	Stanislaus	East Stanislaus
Collierville	San Joaquin	Eastern San Joaquin
El Pinal	San Joaquin	Eastern San Joaquin
Homestead	San Joaquin	Eastern San Joaquin
Kennedy	San Joaquin	Eastern San Joaquin
Larson	San Joaquin	Eastern San Joaquin
Mormon	San Joaquin	Eastern San Joaquin
New Hope Landing	San Joaquin	Eastern San Joaquin
Walthal	San Joaquin	Eastern San Joaquin
Bonadelle Rancho Five	Madera	Madera
Gregg	Madera	Madera
Irrigosa	Madera	Madera
Sharon	Madera	Madera
Storey	Madera	Madera
Trigo	Madera	Madera
Arena	Merced	Merced
Bear Creek	Merced	Merced
El Nido	Merced	Merced
Plainsburg	Merced	Merced
Snelling	Merced	Merced
Stevinson	Merced	Merced
The Grove	Merced	Merced
Hamburg Farms	Merced	Westside - San Joaquin
Hammonds Ranch	Fresno	Westside - San Joaquin
Ingomar	Merced	Westside - San Joaquin
Oro Loma	Fresno	Westside - San Joaquin
Pacheco	Fresno	Westside - San Joaquin
Wood Ranch	Fresno	Westside - San Joaquin
New Jerusalem	San Joaquin	Outside IRWM
Valley Home	Stanislaus	Outside IRWM



Figure 7: DAC Water Sources

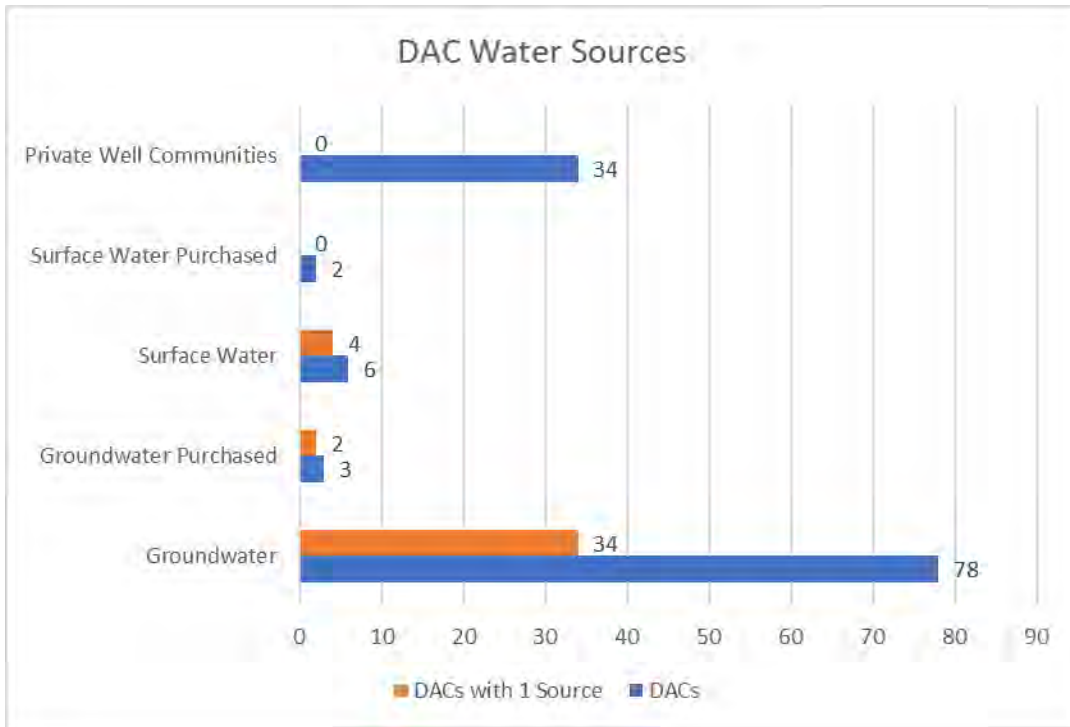
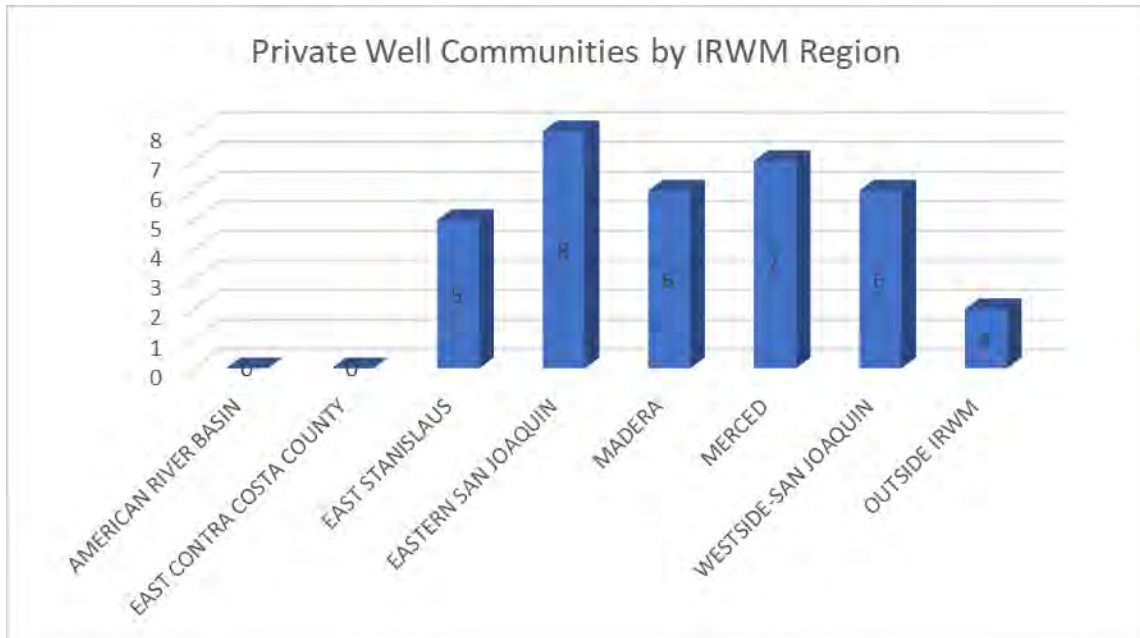


Figure 8: Summary of Disadvantaged Communities Relying on Individual Private Wells



### 4.1.3 Water Quality

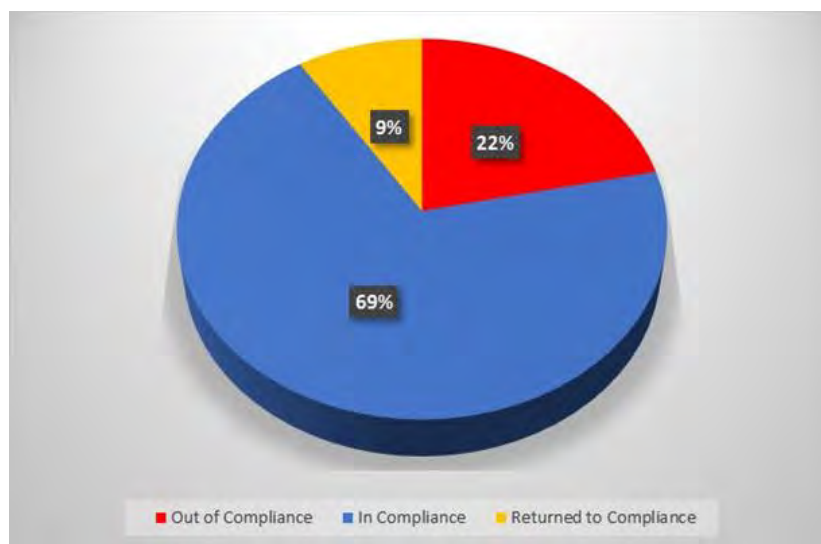
For the purposes of this report, systems are identified as being in one of three compliance categories:

- In Compliance (no current compliance orders)
- Out of Compliance (active compliance order)
- Returned to Compliance (previous compliance order that has been resolved since January 2012)

The compliance data is current as of June 2019. For those that are Out of Compliance or Returned to Compliance, the constituent that caused the compliance order is shown on Table 9. Compliance issues related to monitoring or reporting issues are not included in this data set. It is noted that coliform violations are not used to determine compliance. The State currently issues citations rather than compliance orders for the coliform MCL. Therefore, communities that have had recent coliform violations are still considered “In Compliance” by the State and in this report.

There are 89 DACs with water systems within the SJRFA. Of the DACs with water systems, 61 (69%) are currently in compliance with water quality standards, 20 (22%) are out of compliance, and eight (9%) have returned to compliance (Figure 9). The returned to compliance classification is based on the Human Right to Water portal data, and is typically a system with a previous compliance order that has been resolved since 2012.

**Figure 9: Compliance Status Summary**



While the majority of systems are identified as being in compliance, they may still have issues that are not reflected by compliance status. The following are types of issues impacting DACs in the SJRFA which may not be cause for State to issue a compliance order:

- Coliform MCL violation
- Insufficient water
- Distribution system insufficiencies
- Vulnerability due to constituents of concern near the MCL (potential to exceed)

The most recent change to California drinking water regulations was the 1,2,3-Trichloropropane (1,2,3-TCP) MCL which went into effect as of December 14, 2017. As a result, many water systems have recently received compliance orders for TCP violations, and there may be more on the verge of receiving a compliance order. 1,2,3-TCP is the subject of ongoing litigation, and it is advised that communities consult with legal counsel regarding TCP contamination issues.

The main water quality issues for systems that are out of compliance are for arsenic and 1,2,3 - TCP . Other compliance orders are for total trihalomethanes (TTHM), uranium, and haloacetic acids (HAA5), as shown on Figure 10. Some communities are out of compliance for more than one constituent, therefore there may be more compliance issues than number of communities that are out of compliance.

Figure 10: DAC Compliance Issues



Table 9: DAC Compliance Issues

Community Name	DAC STATUS	County	IRWM	Compliance Status	Compliance Issue
Angler S Ranch #3	SDAC	Contra Costa	East Contra Costa County	In Compliance	
Anglers Subdivision 4	SDAC	Contra Costa	East Contra Costa County	In Compliance	
Bethel Island	SDAC	Contra Costa	East Contra Costa County	In Compliance	
Flamingo Mobile Manor	SDAC	Contra Costa	East Contra Costa County	In Compliance	
Riverview Water Association	SDAC	Contra Costa	East Contra Costa County	In Compliance	
Russos Mobile Park	SDAC	Contra Costa	East Contra Costa County	In Compliance	
Sandmound Mutual	SDAC	Contra Costa	East Contra Costa County	In Compliance	
Santiago Island Village	SDAC	Contra Costa	East Contra Costa County	In Compliance	
Willow Mobile Home Park	SDAC	Contra Costa	East Contra Costa County	In Compliance	
Ballico	SDAC	Merced	East Stanislaus	Out-Of-Compliance	1,2,3-TCP MCL
Buehner	DAC	Stanislaus	East Stanislaus	In Compliance	
Ceres	DAC	Stanislaus	East Stanislaus	Out-Of-Compliance	1,2,3-TCP MCL
Ceres West MHP	SDAC	Stanislaus	East Stanislaus	Out-Of-Compliance	Arsenic MCL
Cobles Corner	DAC	Stanislaus	East Stanislaus	Out-Of-Compliance	1,2,3-TCP, Arsenic MCL
Country Villa Apts	DAC	Stanislaus	East Stanislaus	Out-Of-Compliance	Arsenic MCL
Country Western Mobile Home Park	DAC	Stanislaus	East Stanislaus	Returned to Compliance	Arsenic MCL
Delhi	DAC	Merced	East Stanislaus	In Compliance	
Fisherman's Bend MHP	SDAC	Stanislaus	East Stanislaus	In Compliance	

Community Name	DAC STATUS	County	IRWM	Compliance Status	Compliance Issue
Grayson	SDAC	Stanislaus	East Stanislaus	In Compliance	
Green Run Mobile Estates	DAC	Stanislaus	East Stanislaus	Out-Of-Compliance	Arsenic MCL
Hickman	DAC	Stanislaus	East Stanislaus	In Compliance	
Kerr Park	SDAC	Stanislaus	East Stanislaus	In Compliance	
Keyes	DAC	Stanislaus	East Stanislaus	Out-Of-Compliance	1,2,3-TCP, Arsenic MCL
La Grange	DAC	Stanislaus	East Stanislaus	In Compliance	
Lazy B Mobilehome Park	SDAC	Stanislaus	East Stanislaus	In Compliance	
Martin's Mobile Home Court	SDAC	Stanislaus	East Stanislaus	Out-Of-Compliance	Combined Uranium MCL
Mobile Plaza Park	DAC	Stanislaus	East Stanislaus	Out-Of-Compliance	Arsenic MCL
Modesto	DAC	Stanislaus	East Stanislaus	Returned to Compliance	Nitrate MCL
Monterey Park Tract	DAC	Stanislaus	East Stanislaus	Returned to Compliance	Arsenic, Nitrate MCL
Orchard Village MHP	DAC	Stanislaus	East Stanislaus	Out-Of-Compliance	Arsenic MCL
Riverdale Park	SDAC	Stanislaus	East Stanislaus	Out-Of-Compliance	Combined Uranium MCL
Sunrise Village MHP	SDAC	Stanislaus	East Stanislaus	In Compliance	
Waterford	DAC	Stanislaus	East Stanislaus	In Compliance	
Waterford-River Pointe	DAC	Stanislaus	East Stanislaus	In Compliance	
A1 Winstons Mobile Home Park	SDAC	San Joaquin	Eastern San Joaquin	In Compliance	
Arbor Mobile Home Park	DAC	San Joaquin	Eastern San Joaquin	In Compliance	
Avalos	SDAC	San Joaquin	Eastern San Joaquin	Out-Of-Compliance	Arsenic MCL
B&G Mobile Home Park	DAC	San Joaquin	Eastern San Joaquin	In Compliance	
Big Wheel Mobile Home Park	DAC	San Joaquin	Eastern San Joaquin	In Compliance	
Caribou Mobile Park	DAC	San Joaquin	Eastern San Joaquin	In Compliance	
Century Mobile Home Park	SDAC	San Joaquin	Eastern San Joaquin	Out-Of-Compliance	Arsenic MCL
Cherry Lane Trailer Park	SDAC	San Joaquin	Eastern San Joaquin	Out-Of-Compliance	1,2,3-TCP MCL
Country Squire Mobile Estates	DAC	San Joaquin	Eastern San Joaquin	In Compliance	
Double L Mobile Estates	DAC	San Joaquin	Eastern San Joaquin	In Compliance	

Community Name	DAC STATUS	County	IRWM	Compliance Status	Compliance Issue
El Rio Mobile Home Park	SDAC	San Joaquin	Eastern San Joaquin	In Compliance	
Glenwood Mobile Home Park	SDAC	San Joaquin	Eastern San Joaquin	Returned to Compliance	Nitrate, Nitrate-Nitrite MCL
King Island Trailer Park	DAC	San Joaquin	Eastern San Joaquin	In Compliance	
Lockeford	DAC	San Joaquin	Eastern San Joaquin	In Compliance	
Lockeford Mobilehome Park	DAC	San Joaquin	Eastern San Joaquin	In Compliance	
Lodi Homes	DAC	San Joaquin	Eastern San Joaquin	In Compliance	
Mapache Trailer Park	SDAC	San Joaquin	Eastern San Joaquin	In Compliance	
Rancho San Joaquin	DAC	San Joaquin	Eastern San Joaquin	In Compliance	
Riverside Mobile Home Park	DAC	San Joaquin	Eastern San Joaquin	In Compliance	
Sahara Mobile Court	SDAC	San Joaquin	Eastern San Joaquin	In Compliance	
San Juan Vista	DAC	San Joaquin	Eastern San Joaquin	In Compliance	
Shady Rest Trailer Court	SDAC	San Joaquin	Eastern San Joaquin	In Compliance	
Stockton	DAC	San Joaquin	Eastern San Joaquin	Returned to Compliance	TTHM MCL
Stockton*	DAC	San Joaquin	Eastern San Joaquin	In Compliance	
Terminus	DAC	San Joaquin	Eastern San Joaquin	Out-Of-Compliance	HAA5 MCL
Thornton	SDAC	San Joaquin	Eastern San Joaquin	In Compliance	
V & P Trailer Court Water System	SDAC	San Joaquin	Eastern San Joaquin	Returned to Compliance	Arsenic MCL
Walnut Acres	DAC	San Joaquin	Eastern San Joaquin	In Compliance	
Chowchilla	SDAC	Madera	Madera	In Compliance	
Fairmead	SDAC	Madera	Madera	In Compliance	
La Vina	DAC	Madera	Madera	In Compliance	
Madera	DAC	Madera	Madera	In Compliance	
Md 36 Eastin Arcola	DAC	Madera	Madera	In Compliance	
Parksdale	SDAC	Madera	Madera	In Compliance	
Parkwood	SDAC	Madera	Madera	In Compliance	

Community Name	DAC STATUS	County	IRWM	Compliance Status	Compliance Issue
Ripperdan	DAC	Madera	Madera	In Compliance	
Valeta	DAC	Madera	Madera	In Compliance	
Atwater	DAC	Merced	Merced	Out-Of-Compliance	1,2,3-TCP MCL
El Nido Mobile Home Park	SDAC	Merced	Merced	In Compliance	
Franklin	DAC	Merced	Merced	In Compliance	
Le Grand	DAC	Merced	Merced	Out-Of-Compliance	1,2,3-TCP MCL
Merced	DAC	Merced	Merced	In Compliance	
Planada	DAC	Merced	Merced	In Compliance	
Winton	DAC	Merced	Merced	Out-Of-Compliance	1,2,3-TCP MCL
Crows Landing	SDAC	Stanislaus	Westside - San Joaquin	In Compliance	
Dos Palos	SDAC	Merced	Westside - San Joaquin	Out-Of-Compliance	TTHM MCL
Dos Palos Y	SDAC	Merced	Westside - San Joaquin	In Compliance	
Firebaugh	SDAC	Fresno	Westside - San Joaquin	In Compliance	
Gustine	SDAC	Merced	Westside - San Joaquin	In Compliance	
Las Deltas	SDAC	Fresno	Westside - San Joaquin	Out-Of-Compliance	TTHM MCL
Los Banos	DAC	Merced	Westside - San Joaquin	In Compliance	
San Luis Hills	DAC	Merced	Westside - San Joaquin	Returned to Compliance	TTHM MCL
Santa Nella	SDAC	Merced	Westside - San Joaquin	Returned to Compliance	TTHM MCL
Westley	SDAC	Stanislaus	Westside - San Joaquin	In Compliance	
San Joaquin River Club	DAC	San Joaquin	Outside IRWM	In Compliance	

### *California Urban Water Agencies Drinking Water System Analysis*

Additional work related to water quality compliance in DACs is being conducted by California Urban Water Agencies (CUWA). CUWA, established in 1990, is a nonprofit corporation of 11 major urban water agencies that collectively deliver drinking water to two-thirds of California's population. CUWA is conducting an ongoing analysis of the State Water Resources Control Board's (SWRCB's) drinking water data to identify persistent, non-compliant water systems in California, prioritize assistance to the water systems based on targeted criteria, and provide strategies to restore safe and reliable drinking water to affected Californians. The purpose of CUWA's work is to complement and support existing State efforts to achieve near-term water supply or treatment solutions for severely impacted public water systems that have had ongoing compliance issues. The information summarized in this section was compiled by CUWA.

CUWA proposes a three-pronged approach to break the cycle of underperforming water systems and address the root causes of water quality issues that result in unsafe water supplies. First, identify the most at-risk and severely impacted water systems in the State that have had persistent water quality challenges (i.e., that have had health-based violations for the past 12 or more quarters). CUWA delineated that 80% of the population affected by persistent violations can be addressed by targeting 20% of the high-risk systems (those with >200 connections) based on data from 2013-2017. This correlates to approximately 30 systems in California having persistent violations of priority constituents, which impact 111,700 people. These data are summarized in Table 10. CUWA proposes to initially target this subset of systems to identify feasible solutions, such as regionalization or consolidation efforts, and inform next steps to restore safe, long-term, and sustainable water supplies to all California residents.

**Table 10: Summary of Water Systems with Persistent Violations and Population Impacted**

<b>Number of Connections</b>	<b>Number of Systems with Persistent Violations</b>	<b>Population Impacted</b>
≥200	33	111,700
<200	117	25,800
<b>Total</b>	<b>150</b>	<b>137,500</b>

Source: CUWA 2019.

The second recommendation in CUWA's efforts to address safe and clean water accessibility is to develop strategies to achieve compliance for the water systems with persistent violations. Existing stakeholders, and possibly new or reconfigured water authorities and/or governance structures, should engage as partners to implement near-term results that will return water systems to compliance and help them remain in compliance. This step will involve evaluation of new treatment and monitoring technologies and consideration of partnership models for the shared use of regional resources. The compliance strategies developed within this scope can maximize operational and financial efficiencies to reduce further impacts to California communities.

Lastly, CUWA highlights that efforts to prevent new, unsustainable water systems from forming should be a critical feature of any plan to restore and maintain water accessibility. It is crucial that new water systems throughout the State be appropriately evaluated for their technical, managerial, and financial capacities before being permitted to construct or operate. These efforts will ensure that California communities will continue to be served with high-quality services and that residents' health will be protected.



CUWA is attempting to integrate its efforts with State agencies and programs that are working towards permanent solutions to restore safe and clean drinking water to California communities. A key opportunity is collaborating CUWA's research with the knowledge and efforts of the IRWM program. As a part of its analysis, CUWA identified water systems in the SJRFA that meet the study's high-risk criteria. Shown in Table 11, below, these SJRFA water systems cumulatively serve approximately 28,500 people.

**Table 11: Summary of Water Systems in SJRFA Meeting CUWA High-Risk Criteria**

Water System	County	Constituents of Concern	DAC Status <sup>1</sup>	Population Served
City of Dos Palos	Merced	TTHM	all	7,452
Le Grand Community Services District	Merced	1,2,3-TCP	all	1,700
Winton Water & Sanitary District <sup>2</sup>	Merced	1,2,3-TCP	all	8,500
City of Hughson	Stanislaus	Arsenic, 1,2,3-TCP	partial, south & east areas	6,082
Keyes Community Services District	Stanislaus	Arsenic, 1,2,3-TCP	all	4,805

1. DAC status according to DWR Online DAC Mapping Tool

2. Winton Water & Sanitary District has continued 1,2,3-TCP levels above the MCL, so they have been included here; their compliance deadline is 2021.

Some of the systems above have initiated projects to partially resolve their water quality compliance issues (including, but not limited to, the constituents listed in Table 11). For example, the City of Hughson has secured financing for a well replacement, arsenic treatment facility, and storage/blending tank project. Also, the Keyes Community Services District is constructing a regional benefit arsenic mitigation project. These efforts will help resolve quality issues related to the target constituents, but additional quality concerns (for 1,2,3-TCP and potentially others) still exist for those systems. The other listed high-risk systems in Table 11 may not currently have projects underway or financing secured to address their water accessibility issues.

As a part of future work that will build on this Needs Assessment, the SJRFA can choose to utilize CUWA's analysis and to help identify outreach and education activities, capacity building, project development, and technical assistance in these communities to collectively achieve progress on returning these systems to compliance.

#### 4.1.4 Consolidated Systems

Consolidation system information included in this Needs Assessment is based on:

- Consolidation statistics from the SWRCB for 2017 and 2018
- Comparison of active water system IDs for communities in the study area

The SWRCB Division of Drinking Water started tracking consolidations in 2017. DDW did not comprehensively track consolidations prior to 2017. In the SJRFA, most of the consolidated systems are small communities that have been consolidated with an adjacent city. There have been 14 consolidated DAC water systems identified, as summarized in Table 12.

**Table 12: DACs – Consolidated Systems**

Community Name	System Name	County	IRWM Region
South Dos Palos	City of Dos Palos	Merced	Westside - San Joaquin
August	California Water Service - Stockton	San Joaquin	Eastern San Joaquin
Garden Acres	California Water Service - Stockton	San Joaquin	Eastern San Joaquin
Country Club	California Water Service - Stockton	San Joaquin	Eastern San Joaquin
French Camp	City of Stockton	San Joaquin	Eastern San Joaquin
Taft Mosswood	City of Stockton	San Joaquin	Eastern San Joaquin
Airport	City of Modesto	Stanislaus	East Stanislaus
Bret Harte	City of Modesto	Stanislaus	East Stanislaus
Bystrom	City of Modesto	Stanislaus	East Stanislaus
Parklawn	City of Modesto	Stanislaus	East Stanislaus
Rouse	City of Modesto	Stanislaus	East Stanislaus
Shackelford	City of Modesto	Stanislaus	East Stanislaus
West Modesto	City of Modesto	Stanislaus	East Stanislaus
Empire	City of Modesto	Stanislaus	East Stanislaus

Effective June 24, 2015, Senate Bill 88 (Statutes 2015, Chapter 27) added Sections 116680-116684 to the California Health and Safety Code allowing the SWRCB to require certain water systems that consistently fail to provide safe drinking water to consolidate with, or receive an extension of service from, another public water system. The consolidation can be physical or managerial. The changes to the Health and Safety Code give DDW authority to mandate such consolidations or extension of service following a series of specific actions. DDW will issue letters to water systems to consolidate with, or seek an extension of service, from a public water system. The recipients of such letters have up to six months from the date the letter is issued to voluntarily consolidate with or receive an extension of service from a public water system. As letters to public water systems are issued, they are made publicly available. SWRCB is currently or has pursued mandatory consolidation or extension of service for the following DACs, as identified on the SWRCB website (see Table 13). The last entity listed in the table for each consolidation is the potential receiving water system.

In addition to those mandatory consolidations, Table 14 provides a summary of water systems serving DACs with water quality or quantity issues that are currently evaluating the feasibility of consolidation or are included in a construction project for consolidation through the SWRCB, Division of Financial Assistance. This table is only for those DACs that are within the SJRFA. The SWRCB website has a listing of additional water systems evaluating the feasibility of consolidation.

**Table 13: Mandatory Consolidation or Extension of Service for DACs**

Water Systems	6-Month Consolidation Letter	Public Meeting Date	Public Hearing Date	Mandatory Consolidation Order	Resolved to Consolidate Voluntarily
Ceres West Mobile Home Park City of Ceres*	8/23/2017	5/30/2018	10/1/2018	TBD	TBD
Black Rascal Water Company City of Merced	9/22/2016	12/8/2016	N/A	Note: Determined not to be DAC. Mandatory consolidation ceased.	
Madera County Maintenance District #19 Parkwood City of Madera	6/15/2016	N/A	N/A	N/A	Yes

\* Voluntary negotiation period extended due to City's 1,2,3-TCP violation.

**Table 14: Potential Consolidation for DACs with Water System Violations**

System No.	System Name	Population	County	Compliance Issue	Receiving System	Approximate Consolidation Distance (miles)
SWRCB-Funded Consolidation Projects for Disadvantaged Communities with Violations, Active Planning Phase or Funding Agreement for Planning in Process						
5000019	Riverdale Park Tract CSD	300	Stanislaus	Uranium	City of Modesto	0.1
3900579	Century Mobile Home Park	50	San Joaquin	Arsenic	City of Stockton	0.3
3901213	Avalos, Silvia	30	San Joaquin	Arsenic	City of Stockton	0.4
5000033	Cobles Corner	50	Stanislaus	Arsenic	City of Hughson	0.5
5000218	Country Villa Apts	30	Stanislaus	Arsenic	City of Hughson	0.8
2010004	Madera CO CMD No. 19 Parkwood	1637	Madera	Water shortage, Manganese	City of Madera	0.25
SWRCB-Funded Consolidation Projects for Disadvantaged Communities with Unsafe Water, Construction Projects						
5010009	Keyes CSD (Receiving System)	4805	Stanislaus	Arsenic	Installing Arsenic Treatment System	N/A

System No.	System Name	Population	County	Compliance Issue	Receiving System	Approximate Consolidation Distance (miles)
5000051	Mobile Plaza Park	125	Stanislaus	Arsenic	Keyes CSD	0.7
5000217	Faith Home Teen Ranch	50	Stanislaus	Nitrate	Keyes CSD	0.7
500085	Green Run Mobile Estates	100	Stanislaus	Arsenic	Keyes CSD	0.3
5000086	Countryside MHP	60	Stanislaus	Arsenic	Keyes CSD	0.85
5000057	Orchard Village MHP	75	Stanislaus	Arsenic	Keyes CSD	0.1
2010008	Valley Teen Ranch	3039	Madera	Arsenic	Madera CO MD10A-Madera Ranchos	2

Note: These tables are based on SWRCB consolidation webpage. Systems identified may not be considered disadvantaged based on the data collected for this Needs Assessment.

#### 4.1.5 Wastewater Treatment Facilities

In addition to the source water issues faced by DACs in the SJRFA, many communities also face issues with their wastewater. Wastewater challenges include reliance on septic systems that may be failing or potentially contaminating the groundwater, failing or insufficient sewer collection systems, or wastewater treatment systems that are not capable of meeting the limitations set forth in the facility's waste discharge requirements.

There are approximately 54 wastewater treatment facilities with active waste discharge requirements (WDRs) or National Pollutant Discharge Elimination System (NPDES) permits in the SJRFA, as shown in Table 15. The table includes both DAC and non-DAC communities, cities and county service areas. Of the active wastewater treatment facilities, approximately 35 have had enforcement actions in the past five years. An evaluation of the type of enforcement actions that have been issued was not included in this Needs Assessment.

On May 31, 2018, the Central Valley Regional Water Quality Control Board (CVRWQCB) adopted Resolution R5-2018-0034, Amendments to the Water Quality Control Plans for the Sacramento River and San Joaquin River Basins and the Tulare Lake Basin to Incorporate a Central Valley-Wide Salt and Nitrate Control Program. The SWRCB has not yet approved the amendment. However, approval of this amendment could impact waste discharge requirements throughout the SJRFA.

Table 15: Wastewater Treatment Facilities

Community Name	Agency	DAC Status	County	IRWM Region	Design Flow (mgd)	Enforcement Actions in last 5 Years (#)
Galt	City of Galt	Not DAC	Sacramento	American River Basin	3	15
Rancho Murieta	Rancho Murieta Community Services District	Not DAC	Sacramento	American River Basin	2.4	2
Brentwood	Brentwood	Not DAC	Contra Costa	East Contra Costa County	5	7
Byron	Byron Sanitary District	Not DAC	Contra Costa	East Contra Costa County	0.1	1
Discovery Bay	Town of Discovery Bay	Not DAC	Contra Costa	East Contra Costa County	2.1	9
Oakley	Diablo Water District	Not DAC	Contra Costa	East Contra Costa County	4.3	3
Ceres	City of Ceres	DAC	Stanislaus	East Stanislaus	1.8	1
Modesto	City of Modesto	DAC	Stanislaus	East Stanislaus	14.9	12
Del Rio	Del Rio East HOA Water System	Not DAC	Stanislaus	East Stanislaus	0.015	1
Delhi	Delhi CWD	DAC	Merced	East Stanislaus	0.8	1
Grayson	Grayson Community Services District	SDAC	Stanislaus	East Stanislaus	0.1	1
Hilmar-Irwin	Hilmar County Water District	Not DAC	Merced	East Stanislaus	0.3	1
Hughson	City of Hughson	Not DAC	Stanislaus	East Stanislaus	1.8	0
Oakdale	City of Oakdale	Not DAC	Stanislaus	East Stanislaus	2.45	1

Community Name	Agency	DAC Status	County	IRWM Region	Design Flow (mgd)	Enforcement Actions in last 5 Years (#)
Riverbank	City of Riverbank	Not DAC	Stanislaus	East Stanislaus	7.5	3
Salida	Salida Sanitary District	Not DAC	Stanislaus	East Stanislaus	2.29	4
Turlock	City of Turlock	Not DAC	Stanislaus	East Stanislaus	1.1	15
Waterford	City of Waterford	DAC	Stanislaus	East Stanislaus	1	2
Lathrop	City of Lathrop	Not DAC	San Joaquin	Eastern San Joaquin	1.55	0
Manteca	City of Manteca	Not DAC	San Joaquin	Eastern San Joaquin	9.87	17
Escalon	City of Escalon	Not DAC	San Joaquin	Eastern San Joaquin	3.4	3
Linden	Linden County Water District	Not DAC	San Joaquin	Eastern San Joaquin	0.22	0
Lockeford	Lockeford Community Service District	DAC	San Joaquin	Eastern San Joaquin	0.3	0
Oakwood Lake	Oakwood Lake Water District-Subdivision	NOT DAC	San Joaquin	Eastern San Joaquin	0.015	2
Ripon	City of Ripon	Not DAC	San Joaquin	Eastern San Joaquin	2.34	1
Stockton	City of Stockton	DAC	San Joaquin	Eastern San Joaquin	55	12
Lodi	City of Lodi	Not DAC	San Joaquin	Eastern San Joaquin	8.5	10
Waterloo	San Joaquin Co CSA 15	Not DAC	San Joaquin	Eastern San Joaquin	0.125	1
Woodbridge	Woodbridge Sanitary District	Not DAC	San Joaquin	Eastern San Joaquin	0.5	0

Community Name	Agency	DAC Status	County	IRWM Region	Design Flow (mgd)	Enforcement Actions in last 5 Years (#)
Chowchilla	Chowchilla City Water Department	SDAC	Madera	Madera	2	1
Chuk Chanse Subdivision	Sa 14 Chuk Chanse Subdivision	Not DAC	Madera	Madera	0.031	0
Parkwood	Madera Co CMD No 19 Parkwood	SDAC	Madera	Madera	0.1	0
Ripperdan	Md 28 Ripperdan Self Help	DAC	Madera	Madera	0.0075	0
La Vina	Md#37 La Vina	DAC	Madera	Madera	0.09	0
Madera	City of Madera	DAC	Madera	Madera	7	1
Riverstone/ Rootcreek Water	Riverstone/ Rootcreek Water	Not DAC	Madera	Madera	0.3	0
Atwater	City of Atwater	DAC	Merced	Merced	6	0
Franklin	Meadowbrook WC	DAC	Merced	Merced	0.4	1
Le Grand	Le Grand Community Services District	DAC	Merced	Merced	0.35	0
Livingston	City of Livingston	Not DAC	Merced	Merced	1.18	2
Merced	City of Merced	DAC	Merced	Merced	12	1
Planada	Planada CSD	DAC	Merced	Merced	0.58	1
Snelling		DAC	Merced	Merced	0.3	0
Newman	City of Newman-Water Department	Not DAC	Stanislaus	Westside - San Joaquin	1.69	1
Patterson	City of Patterson	Not DAC	Stanislaus	Westside - San Joaquin	2.25	0
Dos Palos	City of Dos Palos	SDAC	Merced	Westside - San Joaquin	0.54	1
Firebaugh	Firebaugh City	SDAC	Fresno	Westside - San Joaquin	0.5	0
Gustine	City of Gustine	SDAC	Merced	Westside - San Joaquin	1.4	0

<b>Community Name</b>	<b>Agency</b>	<b>DAC Status</b>	<b>County</b>	<b>IRWM Region</b>	<b>Design Flow (mgd)</b>	<b>Enforcement Actions in last 5 Years (#)</b>
Los Banos	City of Los Banos	DAC	Merced	Westside - San Joaquin	4.9	0
San Luis Hills	San Luis Hills	DAC	Merced	Westside - San Joaquin	0.052	0
Santa Nella	Santa Nella County Water District	SDAC	Merced	Westside - San Joaquin	0.45	0
Tracy	City of Tracy	Not DAC	San Joaquin	Westside - San Joaquin	10.8	15
Westley	Westley CSD	SDAC	Stanislaus	Westside - San Joaquin	0.11	1
Mountain House	Mountain House Community Services Dist.	Not DAC	San Joaquin	Outside IRWM	3	12



## 4.2 Funding Area and Region-wide Workshop Findings

As part of the data collection for the DAC Needs Assessment, supplemental data collection and ground-truthing efforts were conducted through two SJRFA-wide meetings and single regional community workshops in each of the seven participating IRWM regions. The first SJRFA meeting was held on April 10, 2019 at the Modesto Centre Plaza. The goal of this meeting was to provide information on the IRWM and DACI program, present preliminary findings of the SJRFA DAC Needs Assessment and the DACI survey, as well as to discuss community water needs. Feedback and input provided during this meeting were incorporated into this report and helped further refine the Needs Assessment. Attendees also had the opportunity to complete and submit the survey on site. The second funding area meeting was held on October 22, 2019 in Modesto. The purpose of this second SJRFA-wide meeting was to present the final draft of the Needs Assessment Report, provide the SAC, community residents and members of the public an opportunity to ask questions, and provide feedback and recommendations.

Single (IRWM) regional community workshops were held in each of the seven participating IRWM regions. Similar to the SJRFA-wide workshops, the goals for these workshops were to provide further information about the IRWM and DACI programs, present preliminary findings of the DAC Needs Assessment, discuss community water needs, complete the DACI survey and identify community residents to participate in the SAC. Feedback obtained at these meetings helped characterize the needs of DACs in the SJRFA and develop recommendations for Phase Two of the DACI program. Self-Help Enterprises (SHE) led the regional workshops in five regions – Madera, Merced, East Stanislaus, Eastern San Joaquin and Westside-San Joaquin. The Environmental Justice Coalition for Water (EJCW) conducted workshops in two regions – American River Basin and East Contra Costa. Agendas and meeting materials were slightly modified in order to meet the needs of each of the IRWM regions.

Regional meetings were held between May 28, 2019 and September 30, 2019. Overviews of each of the IRWM workshops are included below.

### 4.2.1 American River Basin

The American River Basin held a Public Meeting on the Community Water Need Assessment on September 30, 2019 in Galt. The workshop was led by EJCW staff, who provided an overview of the IRWM and DACI program, presented information about the Needs Assessment, and facilitated the community water needs discussion. EJCW staff then led the discussion engaging the participants about their concerns about local water and provided information on the importance of DAC participation and how to get involved. EJCW utilized this meeting to invite community members who reside within the American River Basin boundaries, specifically Galt and Elk Grove, to learn more about the American River Basin region (specifically who are the member agencies, where/when does the group meet and how to get involved), and to discuss potential projects and upcoming funding opportunities under the IRWM program. All workshop materials (meeting agenda, PowerPoint and community survey) were made available in both English and Spanish. EJCW staff member was available to provide translation as needed for the meeting.

A total of 15 residents of Galt attended the Public Meeting. Although outreach was conducted in Elk Grove, no Elk Grove residents attended the meeting.

#### *Outreach Methods*

Drawing upon experience working with San Joaquin Valley DACs, EJCW developed an individualized outreach plan specific to the DACs within the American River Basin boundaries. Most DACs are located in rural locations, lack access to internet broadband services, and are often comprised of residents who speak a language other than English. For these reasons, EJCW utilized several outreach

methods and developed bilingual (English and Spanish) communication materials, including a meeting flyer, invitation emails and social media posts. Outreach methods included site visits in order to conduct door-to-door outreach, post flyers in key locations with heavy foot traffic, phone calls to community leaders asking them to share the information within their community, mailing and emailing flyers, utilizing social media and posting workshops on Eventbrite.

EJCW conducted outreach to the DACs that were identified during preparation of the Needs Assessment. Door-to-door outreach was conducted in the DAC communities in Galt and Elk Grove. Outreach was also conducted in various faith communities in Galt. Outreach efforts invited and encouraged participation in the region-wide workshop. In larger communities with a higher number of homes, flyers were posted at key locations. This outreach method was utilized in Galt and Elk Grove.

Emails were sent to interested groups and previous participants of EJCW workshops/events. Mailers were sent to contacts that had provided previous address information from EJCW workshops/events, as well as water systems that were identified by Provost & Pritchard for the Needs Assessment. Phone calls were also made to previous participants who provided phone numbers at EJCW workshops/events. The DAC list developed as part of the Needs Assessment included contact information for the publicly regulated water and/or wastewater systems. Additional contact information for these DACs was derived from stakeholder lists and community contacts that EJCW staff maintains. Additionally, with the support of the City of Galt and Elk Grove, EJCW was able to extend their outreach to community contacts that had shown prior interest with the City regarding water-related events/needs. Approximately 50 emails were sent out to interested parties and about 55 mailers were sent out to those contacts that had provided address information. The Wilton Rancheria is within the SJRFA portion of the American River Basin Region, and representatives were previously invited to participate in the Region's IRWMP. Representatives from Wilton Rancheria may have been contacted during outreach if they were included in existing stakeholder lists, but no individual outreach to tribal contacts was conducted as part of this effort.

### *Successes and Constraints*

EJCW staff encountered several challenges related to encouraging residents to attend the workshop. These challenges included location of workshop, distance of travel and budget constraints. Due to the large, dense geographic region of the American River Basin Area, the location of the workshop, Galt, was chosen due to the centrality of the area. Although it was a central location, the location may have caused some travel constraints for communities located further out into the region such as Elk Grove. Additionally, due to the large size and the number of DAC neighborhoods in Galt (in comparison to Elk Grove), some of the communities had limited budget to conduct door-to-door outreach in all communities, flyers had to be posted in key locations rather than conducting individualized outreach. EJCW ensured that flyers were posted in areas of high concentration and/or areas of high interest.

Although challenges were experienced, EJCW successfully engaged community residents at this Public Meeting from Galt. EJCW effectively and efficiently worked with the IRWM representative to host and conduct the Public Meeting in Galt. Lastly, the community residents and other stakeholders who attended the Public Meeting provided important information about their water-related needs, priorities and offered recommendations. Moreover, the meeting provided residents the opportunity to directly engage with their IRWM representative.

### *Outcomes*

Overall, the meeting cultivated rich discussions among community residents in attendance. Although the majority of the attendees were from Galt, the discussions were diverse and community residents

showed interest in helping each other further develop ideas on how to address community water needs.

- Based on the outcome of this meeting, the project team learned that community residents and other stakeholders are interested in continuing to obtain information about the IRWM and the DACI programs. Those in attendance inquired about additional opportunities to engage more formally in the DACI program, provided recommendations on how to continue to outreach to and engage DACs, and requested that meeting materials and information continue to be provided in both English and Spanish. Participants recommended having a second Public Meeting to encourage further community dialogue about their issues and concerns.
- Participants expressed overwhelming interest in obtaining assistance in order to identify, develop and submit funding requests. Special emphasis was placed on projects that address immediate/serious water needs or that provide regional benefits.
- Community residents from Galt shared information regarding recent water sampling that had been done by EJCW through another technical assistance program and asked whether this information would be reflected in the Needs Assessment/shown on the appropriate maps. Residents reported that sampling results had indicated high levels of nitrates.
- As it relates to community participation within the American River Basin region, some of the participants expressed the need to obtain additional information regarding the IRWM plan/how to join the group, and process to propose, rank and select projects. Participants were also interested in obtaining regular updates on IRWM activities and funding opportunities.

### *Recommendations*

Based on the discussions of the meeting, the following recommendations are proposed:

- Continue hosting informational workshops in order to inform communities about IRWM, how they can participate, funding opportunities and deadlines, and/or to provide feedback/information to the region.
- Conduct workshops, meetings and events at multiple locations, rather than at a central location, in order to make the location accessible to communities. This can help optimize meeting attendance and allow DACs to effectively engage in the IRWM program.
- Ensure that workshop/meeting materials, along with any education information, continue to be made available in Spanish and other languages, as needed, to ensure inclusivity of community members.
- Consider revisiting projects that were previously denied by DACs, reevaluate engagement and outreach efforts utilized, and consider implementing new engagement strategies and analysis in order to ensure community members fully understand the benefits, costs, and impacts of not moving forward with the project.
- Identify ways to address water-related needs, priority projects proposed by community members, and work closely with them to ensure that these communities are effectively participating in IRWM, as well as benefiting from the DACI program funds.
- Improve Needs Assessment by including historical water challenges, trends and future risks/impacts, showing MCL violations for the various constituents of concern and including water quality information for private domestic wells.

#### 4.2.2 East Contra Costa County

The East Contra Costa County (ECCC) Region-wide workshop took place on May 22, 2019 in Oakley. Community members were invited to learn more about the ECCC region (specifically who are the member agencies, where/when does the group meet and how to get involved) and discuss potential projects and upcoming funding opportunities under the IRWM program. The workshop was led by EJCW staff with support from representatives from the ECCC IRWM group. EJCW provided background information, including an overview of the IRWM and DACI programs and information about the Needs Assessment. EJCW also facilitated the community water needs discussion providing information on the importance of DAC participation and how to get involved. All workshop materials (meeting agenda, PowerPoint and community survey) were made available in both English and Spanish. EJCW staff also provided translation during the meeting.

A total of 17 attendees were present at the workshop. Attendees included representatives from the Diablo Water District, Contra Costa Water District, Pleasantimes Mutual Water Company, Bethel Island Municipal Improvement District, Angler Ranch #3, Oakley Mutual Water Company, Contra Costa Resource Conservation District, and the cities of Antioch and Brentwood.

##### *Outreach Methods*

Outreach prior to the ECCC region meeting was conducted by EJCW. EJCW conducted outreach in both English and Spanish, since many DACs are comprised of residents who speak languages other than English. Outreach materials included a meeting flyer, invitation emails, and social media posts. distributed a meeting. Outreach methods included site visits in order to conduct door-to-door outreach, post flyers in key locations with heavy foot traffic, phone calls to community leaders asking them to share the information within their community, mailing and emailing flyers, utilizing social media and posting workshops on Eventbrite.

##### *Successes and Constraints*

The ECCC region meeting was combined with a regularly scheduled meeting of the IRWM group. This resulted in strong engagement from IRWM participants and agency representatives. Due to the timing of the meeting (weekday morning), it may have been difficult for community members to attend the workshop. Several small community water systems that serve DACs were still represented among the workshop attendees. The ECCC region's representatives were able to work efficiently with the Needs Assessment team in order to schedule the workshop and coordinate to engage potential meeting attendees.

##### *Outcomes*

The community discussion at the meeting is summarized below.

- Attendees expressed interest in additional maps of the DAC areas in the region. Maps provided at the meeting showed DACs by census-designated place, but not by census block group or tract. Attendees felt that information about DACs in these areas would be helpful.
- Attendees were engaged with discussion about water sources in the region. Specifically, they expressed interest in the planned water sources for new homes in the region (i.e., whether these would rely on Delta supply or on groundwater).
- Diablo Water District (DWD) has a low-income assistance program. Representatives from the DWD were interested to know whether there are funds available to help with such a program. DWD would like to avoid needing to turn off water service when residents are unable to pay. Attendees expressed that, since housing costs are extremely high in the area (with some residents spending 80% of their income on housing), more flexibility and affordability is

needed for utilities. Census data may be helpful in further narrowing down areas with affordability issues. Assembly Bill 104 established a statewide income/rate assistance program that may be of interest to attendees. Additionally, the City of Oakland may be useful as a model for preventing water from being turned off. The group expressed interest in learning more about such strategies. Water conservation was noted as a possible way for DAC areas to both conserve water and contribute to affordability.

- The group discussed water supply issues in the Sandmound Slough/Hotchkiss Tract area, in particular the issues and costs related to including new areas in the Diablo Water District and Contra Costa Water District service areas. Residents are unsure about inclusion and/or rejecting inclusion due to costs (or perception of costs). Income surveys are needed in the Sandmound Slough/Hotchkiss Tract area to establish smaller communities as DACs, so that they may have access to funding that could offset inclusion costs and connection fees. Income surveys are needed at other locations too, such as in areas of Antioch. Income surveys are a priority of the region to identify other DAC areas.
- An attendee from Contra Costa Resource Conservation District (CCRCD) reported that the CCRCD has performed several listening sessions in Antioch to identify community needs. Most common responses were flooding, trash, homelessness, and water conservation. Capacity building is a priority for Antioch.
- The group identified that many assistance and grant programs exist (e.g., Community Development Block Grants, DWR Grants, IRWM grants, SWRCB programs), but could be improved if the programs were more compatible with one another. It is difficult to participate in all programs and understand their nuances in order to be able to obtain grant funding for projects and activities.
- A representative from a small water system on Bethel Island noted that they are looking toward consolidation with a larger system. Attendees suggested that a meeting could be held by one of the larger districts to provide more information about the water inclusion and annexation processes. This could be applicable to systems around the perimeter of Bethel Island and Hotchkiss Tract.

### *Recommendations*

Based on the discussion that occurred at the meeting, the following recommendations have been identified:

- Continue to prioritize rate affordability and explore state programs that would help utilities avoid the need to turn off water service to residents who are unable to pay.
- In conversations with state agencies, IRWM region representatives and others can advocate for better access to information about funding programs. Urge state agencies to make their programs more compatible to reduce the burden of funding/financing applications for local agencies.
- Consider conducting income surveys to identify other DAC areas. DWR provides an income survey methodology. Prioritize this activity in the IRWM plan goals. Utilize available tools, such as DWR's DAC mapping tool and census data, to fully identify DACs in the region. In particular, income surveys are needed in Antioch, various water systems on Bethel Island, and Sandmound Slough communities not currently served by Diablo Water District.

- Larger water suppliers, such as Contra Costa Water District and Diablo Water District, should consider inviting smaller water suppliers to learn more about the process for consolidating systems.

#### 4.2.3 *East Stanislaus*

The East Stanislaus Regional Water Management Partnership (ESRWMP) Region-wide workshop was held on May 28, 2019 in Modesto. The workshop was led by SHE staff with support from representatives from the ESRWMP group. SHE provided an overview of the IRWM and DACI program, presented information about the Needs Assessment, and facilitated the community water needs discussion. Jim Alves, representative for the ESRWMP region, led the discussion about their group and provided information on the importance of DAC participation and how to get involved. SHE utilized this meeting to invite community members who reside within the ESRWMP boundaries to learn more about the ESRWMP region (specifically who are the member agencies, where/when does the group meet and how to get involved), and to discuss potential projects and upcoming funding opportunities under the IRWM program. All workshop materials (meeting agenda, PowerPoint and community survey) were made available in both English and Spanish. SHE staff also provided translation during the meeting.

A total of nine attendees were present at the workshop. Those in attendance at the meeting included residents from the communities of Empire and Cowan Tract, Monterey Park and representatives from the City of Modesto and Stanislaus County, as well as a Water Operator that works for various water systems serving DACs within the ESRWMP boundaries.

#### *Outreach Methods*

Drawing upon experience working with San Joaquin Valley DACs, SHE developed an individualized outreach plan specific to the DACs within the ESRWMP boundaries. Most DACs are located in rural locations, lack access to internet broadband services, and are often comprised of residents who speak a language other than English. For these reasons, SHE utilized several outreach methods and developed bilingual (English and Spanish) communication materials, including a meeting flyer, invitation emails and social media posts. Outreach methods included site visits in order to conduct door-to-door outreach, post flyers in key locations with heavy foot traffic, phone calls to community leaders asking them to share the information within their community, mailing and emailing flyers, utilizing social media and posting workshops on Eventbrite.

SHE conducted outreach to the DACs that were identified through the draft Needs Assessment. Door-to-door outreach was conducted in the following DAC communities: areas of Delhi, Ballico, Montpelier, areas of Hickman, and Cowan Tract. Outreach efforts invited and encouraged participation in the region-wide workshop. In larger communities with a higher number of homes, flyers were posted at key locations. This outreach method was utilized in the following communities: Delhi, Hickman, Waterford, Empire and Airport.

Emails were sent to interested groups and previous participants of SHE and Modesto workshops/events. Mailers were sent to contacts that had provided previous address information from SHE workshops/events, as well as water systems that were identified by Provost & Pritchard for the Needs Assessment. Phone calls were also made to previous participants who provided phone numbers at SHE or Modesto workshops/events. The DAC list developed as part of the Needs Assessment included contact information for the publicly regulated water and/or wastewater systems. Additional contact information for these DACs was derived from stakeholder lists and community contacts that SHE staff maintains. Additionally, with the support of the City of Modesto, SHE was able to extend their outreach to community contacts that had shown prior interest with the

City regarding water-related events/needs. Approximately 50 emails were sent out to interested parties and about 55 mailers were sent out to those contacts that had provided address information.

### *Successes and Constraints*

SHE staff encountered several challenges related to encouraging residents to attend the workshop. These challenges included location of workshop, distance of travel and budget constraints. Due to the large, dense geographic region of the ESRWMP, the location of the workshop, Modesto, was chosen due to the centrality of the area. Although it was a central location, the location may have caused some travel constraints for communities located further out into the region such as Delhi, Ballico, Montpelier, Hickman, and Waterford. Additionally, due to the large size of some of the communities and limited budget to conduct door-to-door outreach in all communities, flyers had to be posted in key locations rather than conducting individualized outreach. SHE ensured that flyers were posted in areas of high concentration and/or areas of high interest.

Although challenges were experienced, SHE successfully engaged five different community residents at this workshop from Cowan Tract, Empire, Monterey Park, and representatives from the City of Modesto and Stanislaus County, as well as a Water Operator that works for various water systems serving DACs within the ESRWMP. SHE effectively and efficiently worked with the IRWM representative to host and conduct the community workshop at the City of Modesto building, secured support from other city staff who assisted with outreach efforts and shared their community contacts. Lastly, the community residents and other stakeholders who attended the workshop provided important information about their water-related needs, priorities and offered recommendations. Moreover, the meeting provided residents the opportunity to directly engage with their IRWM representative.

### *Outcomes*

Overall, the meeting cultivated rich discussions among community residents, City and County staff in attendance. Although the majority of the attendees were from Cowan Tract, a private domestic well community, the discussions were diverse and community residents showed interest in helping each other further develop ideas on how to address community water needs.

- Based on the outcome of this meeting, the project team learned that community residents and other stakeholders are interested in continuing to obtain information about the IRWM and the DACI programs. Those in attendance inquired about additional opportunities to engage more formally in the DACI program, provided recommendations on how to continue to outreach to and engage DACs, and requested that meeting materials and information continue to be provided in both English and Spanish.
- Multiple areas in the East Stanislaus Region are in need of improved storm drainage systems, including curbs, gutters, and sidewalks, to prevent street flooding during rain events. The community of Empire is one specific location where these improvements are needed. Other neighborhoods in Stanislaus County and the City of Modesto are also in need of storm drain systems. The City of Modesto has rock wells in some areas; the low capacity of these rock wells makes surrounding areas prone to street flooding. Several maps depicting areas in need of these improvements are provided in Appendix B.
- Communities expressed overwhelming interest in obtaining assistance in order to identify, develop and submit funding requests. Special emphasis was placed on projects that address immediate/serious water needs or that provide regional benefits. Residents from the community of Empire shared information about their stormwater needs, past flooding impacts and desire to secure funding to improve stormwater management within their

community. County staff in attendance shared that, in previous years, the County had tried to address the stormwater needs of the community via a stormwater management project but that they were unable to because the community voted down the project. Community residents asked the County to reconsider the project. The County was asked to implement appropriate outreach, education and engagement strategies in order to ensure that the community is provided adequate information about the project benefits, costs and possible funding opportunities and is able to make a better, informed decision. The County was also encouraged to conduct a 'with project' and 'without project' conditions analysis in order to illustrate project benefits, project operations and maintenance costs, estimate and costs per household and identify impacts/costs to mitigate future and ongoing flooding.

- Community residents from the community of Cowan Tract shared information regarding recent water sampling that had been done by SHE through another technical assistance program and asked whether this information would be reflected in the Needs Assessment/shown on the appropriate maps. Residents reported that sampling results had indicated high levels of nitrates and uranium. It was also reported that an overwhelming number of the residents in Cowan Tract prefer to keep their well rather than pursuing construction of or connection to an existing water system. Some of the residents stressed the importance of allowing communities and/or homeowners the ability to opt out of certain projects, such as water quality testing of their private well. At least one of the residents expressed concerns over ongoing decline in groundwater levels and requested information about SGMA. Lastly, residents expressed interest in obtaining funding to install at least one fire hydrant within the community.
- As it relates to community participation within the ESRWMP region, some of the participants expressed the need to obtain additional information regarding the IRWM plan/how to join the group, and process to propose, rank and select projects. Participants were also interested in obtaining regular updates on IRWM activities and funding opportunities.
- Questions/recommendations on the Needs Assessment included the desire to include/show historical water challenges, trends and future risks/impacts, MCL violations for the various constituents of concern and water quality information for private domestic wells.
- Empire lacks and needs a storm drain system, curb, gutter, sidewalk and a storm drain system to collect it, to prevent street flooding during the rain events. See map entitled County Islands Area Lacking Storm Drain Systems (included in Appendix B) for detail.
- There are various Stanislaus County urban areas that are identified as a DAC or SDAC which lack and need a storm drain system, curb, gutter, sidewalk and a storm drain system to collect it, to prevent street flooding during the rain events.
- The City of Modesto needs an updated storm drain system in areas of rockwells to address street flooding, the low volume capacity of rockwells makes rockwell neighborhood areas in the City prone to street flooding. See Appendix B for a map of rockwells.

### *Recommendations*

Based on the discussions of the meeting, the following recommendations are proposed:

- Continue hosting informational workshops in order to inform communities about IRWM, how they can participate, funding opportunities and deadlines, and/or to provide feedback/information to the region.



- Conduct workshops, meetings and events at multiple locations, rather than at a central location, in order to make the location accessible to communities. This can help optimize meeting attendance and allow DACs to effectively engage in the IRWM program.
- Ensure that workshop/meeting materials, along with any education information, continue to be made available in Spanish and other languages, as needed, to ensure inclusivity of community members.
- Consider revisiting projects that were previously denied by DACs, reevaluate engagement and outreach efforts utilized, and consider implementing new engagement strategies and analysis in order to ensure community members fully understand the benefits, costs, and impacts of not moving forward with the project.
- Identify ways to address water-related needs, priority projects proposed by community members, and work closely with them to ensure that these communities are effectively participating in IRWM, as well as benefiting from the DACI program funds.
- Improve Needs Assessment by including historical water challenges, trends and future risks/impacts, showing MCL violations for the various constituents of concern and including water quality information for private domestic wells.
- Identify all the communities within or partially within the 100-year flood plain on an aerial map and also on the 1997 aerial maps; these communities include Riverdale Park, West Modesto (Robertson Neighborhood), Bystrom Neighborhood, Airport Neighborhood and City of Modesto, and South Modesto. Also create a plan to find solutions (see example maps included in Appendix B).
- Identify areas in the water systems that need replacing such as old leaking steel main. A map is included in Appendix B, as an example of a map used by the City of Modesto to identify areas for rehabilitation and replacement of water system infrastructure.
- Once all the needs of a given community have been identified, specific maps should be created for each neighborhood and provided to the community to allow them to advocate for the projects.
- Provide links in the Needs Assessment Report to other efforts that have already identified Community Water Related Needs, including the following:
  - East Stanislaus Regional Water Management IRWM website:  
<http://www.eaststanirwm.org/>
  - Mid San Joaquin River Regional Flood Management Plan:  
<http://www.midsjrfloodplan.org/>
  - City of Modesto, Utilities Department, Reports and Studies (e.g., Wastewater and Water Master Plans): <https://www.modestogov.com/620/Reports-Studies>
  - Stanislaus and Tuolumne Rivers Groundwater Basin Association Groundwater Sustainability Agency: <http://www.strgba.org>
  - Turlock Subbasin Groundwater Sustainability Agencies:  
<https://turlockgroundwater.org/>
  - Stanislaus Multi-Agency Regional Storm Water Resource Plan:  
<http://www.stancounty.com/publicworks/swrp/>

- Identify all the urban areas within Stanislaus county that do not have sewer and are still on septic systems.

#### 4.2.4 Eastern San Joaquin

The Eastern San Joaquin County Integrated Regional Water Management Group (ESJ IRWM) Region-wide workshop was held on September 10, 2019 in Stockton. The purpose of the workshop was to provide information about the IRWM and DACI programs, present preliminary findings of the DAC Needs Assessment, discuss community water needs, complete the DACI survey and identify community residents to participate in the SAC. In addition to these goals, SHE utilized this workshop to provide community residents who reside within the ESJ IRWM boundaries, the opportunity to learn more about the ESJ IRWM (specifically who are the member agencies, when/where does the group meet and how to get involved), discuss potential projects and upcoming funding opportunities under the IRWM program. The workshop was led by SHE staff with support from a representative from the ESJ IRWM region and EJCW staff. SHE was responsible for providing an overview of the IRWM and DACI program, provide information about the Needs Assessment, and facilitate the community water needs discussion. The representative from the ESJ IRWM region provided an overview about their IRWM region, their governance structure and engagement opportunities to DACs. EJCW assisted with outreach and other meeting logistics.

Two county staff from the San Joaquin County Public Works, one person from a non-governmental organization, five people from a community-based organization, two representatives from a community college, one person from the community of Stockton and one person from outside of the state were in attendance. Workshop materials were made available in both English and Spanish and SHE staff were available to provide Spanish translation during the workshop although ultimately none was needed.

##### *Outreach Methods*

SHE developed an individualized outreach plan to reach community members residing in DACs within the Eastern San Joaquin IRWM boundaries. Most DACs within the Eastern San Joaquin IRWM region are served by the County of San Joaquin. Therefore, the DAC list developed for the Needs Assessment included very little contact information for the DACs within the region. In order to address this limitation, SHE implemented several outreach methods and developed bilingual (English and Spanish) communication materials, including a meeting flyer. The primary outreach method of inviting residents to attend the meeting was via direct mailings, phone call and emails. Additional outreach efforts included conducting site visits to in order to post flyers in key community locations.

Site visits were conducted in the following DAC communities: Weston Ranch, Highway 4 community, Park and South Central Stockton. EJCW worked with local Community-based organizations to perform mailings and phone calls. Additionally, the project team encouraged the Eastern San Joaquin IRWM and San Joaquin County to assist in the outreach by sending out the flyer to their interested parties email list.

##### *Successes and Constraints*

SHE staff encountered challenges with engaging residents to attend the workshop. Some of these challenges included limited budget to conduct door-to-door outreach and potential travel constraints for DAC residents. Although the meeting took place in the evening to better accommodate a working schedule, the location of the meeting may have caused some travel constraints to community members located further out into the region.

Despite these challenges, SHE successfully engaged six different community representatives at the workshop from the Stockton and the Taft Community Center. County staff were pleased with the information provided and with the opportunity to engage with representatives from DACs.

SHE provided translation from English to Spanish and ensured all meeting materials were available in these languages. SHE staff also facilitated the community water needs discussion which allowed for meaningful discussions about community water needs, issues, and identification of projects and recommendations to improve community participation in IRWM activities.

### *Outcomes*

Overall, the meeting cultivated rich discussions with the community members in attendance. The discussions held helped community members identify potential data issues, recommendations to improve the maps, community water-related issues, as well as begin to identify priorities for each of their communities. Some of the data issues, recommendations to improve maps, community needs and priorities that were discussed include:

- Need to verify DAC status for Lodi. The local Groundwater Sustainability Plans has Lodi listed as a DAC.
- The community of Victor is believed to be SDAC. Project team was asked to verify MHI. If not a SDAC, an MHI survey should be conducted.
- There was a request to verify the compliance status for the community of Thornton. It is believed that they are exceeding the MCL for manganese.
- Manteca is missing from the Public Water System map. Water provider is believed to be Lakewood Water Company. Additionally, residents expressed concerns over high water rates. Some reported paying up to \$400 a month.
- Community members expressed concerns addressing private well communities regarding knowing the approximate number of wells in each community, if there's any known groundwater quality issues and if there are homes along State Route 3 that are on private wells.
- Several concerns were raised regarding impacts to county-owned levees and ongoing costs to improve/repair. These impacts may be due to activities by the homeless population. Others reported that contamination is occurring due to lack of proper sanitation services for the homeless population.

### *Recommendations*

The following recommendations were provided by those that participated in the community water needs small groups discussions:

- Conduct a stormwater needs assessment – this can help with SGMA implementation efforts
- Consider providing the county funding to prepare a Stormwater Resources Plan
- Residents on private wells may not have the resources to sample their drinking water. They may also not know what to sample for. Establishing a Water Sampling program would help to obtain information on private domestic wells (tests for lead and common contaminants)
- Conduct more outreach efforts, e.g. door-to-door outreach emails and identify incentives to increase DAC participation in IRWM and DACIP efforts

- Consider programs that may help address water and sanitation needs of the homeless population in Stockton
- There is interest from between the Victor County Service Area (CSA) and an Irrigation District in pursuing a groundwater banking project. Project development funding would be needed to pursue the project overall
- Identifying opportunities to recycle wastewater
- The County of San Joaquin may be willing to administer a countywide septic system grant/loan program, if able to obtain available funding from SWRCB

#### 4.2.5 *Madera*

The Madera Regional Water Management Group (RWMG) Region-wide workshop was held on June 3, 2019 in Madera. Similar to other region-wide workshops, SHE utilized this meeting to provide community members who reside within the Madera RWMG boundaries the opportunity to learn more about the Madera RWMG, (including who are the member agencies, when/where does the group meet and how to get involved), discuss potential projects and upcoming funding opportunities under the IRWM program. The workshop was led by SHE staff with support from representatives from the Madera RWMG. SHE provided an overview of the IRWM and DACI program, provided information about the Needs Assessment, and facilitated the community water needs discussion. Representatives from the Madera RWMG provided an overview about their IRWM region and encouraged DACs to attend future meetings. Lastly, SHE staff shared information about additional active DACI program funded projects that aim to improve DAC participation within the Madera RWMG. Specifically, SHE provided information about the Madera Regional Planning projects, which includes a DAC Capacity and Education Building project, Water Quality Sampling project, and a Water Meter Assessment project. All workshop materials (meeting agenda, PowerPoint and community survey) were made available in both English and Spanish. SHE staff also provided translation during the meeting.

A total of eleven attendees were present at the workshop. Five community members from the community of La Vina, Parksdale and Indian Lakes were in attendance. It is important to note that Indian Lakes is located outside of the SJRFA and are within the Mountain Counties Funding Area. The meeting was also attended by County staff working on IRWM and SGMA and two members of the Madera RWMG.

#### *Outreach Methods*

SHE developed an individualized outreach plan to reach community members residing in DACs within the Madera IRWM boundaries. Most DACs within the Madera IRWM region are served by the County of Madera. Therefore, the DAC list developed for the Needs Assessment included very little contact information for the DACs within the region. In order to address this limitation, SHE implemented several outreach methods and developed bilingual (English and Spanish) communication materials, including a meeting flyer, invitation emails and social media posts. The primary outreach method was door-to-door outreach. Additional outreach efforts included posting flyers in key locations, conducting phone calls to community leaders asking them to share the information within their community, mailing flyers, sending out emails, utilizing social media and posting workshops on Eventbrite.

Door-to-door outreach was conducted in the following DAC communities: Fairmead, areas of Parksdale, La Vina and Ripperdan. Community contacts for Parksdale were obtained from SHE staff that have relationships with community leaders. Calls were also made to active community members

in the Parksdale area to contact and encourage participation from other residents, as well as community residents who had completed the DAC Participation Survey and those who had shown prior interest in water-related events/needs. The Madera RWMG and Madera County also assisted in the outreach by sending out the flyer to their interested parties email list.

Within the Madera Region, one tribe is present: the North Fork Rancheria. Their tribal lands fall within the Madera Region, with pockets in both the SJRFA and Mountain Counties Funding Area. The majority of these tribal lands fall in the Mountain Counties Funding Area; thus, the North Fork Rancheria was included in the outreach under the Mountain Counties Funding Area needs assessment.

### *Successes and Constraints*

SHE staff encountered challenges with engaging residents to attend the workshop. These challenges included limited contact information for the DACs within the region, location of workshop, distance of travel and time constraints. Although the meeting took place in the evening to better accommodate a working schedule, the location of the meeting may have caused some travel constraints to community members located further out into the region.

Despite these challenges, SHE successfully engaged five different community representatives at this workshop from Parksdale, La Vina, and Indian Lakes communities. It was noted by both the County and Madera RWMG representatives that this has been the most DAC engagement in an IRWM-related meeting that they have experienced and were really excited about the possibility of creating long-term relationships. Additionally, community residents provided feedback regarding training topics that could be covered in future workshops or as part of Madera's DAC Capacity and Education program.

SHE provided translation from English to Spanish and ensured all meeting materials were available in these languages. This allowed for meaningful discussions throughout the meeting about community water needs, issues, and ideas to assist communities.

### *Outcomes*

Overall, the meeting cultivated rich discussions with the community members in attendance. The discussions held helped community members identify community water-related issues, as well as begin to identify priorities for each of their communities. Some of the community needs and priorities that were discussed include:

- Community members from La Vina identified water quality and stormwater needs but ultimately prioritized water quality. Other needs identified included the lack of sidewalks/safe walkways for children.
- Community members from Indian Lakes attended this meeting, despite being from outside the SJRFA, to learn more about the IRWM program and how the SJRFA was implementing the DACI program. They identified water supply and water quality issues related to having high levels of magnesium, as well as not having sufficient financial resources to address them.
- Community members from both La Vina and Indian Lakes identified addressing water quality and assistance in getting a new well as their top priority.
- Community members from both La Vina and Indian Lakes also mentioned that having safe, reliable water is vital for their communities and without projects that help address their needs, communities will continue to deteriorate.

- During the discussion on water quality concerns, a conversation about SGMA also took place regarding how there is a need to have residents participate in the development of a mitigation policy in order to ensure communities continue having access to adequate and safe sources of drinking water.
- Community members from Parksdale expressed interest in promoting water conservation via the installation of water meters and proper community education programs. Residents were also interested in the long-term sustainability and management of local groundwater resources.
- Community members in attendance also provided recommendations on ways to engage DACs in IRWM activities. General recommendations included continuing to provide meeting materials in English and Spanish, conducting additional targeted outreach in order to properly educate, engage and facilitate meaningful discussions with community members regarding water-related projects that may benefit their community and/or the region.
- Those in attendance also expressed concerns with the potential use of DACI funds on administration costs as opposed to the activities that provide direct benefits to communities and advance projects that will address the water-related needs.
- Community residents provided feedback regarding training topics that could be covered in future workshops or as part of Madera's DAC Capacity and Education program. Training topics mentioned at the workshop included community benefits and opportunities through IRWM, what is an IRWM plan and how to effectively participate in IRWM. Other topics included funding and project development and exploring multiple-benefit projects.

### *Recommendations*

Based on the discussions of the meeting, the following recommendations are proposed:

- Build community capacity on IRWM and other water sustainability programs.
- Continue hosting informational workshops to inform communities about IRWM, how they can participate, funding opportunities and deadlines, and/or provide feedback/information to the region.
- Utilize a portion of remaining DACI program funds to provide technical assistance/support project identification, and development/preparation of funding requests.
- Ensure that workshop/meeting materials, along with any education information, continue to be provided in English and Spanish. Consider translating documents into other languages, as needed, to ensure inclusivity of community members.
- Take into consideration the community priorities/projects proposed by community members and work closely with them to ensure that these communities are participating in IRWM, as well as benefiting from the DACI program funds.

#### *4.2.6 Merced*

The Merced Integrated Regional Water Management Authority (MIRWMA) region-wide workshop was held on June 12, 2019 in Merced. The workshop was led by SHE staff with support from a representative from the MIRWMA region. SHE was responsible for providing an overview of the IRWM and DACI program, provide information about the Needs Assessment, and facilitate the community water needs discussion. The representative from the MIRWMA region provided an overview about their IRWM region, their governance structure, and engagement opportunities to

DACs. SHE utilized this workshop to provide community residents who reside within the MIRWMA boundaries the opportunity to learn more about the MIRWMA (specifically who are the member agencies, when/where does the group meet and how to get involved), and to discuss potential projects and upcoming funding opportunities under the IRWM program.

Two city staff from the City of Merced, one person from the Merced Irrigation District, and one person from a consulting agency were in attendance. Workshop materials were made available in both English and Spanish, and SHE staff were available to provide Spanish translation during the workshop although ultimately none was needed.

### *Outreach Methods*

SHE developed an individualized outreach plan specific to the DACs within the MIRWMA boundaries. Due to the distance, time limitations and size of some communities, door-to door outreach was limited to key communities in the southern portion of the IRWM region. SHE incorporated several additional outreach methods into the plan and developed bilingual (English and Spanish) communication materials, including a meeting flyer, invitation emails and social media posts. Additional outreach efforts included posting flyers in key locations with heavy foot traffic, conducting phone calls to community leaders asking them to share the information within their community, mailing flyers, sending out emails, utilizing social media and posting workshops on Eventbrite.

Door-to-door outreach was conducted in the following DAC communities: Le Grand, Tuttle, Bear Creek, and El Nido. Due to the large number of homes, size of community and time limitations, flyers were posted at key locations in the following communities: Planada, and areas near the Merced Civic Center. Additionally, the Le Grand CSD and Planada CSD made the flyers available at their offices for community residents to view and take home. A community leader in Planada also supported the outreach by distributing flyers and encouraging resident participation.

### *Successes and Constraints*

SHE staff encountered challenges with engaging residents to attend the workshop. These challenges included location of workshop, distance of travel and time constraints. Although the meeting was set in the evening to better accommodate a working schedule, the location of the meeting may have caused some travel constraints to community members located further out into the region. Also, due to the workshop being set in early June, community participation may have also been impacted by the end-of-school activities, graduations, as well as summer vacations.

Although challenges were experienced, SHE was able to effectively and efficiently communicate with the City of Merced and Merced County to host the workshop. SHE was also able to establish meaningful discussions regarding community/city needs during the workshop with City staff and others who work with DACs in Merced.

### *Outcomes*

Overall, the meeting cultivated rich discussions among those that attended the workshop. Some of the discussions and questions included:

- Importance of properly educating, engaging and facilitating meaningful discussions with community members regarding water-related projects that may benefit their area or region.
- Participants wanted clarification on the single water sources data and questioned if schools with their own water systems were included in the assessment. Participants were especially interested in the needs of El Nido and the local school.

- Participants agreed and recommended that education and outreach on water be emphasized so that communities can better prepared for future droughts. They also emphasized that the Merced Region has recurring issues with household water leaks and recommended that Merced County, MID and City of Merced work together to address these issues and needs.
- Attendees also recommended implementing water metering program in order to help communities reduce water usage. It was noted that this may also help communities identify leaks sooner. City of Merced also mentioned water conservation projects that they have implemented which included among other things providing free shower heads.
- Attendees also recommended expanding the Needs Assessment to incorporate, specific water quality information on communities of private wells and upcoming new 2020 census data, and on identifying opportunities to develop and maintain an active database.
- Attendees also recommended implementing and encouraging recharge projects to incentivize regional benefits.

### *Recommendations*

Based on the discussions of the meeting, the following recommendations are proposed:

- Encourage collaboration among different entities and agencies within the Merced IRWM boundaries to address recurring regional issues and needs.
- Continue hosting informational workshops to inform communities about IRWM, how they can participate, funding opportunities and deadlines, and/or provide feedback/information to the region.
- Hold workshops, meetings and events at locations where it easily accessible to communities. Hosting region-wide workshops can be a constraint to communities located further out of the region, so hosting various workshops throughout the region, specifically in DACs, would be ideal to commence effective engagement of DACs in the IRWM program.
- Consider implementing a water education and sustainability program similar to the program that is currently implemented by the City of Merced.
- Consider expanding the Needs Assessment to incorporate data from schools with their own water systems, specific water quality information on communities of private wells, and upcoming new 2020 census data, as well as identify opportunities to develop and maintain an active database.

#### *4.2.7 Westside-San Joaquin*

The Westside-San Joaquin (WSJ) IRWM Region-wide workshop was held on June 4, 2019 in Santa Nella. The workshop was led by SHE staff with support from the representative from the Westside-San Joaquin IRWM region. SHE was responsible for providing an overview of the IRWM and DACI program, providing information about the Needs Assessment, and facilitating the community water needs discussion. Representatives from the WSJ IRWM region provided an overview of their IRWM region and discussed current efforts to update their IRWM plan. SHE utilized this meeting to provide community residents who reside within the WSJ IRWM boundaries the opportunity to learn more about the WSJ IRWM region (specifically who are the member agencies, when/where does the group meet and how to get involved), discuss potential projects and upcoming funding opportunities under the IRWM program



A total of five attendees were present at the workshop. One community member from the San Joaquin River Club community, one person from Fresno State, two people from the San Luis & Delta-Mendota Water Authority, and one person from a consulting group were in attendance.

### *Outreach Methods*

SHE developed an individualized outreach plan specific to the DACs within the WSJ IRWM boundaries. The WSJ IRWM boundaries overlap two IRWM funding areas – the San Joaquin River and the Tulare-Kern funding areas. Outreach was focused on the DACs within the SJRFA. Moreover, due to the distance, size of some communities, and budget limitations, door-to-door outreach was limited to key communities. SHE incorporated several additional outreach methods into the plan and developed bilingual (English and Spanish) communication materials, including a meeting flyer, invitation emails and social media posts. Additional outreach efforts included posting flyers in key locations with heavy foot traffic, conducting phone calls to community leaders asking them to share the information within their community, mailing flyers, sending out emails, utilizing social media and posting workshops on Eventbrite.

Door-to-door outreach was conducted in the following DAC communities: Hamburg Farms, Pacheco, and areas of Dos Palos. Due to the large number of homes, size of community and time limitations, flyers were posted at key locations in the following communities: Gustine, Dos Palos Y, Dos Palos and South Dos Palos. The Westside-San Joaquin IRWM group also assisted in the outreach by sending out the flyer to their interested parties email list and posting flyers in Firebaugh and Mendota.

### *Successes and Constraints*

SHE staff encountered challenges with engaging residents to attend the workshop. These challenges included location of workshop, distance of travel and time constraints. Although the meeting was held in the evening to better accommodate a working schedule, the location of the meeting may have caused some travel constraints to community members located outside the area. Also, because the workshop took place in early June, community participation may have also been impacted by the end-of-school activities, graduations, as well as summer vacations. Due to the WSJ IRWM Region's unique boundaries (large distance from north to south), outreach was also very limited to the communities who were in close proximity to Santa Nella (location of workshop), which in turn limited the scope of communities being able to attend.

### *Outcomes*

Overall, the meeting cultivated rich discussions among those in attendance. The discussions held, helped attendees think further about community water issues and ways to possibly address them. Some of the discussions and questions included:

- The San Joaquin River Club representative identified the following water-related needs: water quality (chromium 6), water supply, stormwater, dated infrastructure (pipes date back to 1936), ongoing water mains and line breaks, lack of adequate fire hydrants, and lack of adequate financial resources to properly operate a water system, respond to emergencies and replace old infrastructure.
- When asked to prioritize needs, the San Joaquin River Club representative identified a new distribution system, a rate analysis, and installation of meters as the top three priorities.
- The representative also expressed interest in community education on groundwater sustainability programs and technical, managerial and financial training for board members. He was also interested in identifying ways to reduce board turnover. Additional community outreach and engagement recommendations included conducting targeted outreach in DACs,

identifying key water leaders, and reducing participation challenges such as lack of transportation, resources of information to attend meetings.

- Due to limited resources under the DACI program, meeting attendees discussed possible ways to leverage additional technical assistance and training programs. For example, assisting communities in need of rate analysis, and board training to technical assistance programs funded by the SWRCB.

### *Recommendations*

Based on the discussions of the meeting, the following recommendations are proposed:

- Leverage additional technical assistance programs in order to address multiple water-related needs, including lack of adequate technical, managerial and financial and board turnover.
- Build community capacity on other groundwater sustainability programs.
- Continue hosting informational workshops to inform communities about IRWM, how they can participate, funding opportunities and deadlines, and/or provide feedback/information to the region.
- Provide technical assistance to DACs to help them develop projects and apply for funding.
- Open up opportunities for DACs representatives to participate in IRWM/benefit from the DACI program funds.
- Workshops, meetings and events be held at locations where it easily accessible to communities. Hosting region-wide workshops can be of a constraint to communities located further out of the region, so hosting various workshops throughout the region, specifically in DACs, would be ideal to commence effective engagement of DACs in the IRWM program.

## 4.3 Community Survey Development and Findings

Supplemental data collection and outreach efforts were conducted to obtain additional information for the Needs Assessment. In order to better understand present DAC participation levels, knowledge of IRWM planning, possible participation barriers, and/or interest in IRWM-related activities, a Disadvantaged Community IRWM Participation Survey was developed and distributed funding area-wide. This survey also aimed to gather information about the community's water needs. The survey was targeted at rural community residents, private domestic well owners, and DAC water system directors and staff. This information was also used to develop recommendations for the IRWM regions to consider when developing a proposal for phase two of the SJRFA DACIP.

### 4.3.1 Survey Development

#### *Methods*

Self-Help Enterprises led the development of the Disadvantaged Community IRWM Participation Survey and the accompanying informational sheet. The sheet provided additional information about the purpose of the survey, the SJRFA DACIP, its importance, and why communities should be involved. Collectively, the survey and the informational sheet are referred to as the survey tools. SHE sought and received input from the Project Team: Woodard & Curran, Provost & Pritchard, and the Environmental Justice Coalition for Water. The SAC provided additional feedback for the SJRFA. The SAC consists of a diverse group of IRWM representatives and stakeholders within the SJRFA region. This group oversees the program and helps guide the development, implementation, and management of the DACIP process.

The final seventeen-question survey asked about DAC participation in IRWM activities, potential participation barriers, and sought recommendations on how to improve participation. The survey also requested information on current water needs. The water needs options listed in the survey ranged from improving water quality, supply, and distribution to incorporating water meters and storm water infrastructure. The survey tool was developed in English and Spanish. Using Google Forms, SHE created the surveys electronically to easily share the survey link online and via email. Please refer to Appendix C for the final survey tool.

#### *Survey Distribution*

SHE and EJCW used various survey distribution methods in order to reach DACs and improve the response rate. The bilingual (English and Spanish) surveys were distributed to previously identified DAC public water systems, as well as DAC water leaders known to, SHE and EJCW. Surveys were distributed via email, direct mail, and were made available at the April 10, 2019 funding area wide meeting and at all regional workshops. Woodard & Curran also shared the survey with the SAC and requested that IRWM regions distribute the survey to their DAC contacts. Moreover, organizations that work with DACs were notified of the release of the survey and asked to assist with the distribution of the survey tool.

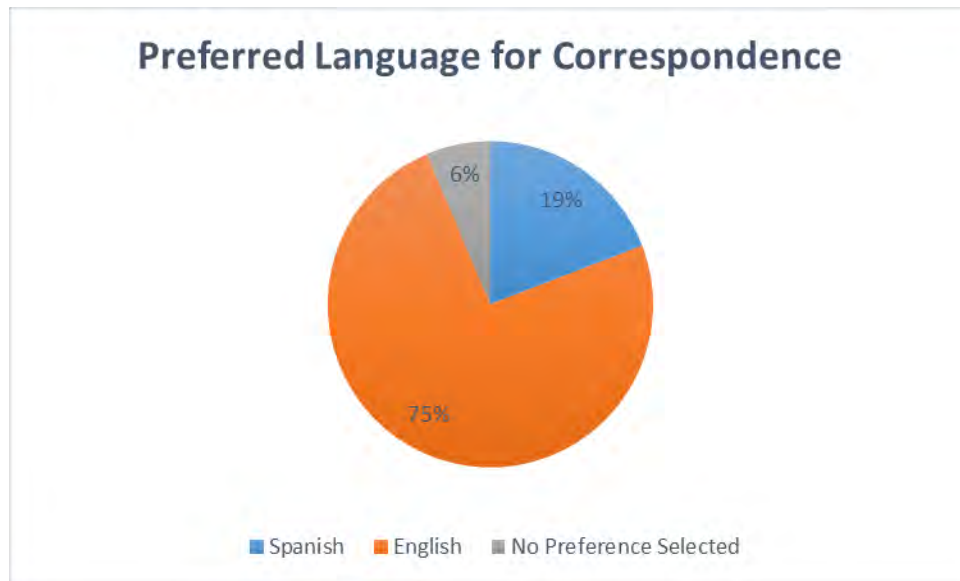
#### **4.3.2 Survey Results**

A total of 50 survey responses were received. SHE staff were responsible for inputting the responses received into Google Forms, and took the lead on analyzing the response data.

Upon analysis and completion of findings, the survey responses were categorized into main topics: preferred language for correspondence, respondent classification, knowledge of IRWM, current IRWM participation, participation barriers and recommendations, interest in participating in IRWM activities, and community improvements and water needs. When analyzing the data, SHE removed three surveys from the analysis, as they were from communities that are not disadvantaged. The analysis below is based on the 47 surveys submitted from disadvantaged communities.

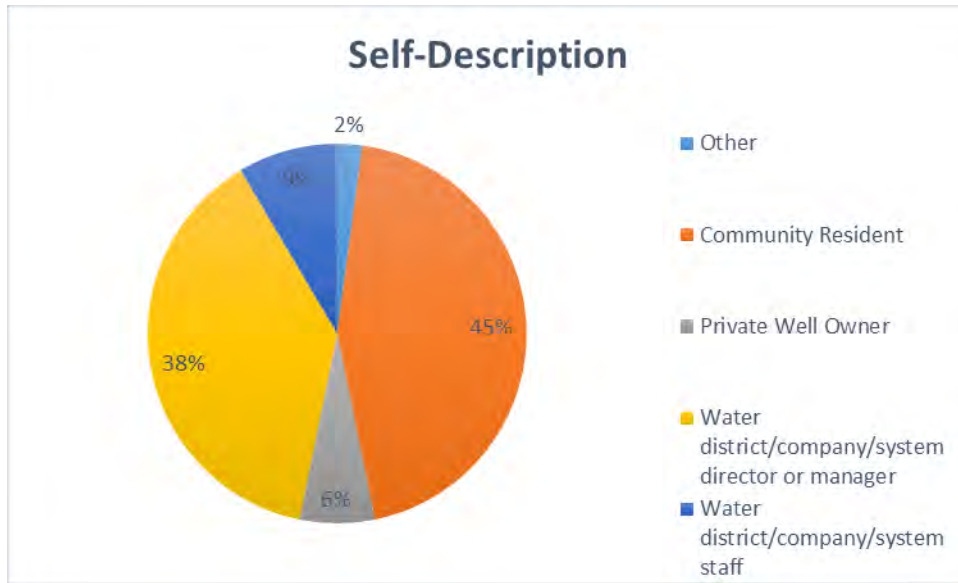
#### *Survey Participation (preferred language for correspondence and how the participants are best described)*

Of the 47 surveys, 19% of those that responded to the survey preferred correspondence in Spanish (Figure 11). This preference came from participants residing within the East Stanislaus IRWM region. This finding emphasizes the need to have materials and translation available in Spanish.

**Figure 11: Survey Results: Preferred Language for Correspondence**

Overall, various DAC stakeholders completed the survey. The majority of the survey respondents identified as community residents with a response rate of 45%. Managers or Directors who worked for water districts, water companies, or water systems made up 38% and 9% were staff who worked for water districts, water companies or water systems, while 6% were private well owners (Figure 12). Unlike responses observed in other funding areas, the percentage of community residents who completed surveys were significantly higher, while the percentage of managers or directors that worked in water districts were significantly lower. Additionally, a small percentage of private well owners also participated in this survey. The Tuolumne River Trust contributed and assisted with the outreach and distribution of the survey which helped improve the response rate from community residents. This further emphasizes the importance of identifying and working with local community-based groups and community leaders who have an established relationship with the community, when conducting outreach and engagement activities.

**Figure 12: Survey Results: Self-Description**

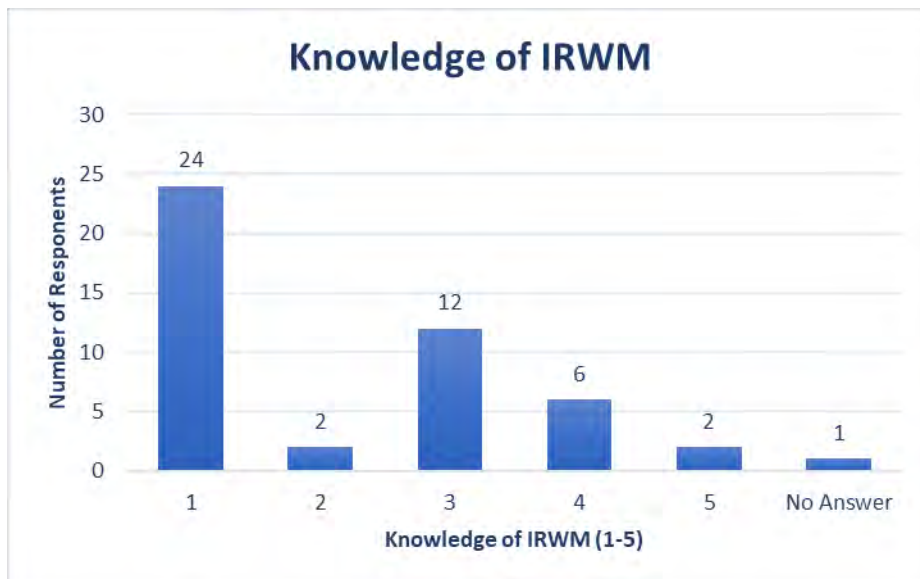


*Knowledge of IRWM (Scale of knowledge and in which IRWM region is the participant’s community located)*

The survey asked participants to rate their knowledge of IRWM on a scale of 1 to 5, with 1 being “not knowledgeable” and 5 being “very knowledgeable.” Overwhelmingly, 55% of respondents had little to no knowledge of IRWM; (26%) had some knowledge, while 17% of respondents were knowledgeable or very knowledgeable (Figure 13).

By determining which stakeholders are knowledgeable and not knowledgeable in the IRWM program, the SAC can fund a more targeted outreach and engagement plan that focuses on the community residents, small water systems, and private domestic well owners that need information.

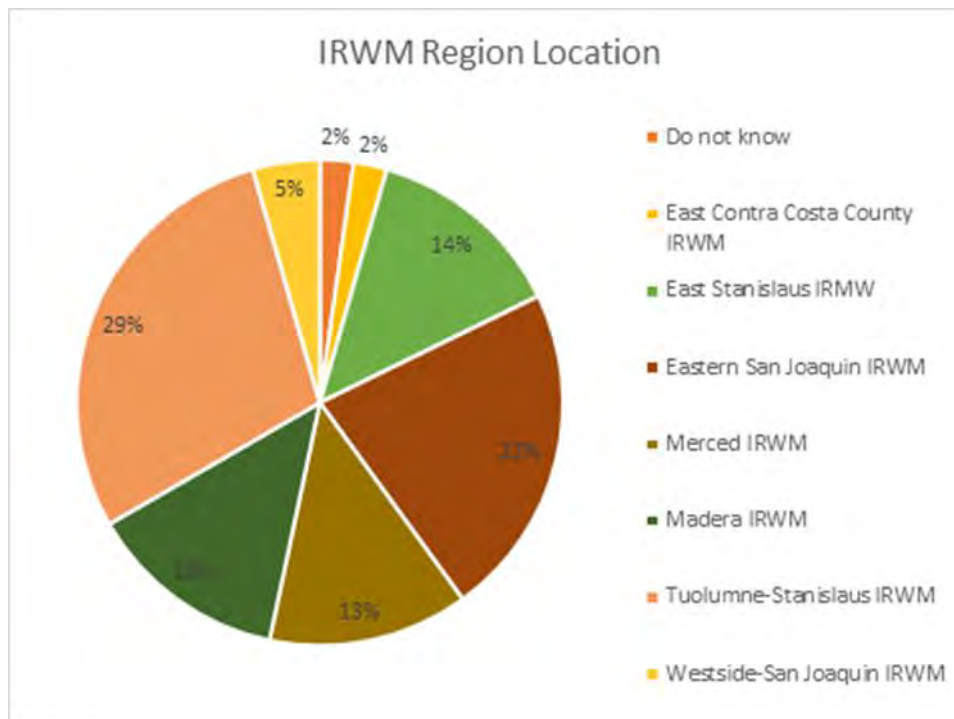
**Figure 13: Survey Results: Knowledge of IRWM**



Survey respondents were also asked to identify which IRWM region their community was located in. The survey listed each of the ten IRWM regions within the SJRFA and provided respondents the opportunity to select “other” or “do not know” as options. Forty-five of the 47 respondents answered the question with the majority selecting one of the listed IRWM regions, and one selecting “do not know.”

As shown in Figure 14, the majority of respondents identified themselves as being from the Tuolumne-Stanislaus IRWM Region. Using the DWR DAC Mapping Tool, the respondent addresses provided, and the community identified in the survey, SHE staff were able to verify whether the community was actually located in the IRWM region that the respondent had selected. After analyzing the data, the results show that not all respondents correctly knew which IRWM region their community was located in. For example, data submitted showed that 29% of respondents selected the Tuolumne-Stanislaus IRWM as the IRWM region that their community was located in, however, those communities are actually located in the East Stanislaus IRWM region. Respondents may have assumed that their community was located in the Tuolumne-Stanislaus IRWM region as most of these surveys were obtained through distribution efforts conducted by the Tuolumne River Trust or due to their close proximity to the Tuolumne River.

**Figure 14: Survey Results: IRWM Region Location**



#### *Community Participation in IRWM Activities*

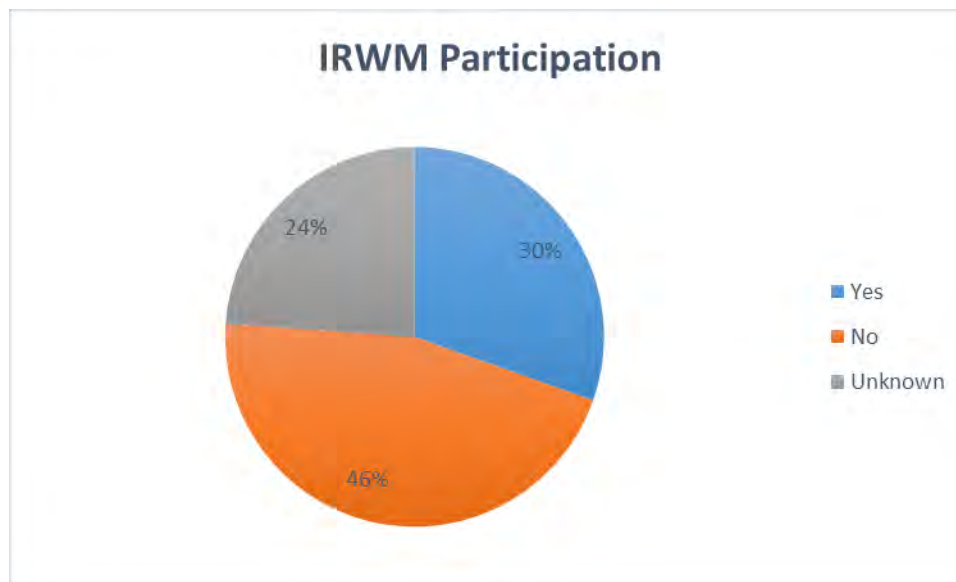
To further understand community participation in IRWM activities, the survey asked participants if they, or someone they know, participates in IRWM meetings. This survey question served the purpose of identifying who participates, what motivates them to participate, or why they do not participate. The survey also asked whether communities had applied and received IRWM funding and to identify factors that make it difficult for their community to participate in IRWM planning efforts. Given the goal of the DACI program, the survey also asked participants to identify possible

solutions to address participation challenges. Lastly, participants were asked to select any or all of the IRWM activities listed on the survey (e.g. attend an IRWM board or advisory committee meeting, serve on an advisory committee or work group, attend a workshop, host a meeting or participate in additional surveys or interviews) that are of interest.

### **Community Participation in IRWM Meetings**

When asked if the respondent or a member of the community participates in IRWM meetings, 70% of respondents either do not participate or do not know of a community member that participates in IRWM meetings, while 30% of respondents participate or know of someone who participates (Figure 15). Most of those who responded who do not participate identify as community residents, water district staff or directors, and private well owners, with a majority of them being water district directors and community residents.

**Figure 15: Survey Results: IRWM Participation**



Correspondingly, their lack of participation in IRWM meetings may also be correlated to respondents having little to no knowledge of IRWM. The data show that those who rated their knowledge of IRWM as being knowledgeable or very knowledgeable had also indicated they are or have previously participated in IRWM meetings. Similarly, those that rated their knowledge of IRWM as not knowledgeable identified as community residents, private well owners and water districts, water companies, water system directors, and managers or staff; this group indicated that they had not previously participated in IRWM meetings. It is important to note that the low participation and little to no knowledge of IRWM could be correlated to a lack of participation, lack of information, limited resources, travel constraints and competing priorities. These factors are further explained in the participation barriers section.

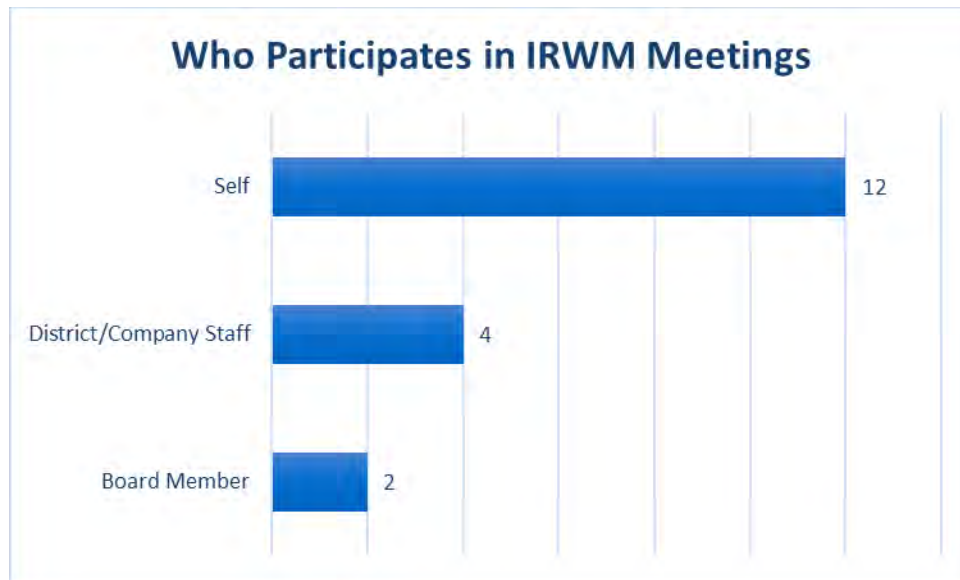
### **Who Participates in IRWM Meetings**

When asked to identify who participates in the IRWM meetings (e.g. self, community resident, board member/district company staff, and/or other), the majority of the respondents identified themselves

as the person who attends in IRWM meetings (Figure 16). When the respondent was not the one that attends IRWM meetings, they selected community residents, board members, or district/company staff member.

Those who identified themselves as a person that participates in IRWM meetings are water district directors or managers and community residents. This indicates that water district directors may attend the IRWM meetings as part of their job responsibilities and may be paid to do so. This begins to display the disparities in the levels of participation between those who are paid to attend versus those who do not have the same financial resources to pay their staff to attend.

**Figure 16: Survey Results: Who Participates in IRWM Meetings**



### **What Motivates Communities to Participate**

In the open-ended question that asked participants what motivates them to participate in meetings, most responded that their participation is tied to their job responsibility, desire to continue their education on water management, interest in working with other communities, building resiliency for their community, as well as identifying projects and securing funding for community improvement needs. These motivation factors should be leveraged when conducting outreach to stakeholders.

### **Why Communities Do Not Participate**

To assist in further understanding lack of participation in the IRWM program, the survey asked participants why they have not participated in IRWM meetings. After analyzing the open-ended responses, the top three themes that arose were lack of information, lack of resources, and competing priorities. Of these, the top response was the lack of information. For example, several survey respondents said that they were not aware of the program or the meetings and that they would have participated if they had known. Another survey respondent expressed these constraints by stating that "...[s]mall agency staff must work hard to keep services for customers [and have] no time for extra meetings".



### **Participation Challenges and Recommendations**

When asked to identify any factors that prevent or make it difficult for the community to participate in IRWM planning efforts, the main factors identified were similar to the responses provided when asked why they have not participated in IRWM meetings. The top themes that were identified include lack of information, limited resources, travel constraints, as well as competing priorities. One respondent specifically stated that “GM (General Managers) perform many functions, [while] larger agencies have employees to fill those positions.” Not only does this indicate that competing priorities challenge participation levels in small water systems, but further indicates that small water systems lack the resources to satisfy participation needed for other programs and meetings. These two factors appear to be inter-related for smaller water systems and DACs. Additionally, the majority of respondents were willing to participate in the program but were unaware of its existence and did not have information about the program. The survey found that in one instance there were no barriers to participate, and the respondent’s only issue was not knowing about the program.

In another instance, a survey respondent identified a factor for participation as “I don’t know what our options are for funding, [or] what there is to apply for.” This illustrates the lack of awareness of the IRWM program, but also the lack of access that DACs have to funding sources in general. Most survey respondents were interested in learning more about funding programs and being able to secure funding sources to help improve their community and provide long-term solutions.

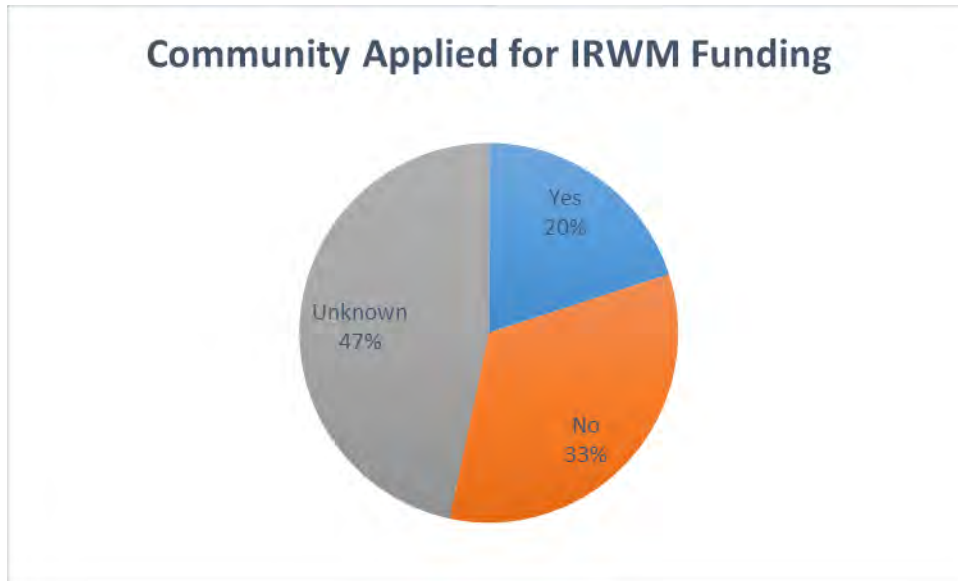
Furthermore, due to the large geographical area of the IRWM regions, many communities find travel a constraint to attending IRWM meetings. One respondent stated that DACs in the Modesto/Ceres tend to have problems with transportation and information about the IRWM program. At least one other respondent noted that they were unable to participate in the program because they are part of a private water company.

### **Community Participation in IRWM Funding**

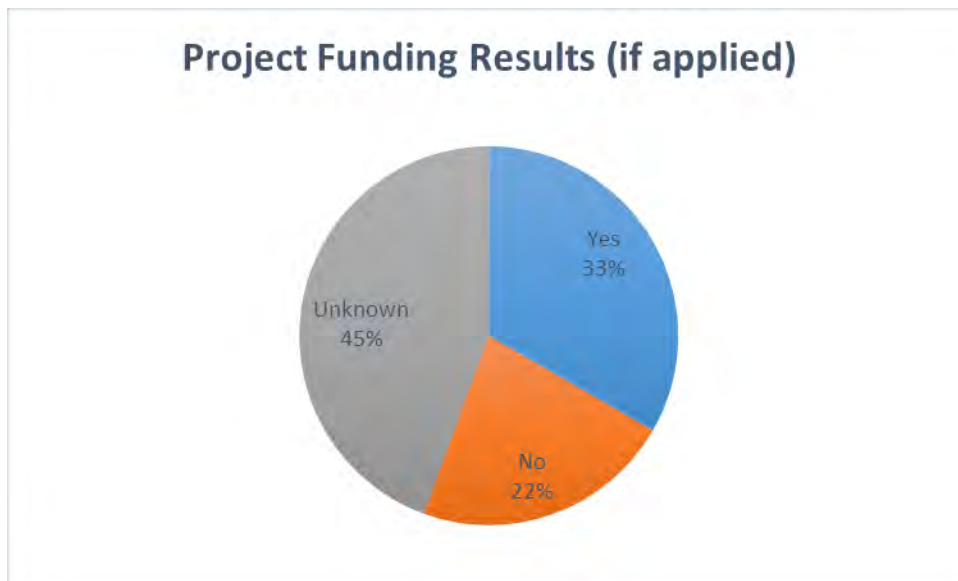
Similar to understanding their participation status, the survey also asked whether their community had ever applied for funding. A total of 20% of respondents said that their community had applied for IRWM funding, while 80% either did not know or knew that their community had never applied to IRWM funding (Figure 17).

Of those that knew that their community had applied for IRWM funding, 33% of the communities had their projects funded, while 22% did not have their project funded (Figure 18). These data show that most DACs that apply for IRWM funding are not being funded. The other 45% did not know if their community had the project funded.

**Figure 17: Survey Results: Community Application for IRWM Funding**



**Figure 18: Project Funding Results**



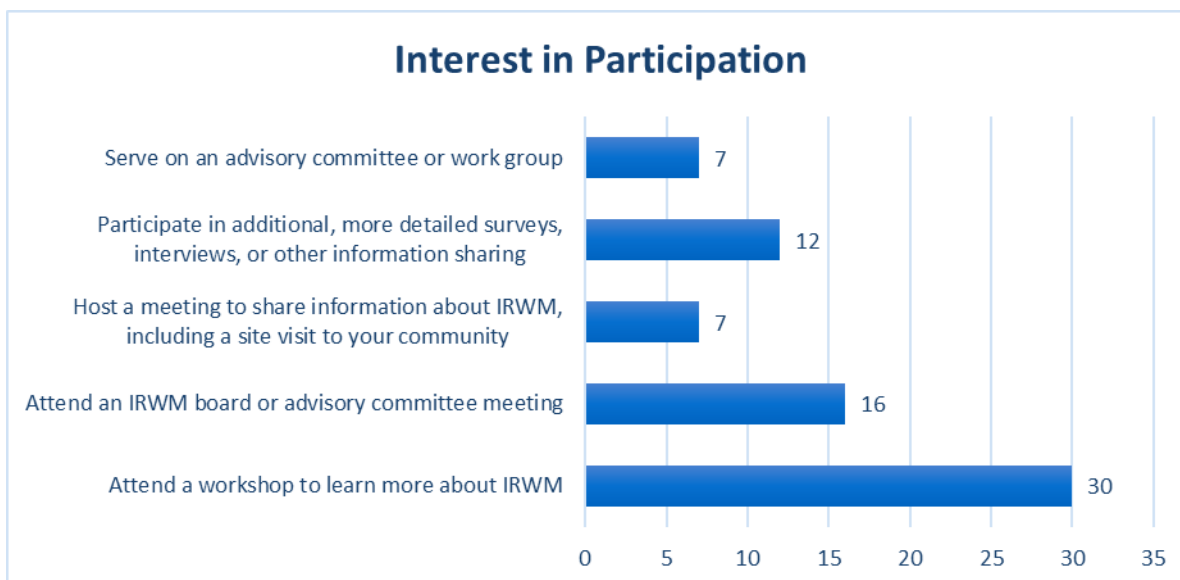
The survey also included an open-ended question asking participants to specify why funding had not been awarded. Most of the respondents stated that they did not know why they were not awarded funding, were unaware of the funding opportunities, or otherwise had pending funding requests on an IRWM project list. Most survey respondents were interested in learning more about funding programs and being able to secure funding sources to help improve their community and provide long-term solutions.

**Interest in Participation**

Although DAC participation in the IRWM program is limited, the survey results found that there is high interest in participating in IRWM. Many participants showed interest in participating in various

IRWM activities with the top three interests being: attending a workshop to learn more about the IRWM program, attend an IRWM meeting, and participating in additional, in-depth surveys (Figure 19).

**Figure 19: Survey Results: Interest in Participation**

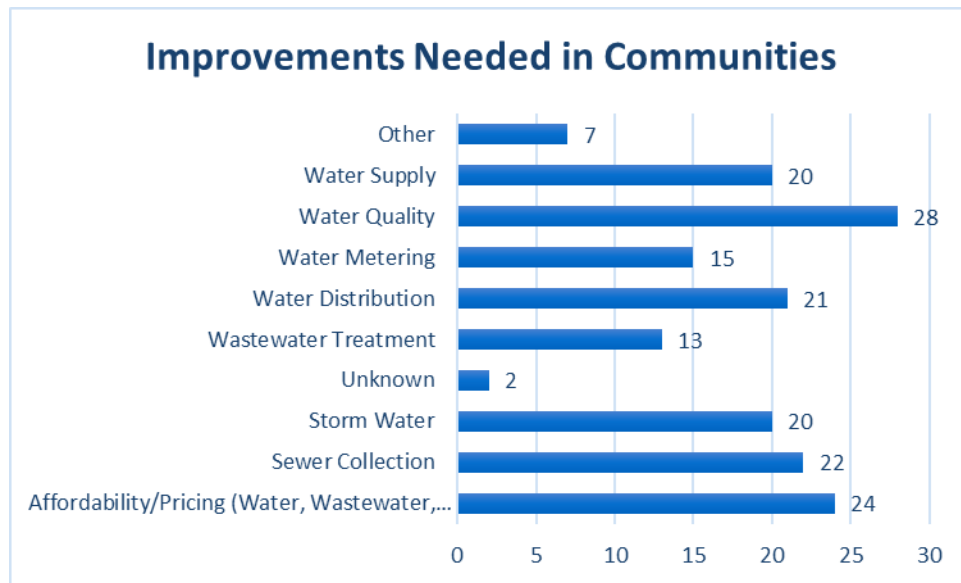


Furthermore, participants provided recommendations to help support and improve community participation in IRWM planning efforts. Comprehensively, some of the common recommendations included conducting more outreach and engagement specifically on the topics of planning for the future, additional funding sources through IRWM, and importance of participation. The recommendations also included the need to secure resources to help community residents and district staff participate in IRWM activities; establish and maintain a contact database; providing translated materials (in, at a minimum Spanish, while also considering other languages as needed); and providing technical assistance.

As one survey respondent stated, community meetings in DACs are essential as there is not enough information or knowledge on the IRWM group or program – “the water needs of the community are important and their participation in this process”. Community participation in this program is vital and was further supported by a City of Modesto representative that attended the April 10, 2019 funding area workshop and stated that they would have like to see more outreach being conducted and a better turnout from DACs.

#### *Community Improvements and Needs*

The survey not only helped provide an understanding of communities’ knowledge and involvement in the IRWM program, but also helped identify community improvements needs. Looking at Figure 20, a variety of community improvements needs were identified; however, the most common needs were water quality, affordability/pricing (water, wastewater, sewer, and stormwater), sewer collection and water distribution.

**Figure 20: Survey Results: Improvements Needed in Communities**

Additionally, in an open-ended question asking participants to further discuss their community needs, most participants also identified their water and sewer infrastructure conditions as old and deteriorating, having compliance issues, as well as having further water quality issues with constituents of concern such as chromium 6. The last two questions of the survey asked respondents to identify people or organizations that they believe the project team should be in touch with and times where they would be available for any follow up that may be needed. Some of the respondents provided contact information for key community leaders, which shows that there is an opportunity to engage with other DAC residents.

The survey findings, as well as feedback provided during the funding area-wide and regional community workshops, were utilized by the project team to develop recommendations on how these needs could be addressed in Phase 2 of the DACI program. These recommendations are discussed in further detail below.

## Section 5. Recommendations and Next Steps

The following recommendations are presented to the Stakeholder Advisory Committee as activities to consider implementing as part of phase two of the DACI program.

### *Needs Assessment*

The current Needs Assessment was focused on drinking water and wastewater needs. Many participants mentioned the need to conduct a more comprehensive Needs Assessment for the funding area.

- Gather and incorporate data for other types of water systems (e.g., school water systems)
- Develop a survey tool or tools to gather additional data sets. Additional data sets may include:
  - Storm Water Facilities
  - Water Rates/Sewer Rates
  - Water System Operations Needs/Professional Services Needs
  - Private Well Depth and Water Quality
  - Systems with Metered Water Services
- Collect information on communities relying on individual septic systems
- Develop community profiles that show the community water-related needs. Community representatives can use these profiles in order to advocate for future funding allocations and community improvement projects

### *Water Sampling Program for Households Relying on Private Domestic Wells*

Given the number of households/communities relying on private domestic wells and the lack of water quality information available for these homes, participants expressed interest in establishing a free water sampling program for low-income households. The program should include water sampling for common constituents in the area, information on potential health impacts and information regarding potential interim and long-term solutions.

### *DAC Outreach and Education Program*

Due to the overwhelming number of survey responses that showed interest in participating in IRWM activities but were unaware of the program and meetings, consider establishing a DAC Outreach and Education Program. The DAC Outreach and Education Program should include the following:

- Direct and targeted outreach to DACs. For example, community meetings, workshops and other training opportunities. Topics of interest include:
  - What is IRWM and why it is important to participate
  - Understanding IRWM plans
  - Community Water Needs and Project Identification
  - Funding Opportunities through IRWM and other Funding Sources
- Establish and maintain a contact database of public water systems, key community leaders and local community organizations
- Develop educational materials in multiple languages

### *Technical Assistance and Funding for Project Development Activities*

It is important to provide DACs the technical assistance they need in order to seek appropriate funding sources and implement community water solutions. Potential technical assistance services include but are not limited to:

- Project identification and preliminary project development

- Fund project development activities (e.g. CEQA, preliminary design, feasibility studies, water meters assessments)
- Preparing project information forms/assisting DACs to submit projects to their IRWM region
- Leverage other technical assistance programs. For example, assist DACs obtain technical assistance offered by the State Water Resources Control Board in order to conduct income surveys, water rate assessments, leak detections and board training

#### *Continued Funding Area-Wide DACI Program Coordination*

The intent of the DACI Program is to ensure the involvement of DACs in IRWM planning efforts. One of the key objectives of the Program is for the funding area to work collaboratively to involve DACs, community-based organizations, and stakeholders in IRWM planning efforts to ensure balanced access and opportunity for participation in the IRWM planning process. To further the objectives of this Program, the SAC should continue to hold regular meetings. In future coordination efforts, the SAC should consider the following recommendations:

- **Appoint DAC Representatives to SAC:** Consider appointing community leaders who have expressed interest in participating in IRWM and the DACI program to the SAC.
- **Encourage DAC and IRWM Group Coordination:** Discuss regional issues and barriers identified through the DAC Needs Assessment and through the DAC Outreach and Education Program (if implemented). Consider potential ways to bridge those barriers. Encourage more participation by DACs, and foster IRWM group understanding of DAC needs. Encourage utilities, water districts, and municipal agencies to incorporate these findings in their outreach plans and to support DAC project development and implementation.
- **Fund DAC Participation:** Allocate funds to assist DAC representatives to attending meetings. As previously mentioned, many DACs encounter economic and financial constraints and find it difficult to identify individuals that are willing to volunteer their time or pay for travel expenses out of pocket in order to attend meetings that are held many miles away. Unlike local large-scale government agencies or consulting firms, many communities and small water systems cannot afford to close down the office, pay their staff and/or pay for travel expenses in order for them to attend meetings. Ensuring that there are stipends available for community members to attend meetings/participate in IRWM activities is essential to their involvement in the IRWM program.
- **Make Meetings Accessible to DACs:** Consider hosting more localized IRWM meetings. Due to the vast geographic extent of the IRWM regions within the SJRFA, the location of the meetings can cause travel constraints to communities that are further out from the localized areas. Some IRWM regions host rotational meetings around their region to ensure that various communities and stakeholders are able to attend meetings and remain informed.
- **Eliminate Language Barriers:** Ensure the availability of translated materials and translation services. To minimize language barriers, the availability of translated materials and providing interpreting services is essential.

## Section 6. References

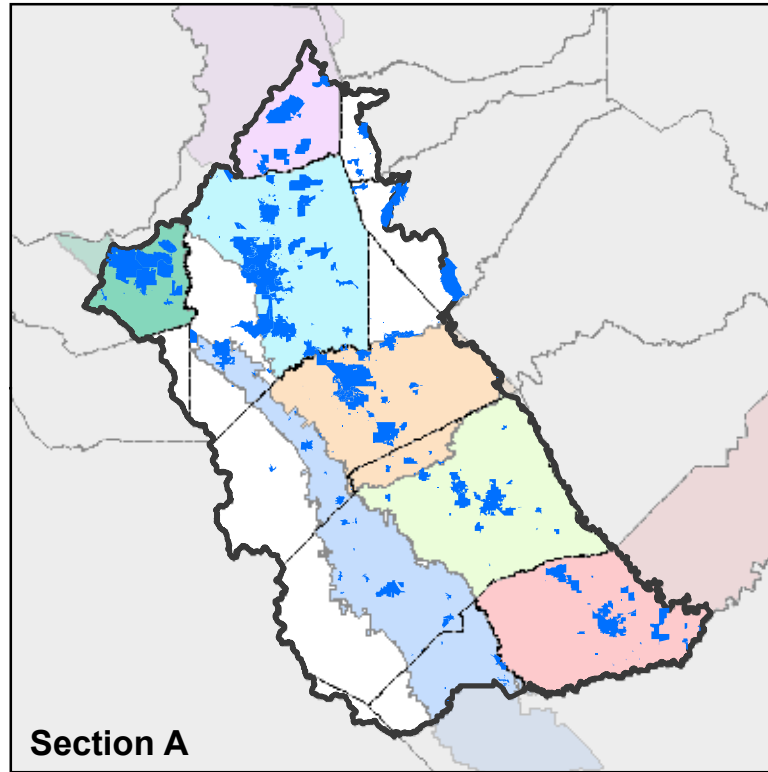
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**Appendix A –**

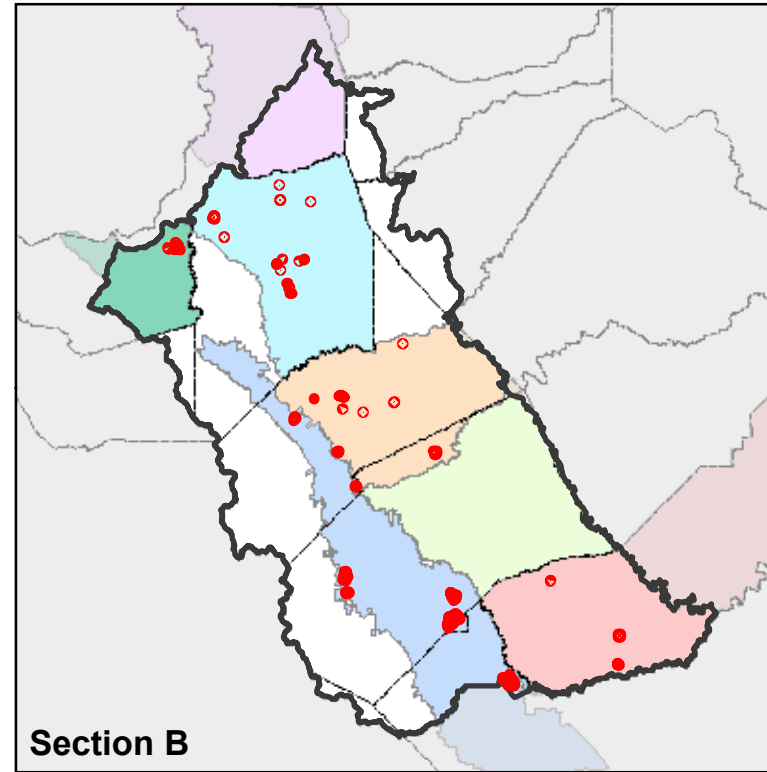
**San Joaquin River Funding Area DAC Needs Assessment Map Book**



**Section A**

**Disadvantaged Communities**

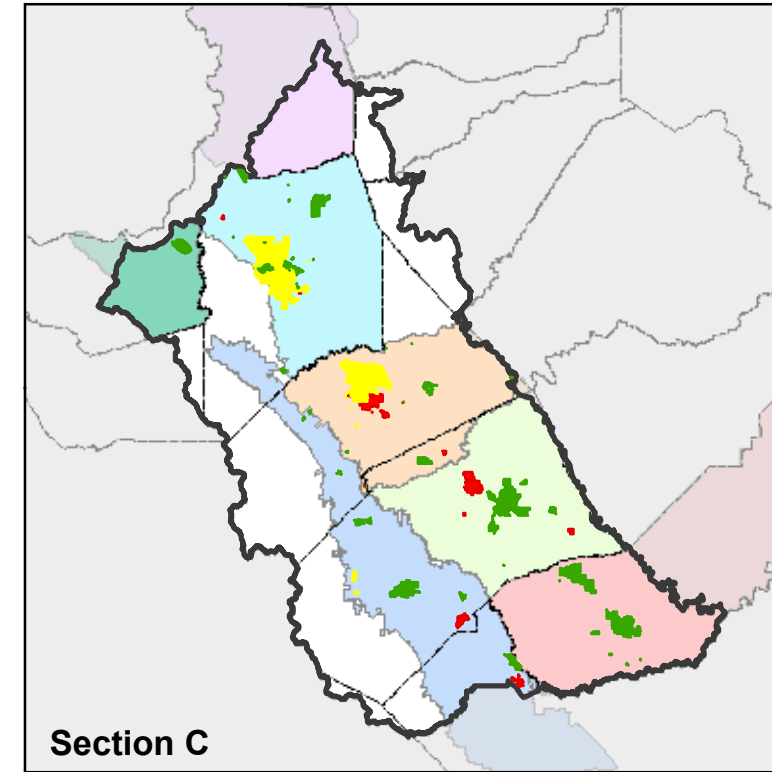
Disadvantage Communities



**Section B**

**Single Water Source Communities**

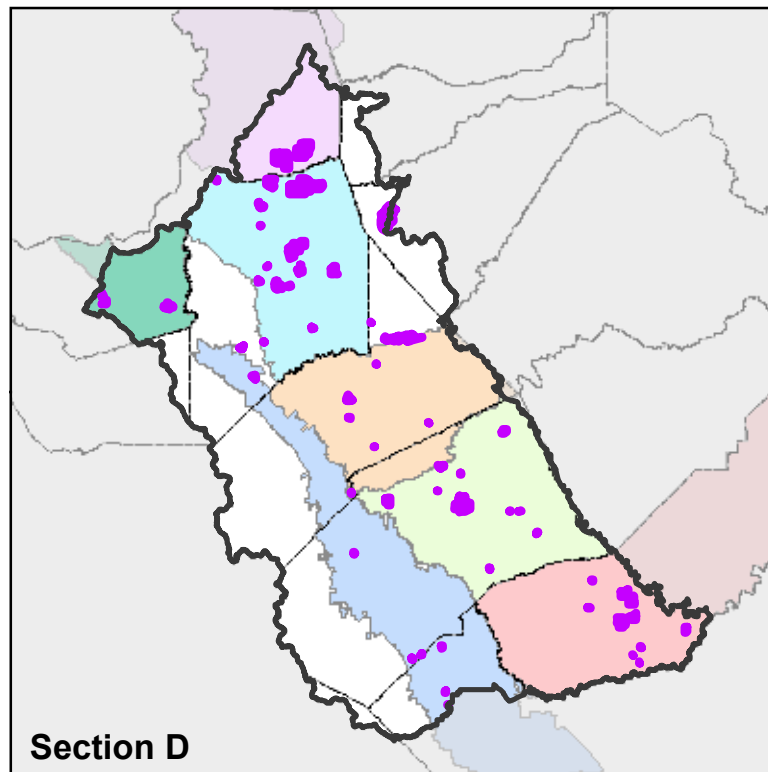
Single Water Source (DAC or SDAC)



**Section C**

**Water Quality Compliance Status**

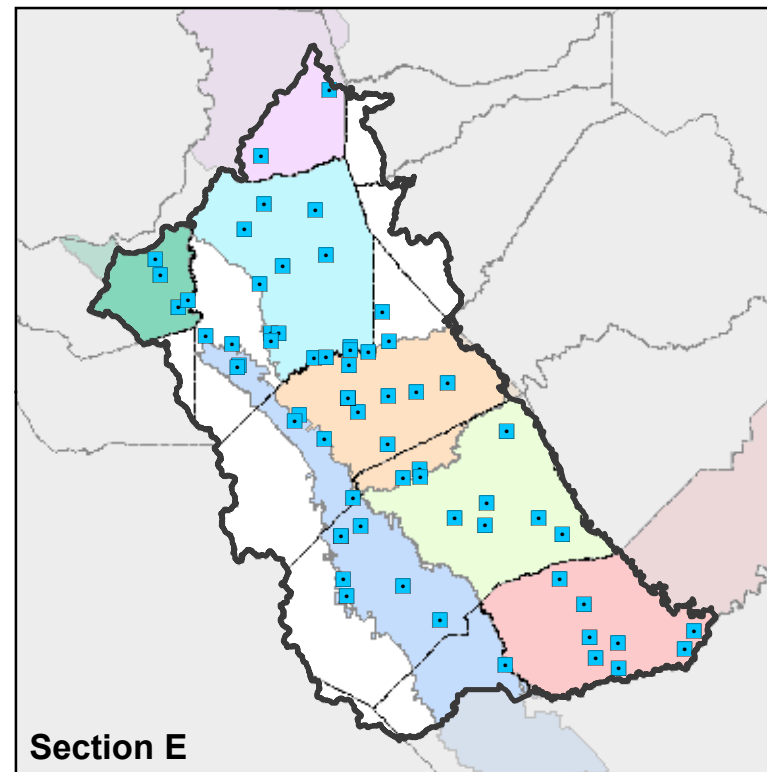
In Compliance  
 Return to Compliance  
 Out of Compliance



**Section D**

**Private Well Communities**

Private Well Communities (No PWS)



**Section E**

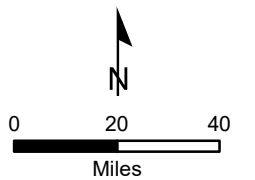
**Wastewater Treatment Facilities**

Wastewater Treatment Facility

**Legend**













- San Joaquin River Funding Area
- IRWM**
- American River Basin
- East Contra Costa County
- East Stanislaus
- Eastern San Joaquin
- Madera
- Merced
- Westside - San Joaquin

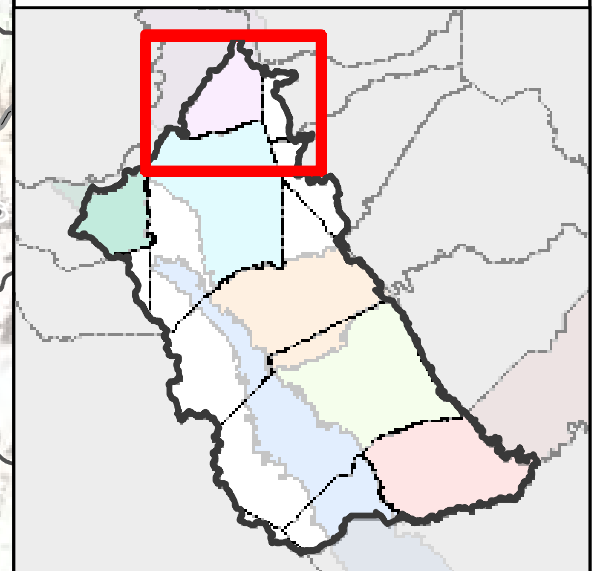
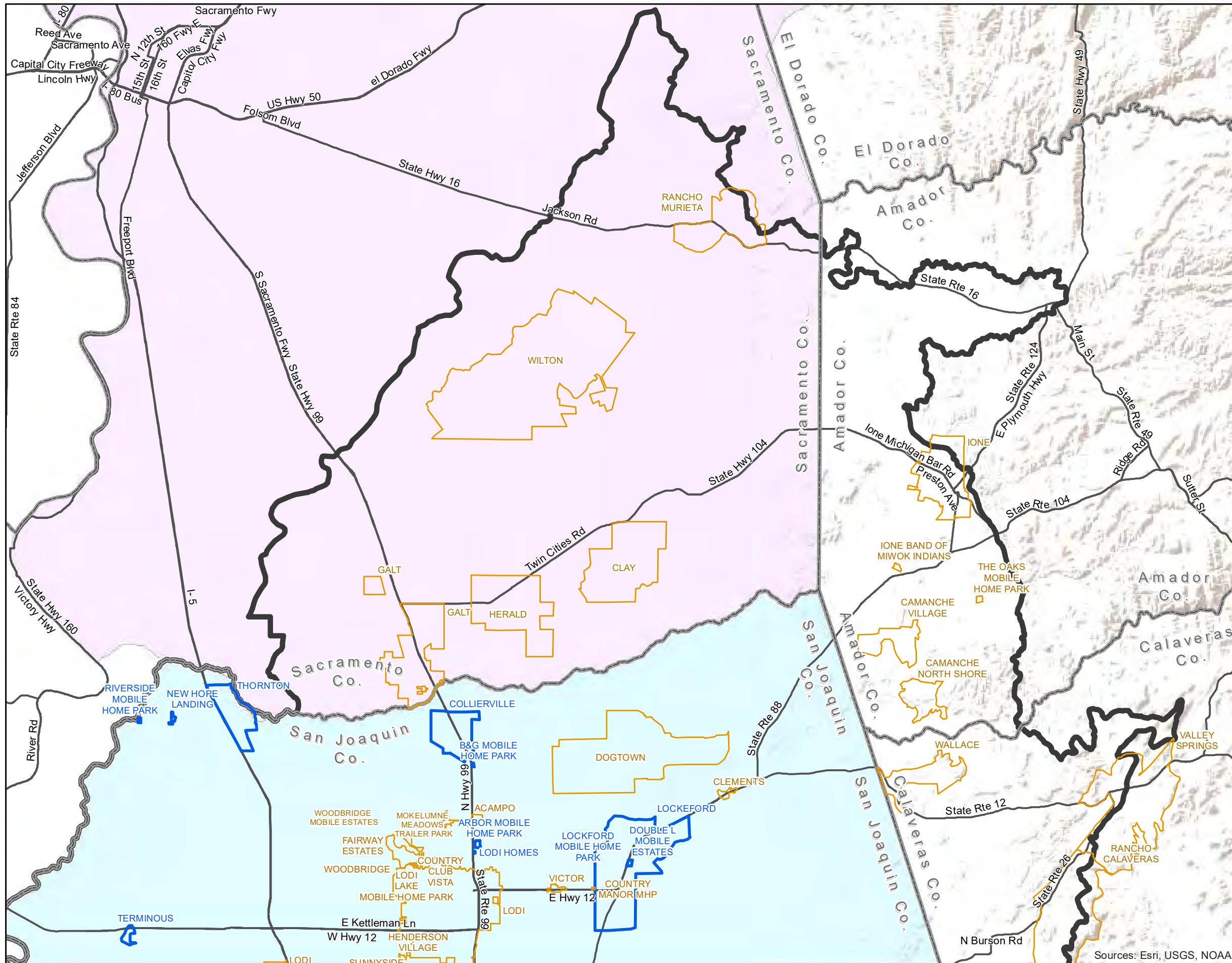
Mokelumne/Amador/Calaveras (MAC) and Tuolumne-Stanislaus IRWMs have elected not to participate in the SJR Funding Area, as they are primarily within another Funding Area.



# San Joaquin River Funding Area Map Book

## American River Basin Disadvantaged Communities

-  San Joaquin River Funding Area
  -  Community (DAC or SDAC)
  -  Community (Not Disadvantaged)
  -  County
- IRWM Boundary**
-  American River Basin
  -  East Contra Costa County
  -  East Stanislaus
  -  Eastern San Joaquin
  -  Madera
  -  Merced
  -  Westside - San Joaquin
  -  Outside IRWM















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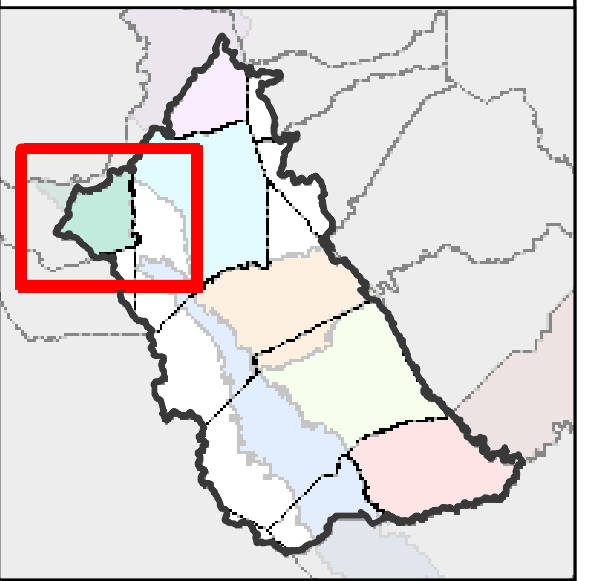
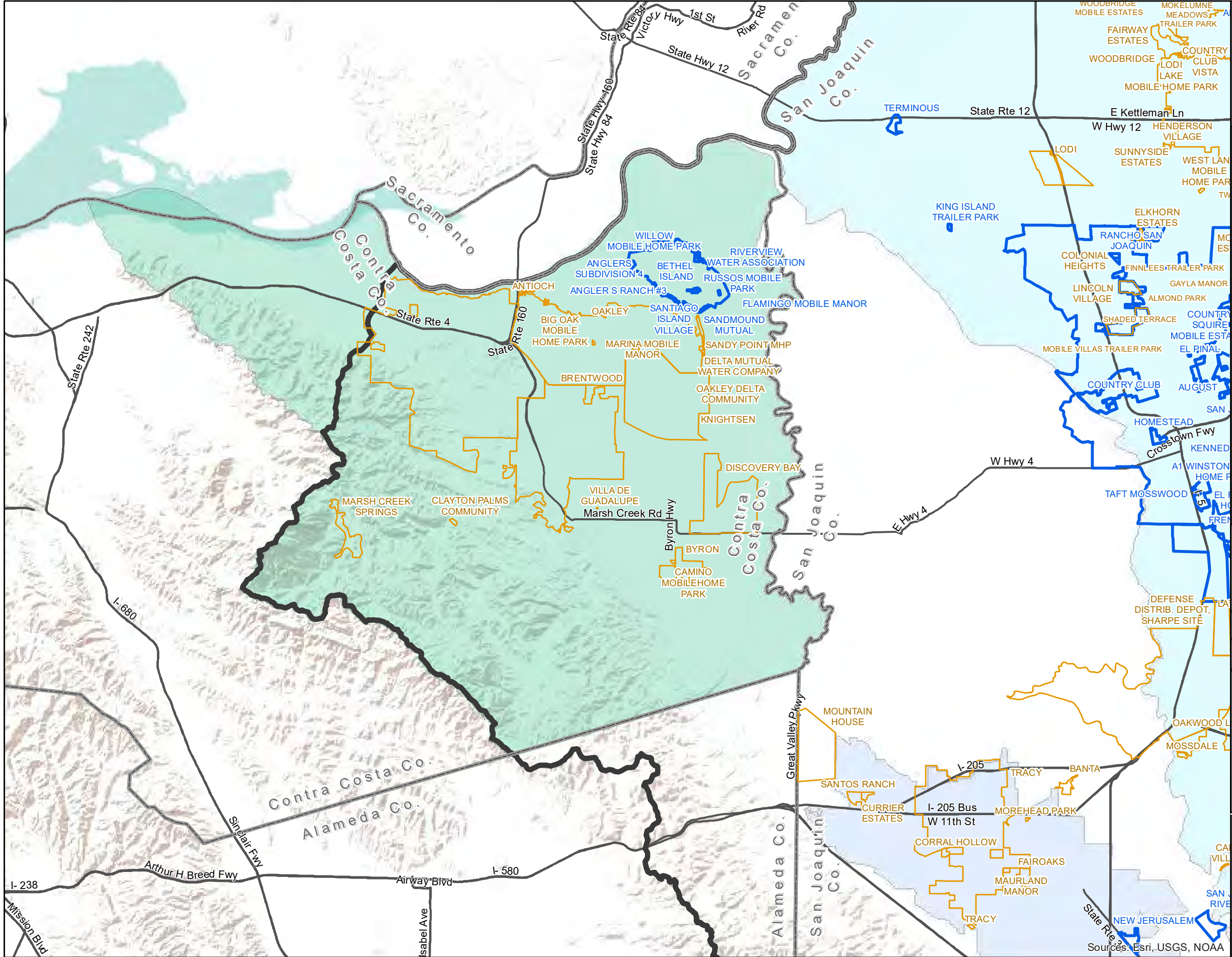
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# San Joaquin River Funding Area Map Book

## East Contra Costa County Disadvantaged Communities

-  San Joaquin River Funding Area
  -  Community (DAC or SDAC)
  -  Community (Not Disadvantaged)
  -  County
- IRWM Boundary**
-  American River Basin
  -  East Contra Costa County
  -  East Stanislaus
  -  Eastern San Joaquin
  -  Madera
  -  Merced
  -  Westside - San Joaquin
  -  Outside IRWM



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






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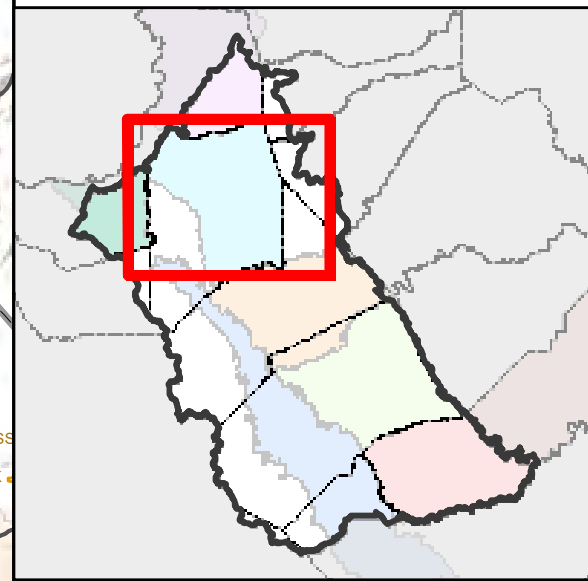
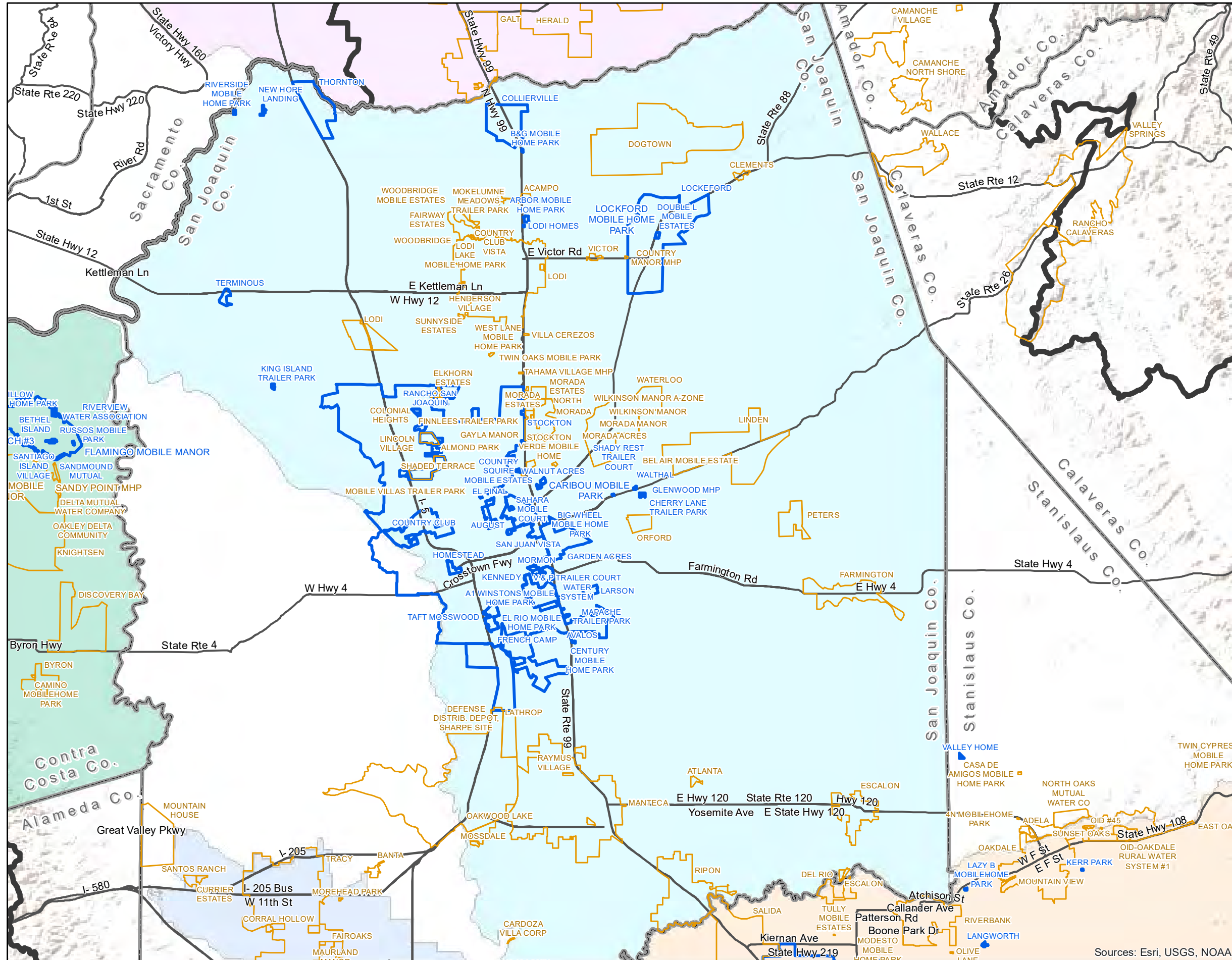
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Sources: Esri, USGS, NOAA

# San Joaquin River Funding Area Map Book

## Eastern San Joaquin Disadvantaged Communities

-  San Joaquin River Funding Area
  -  Community (DAC or SDAC)
  -  Community (Not Disadvantaged)
  -  County
- IRWM Boundary**
-  American River Basin
  -  East Contra Costa County
  -  East Stanislaus
  -  Eastern San Joaquin
  -  Madera
  -  Merced
  -  Westside - San Joaquin
  -  Outside IRWM

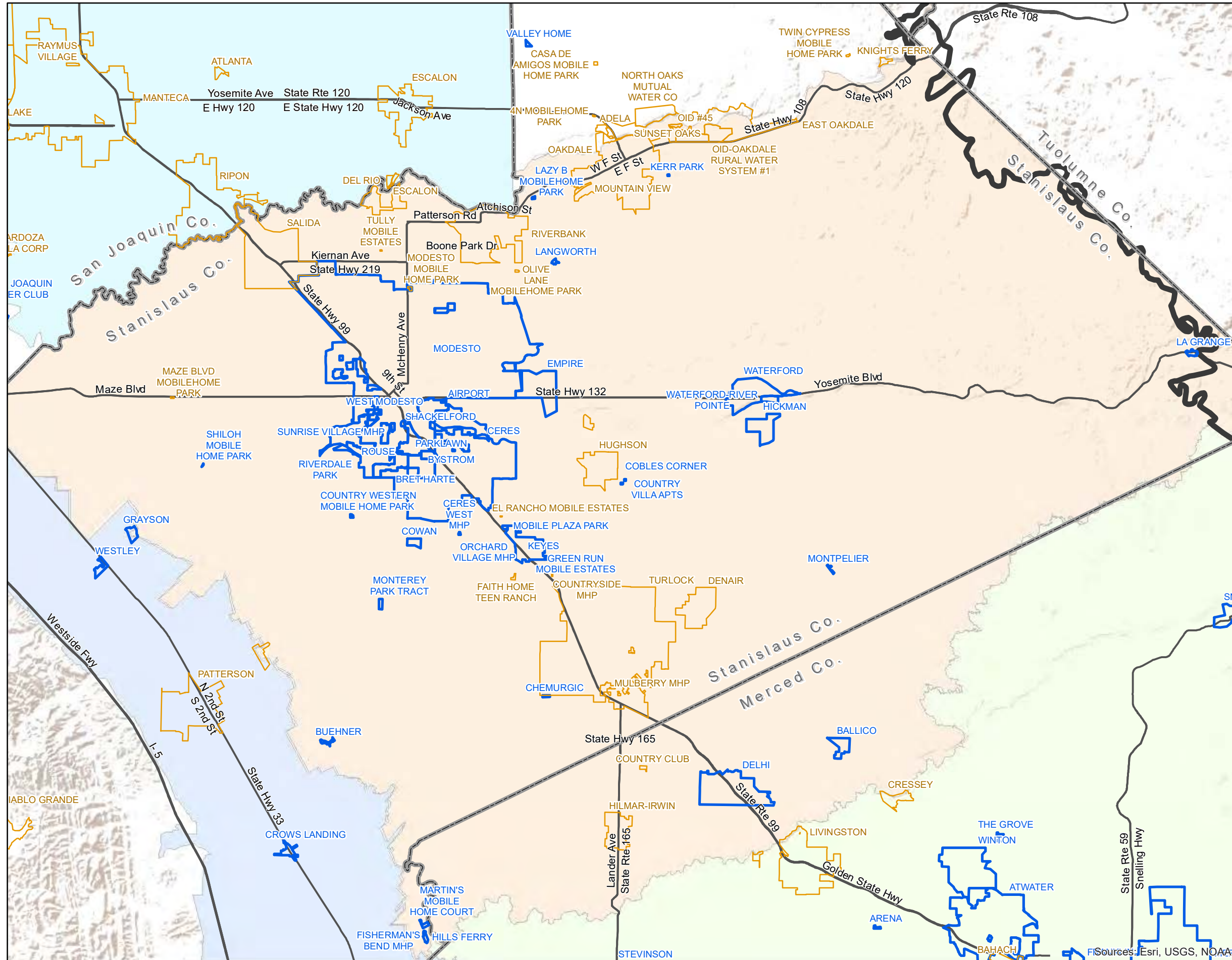


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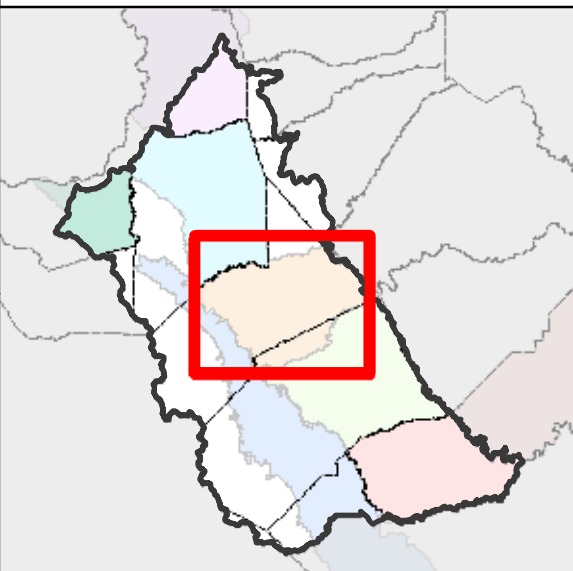
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# San Joaquin River Funding Area Map Book

## East Stanislaus Disadvantaged Communities



- San Joaquin River Funding Area
  - Community (DAC or SDAC)
  - Community (Not Disadvantaged)
  - County
- IRWM Boundary**
- American River Basin
  - East Contra Costa County
  - East Stanislaus
  - Eastern San Joaquin
  - Madera
  - Merced
  - Westside - San Joaquin
  - Outside IRWM

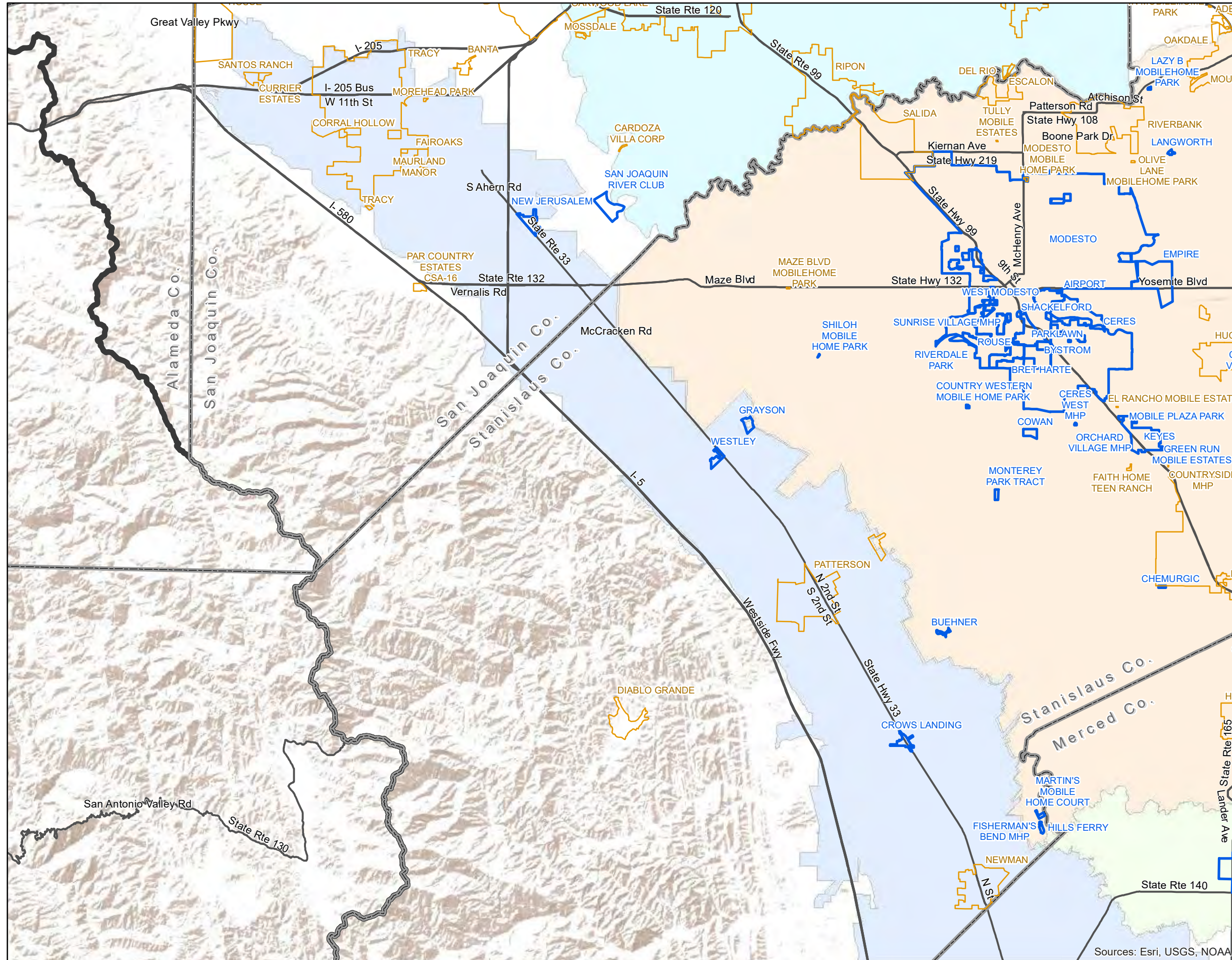


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# San Joaquin River Funding Area Map Book

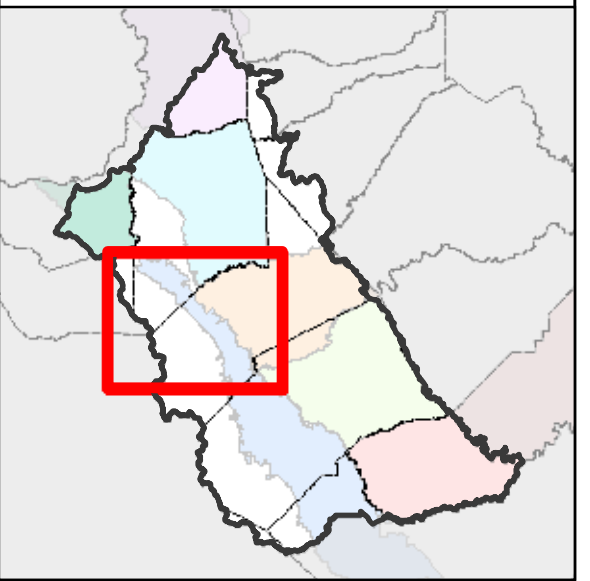
## Westside - San Joaquin North Disadvantaged Communities



- San Joaquin River Funding Area
- Community (DAC or SDAC)
- Community (Not Disadvantaged)
- County

**IRWM Boundary**

- American River Basin
- East Contra Costa County
- East Stanislaus
- Eastern San Joaquin
- Madera
- Merced
- Westside - San Joaquin
- Outside IRWM















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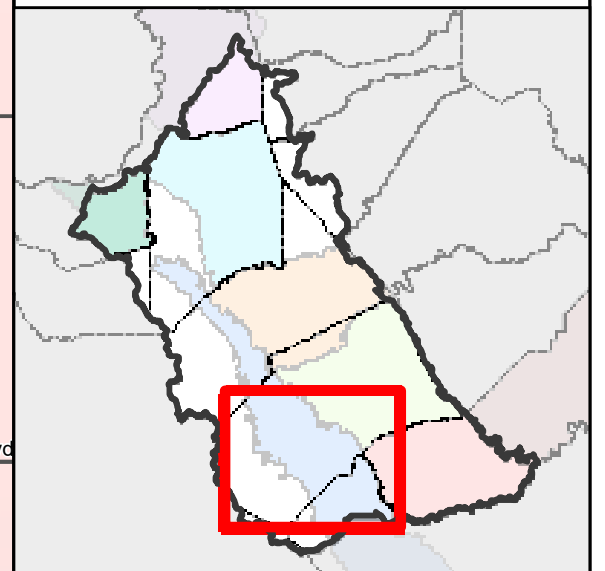
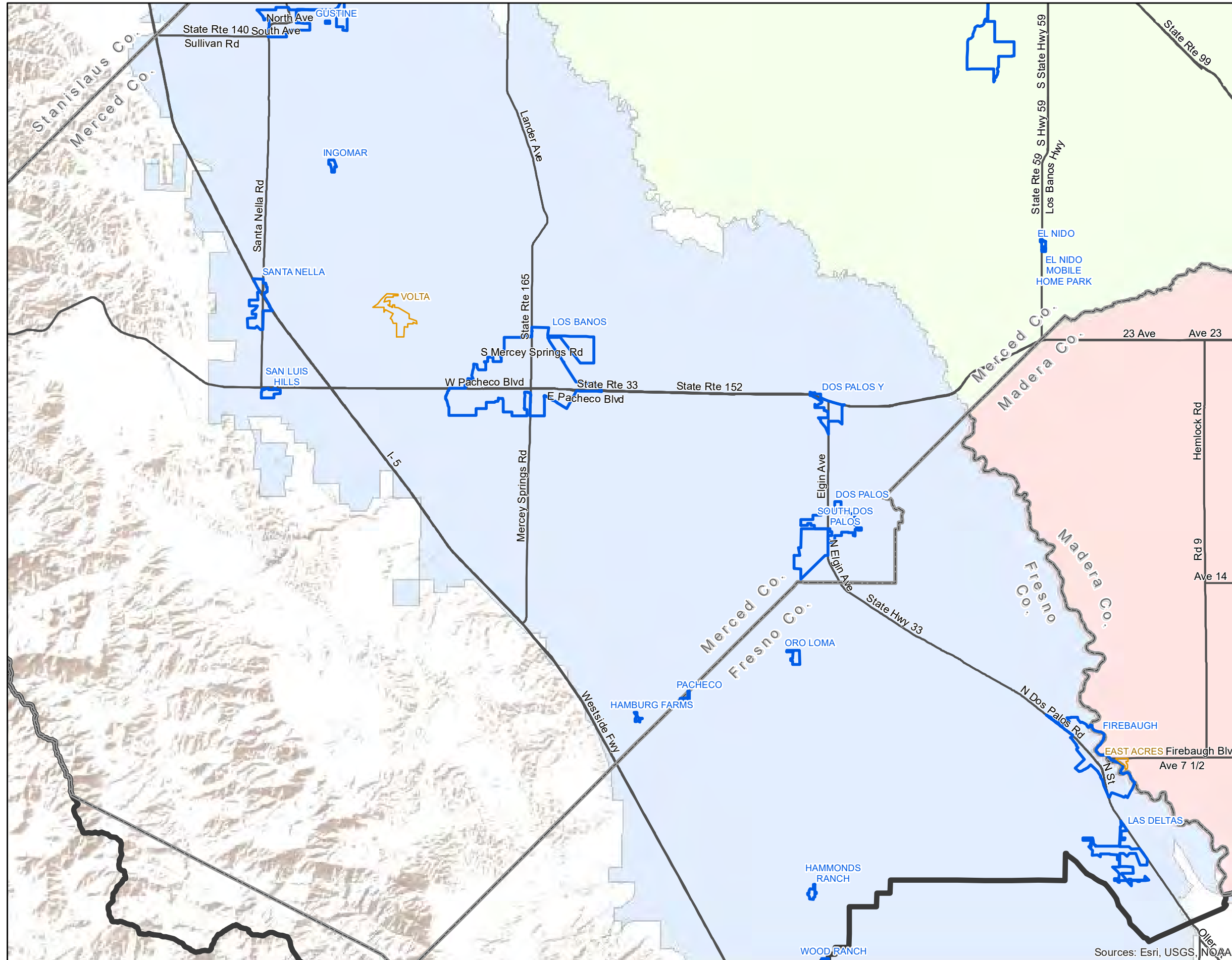
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Sources: Esri, USGS, NOAA

# San Joaquin River Funding Area Map Book

## Westside - San Joaquin South Disadvantaged Communities

-  San Joaquin River Funding Area
  -  Community (DAC or SDAC)
  -  Community (Not Disadvantaged)
  -  County
- IRWM Boundary**
-  American River Basin
  -  East Contra Costa County
  -  East Stanislaus
  -  Eastern San Joaquin
  -  Madera
  -  Merced
  -  Westside - San Joaquin
  -  Outside IRWM



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 Miles

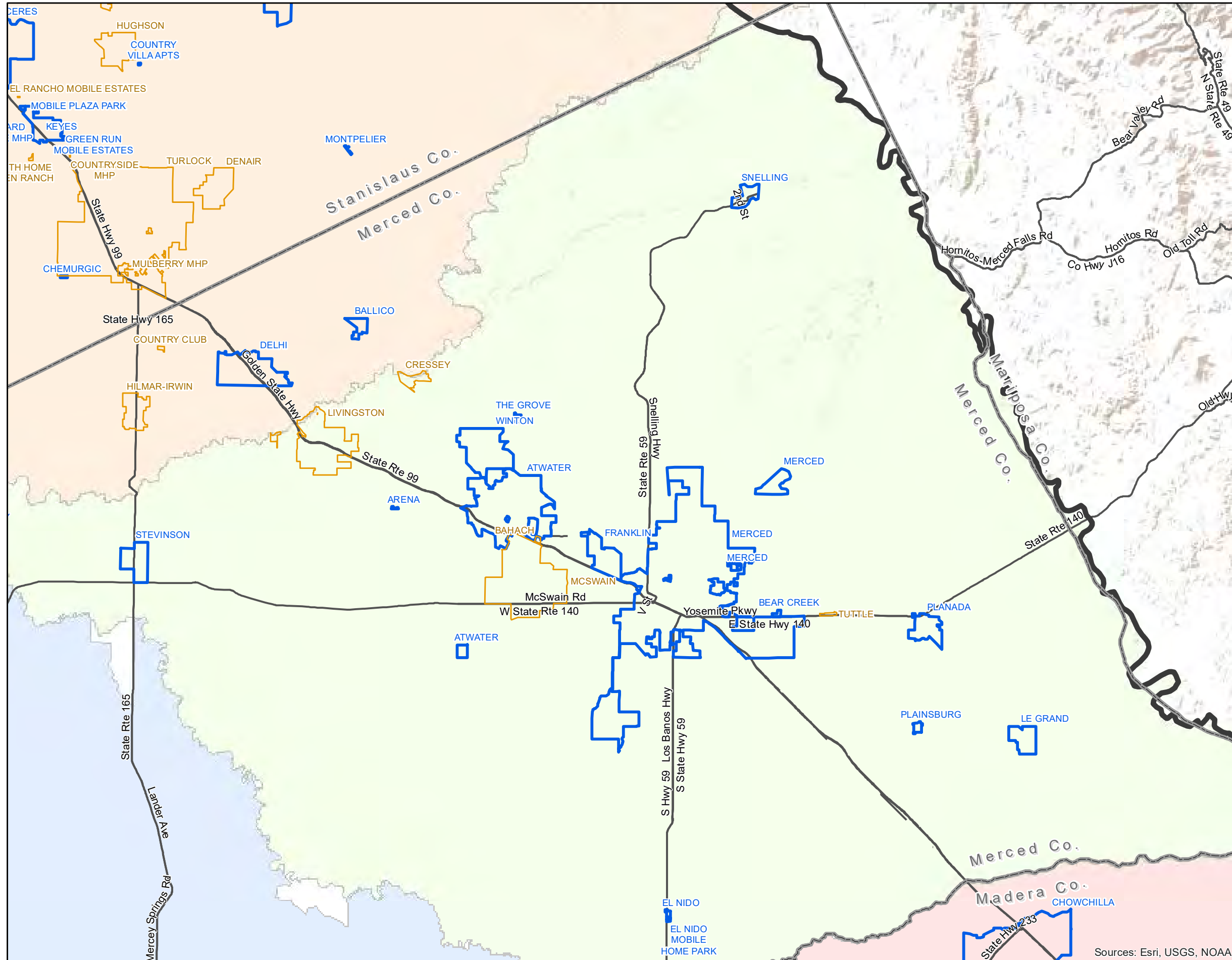
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Sources: Esri, USGS, NOAA

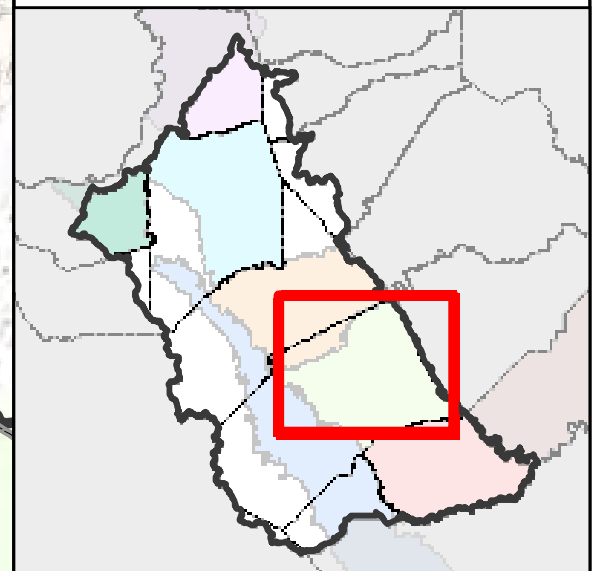


# San Joaquin River Funding Area Map Book

## Merced Disadvantaged Communities



- San Joaquin River Funding Area
  - Community (DAC or SDAC)
  - Community (Not Disadvantaged)
  - County
- IRWM Boundary**
- American River Basin
  - East Contra Costa County
  - East Stanislaus
  - Eastern San Joaquin
  - Madera
  - Merced
  - Westside - San Joaquin
  - Outside IRWM



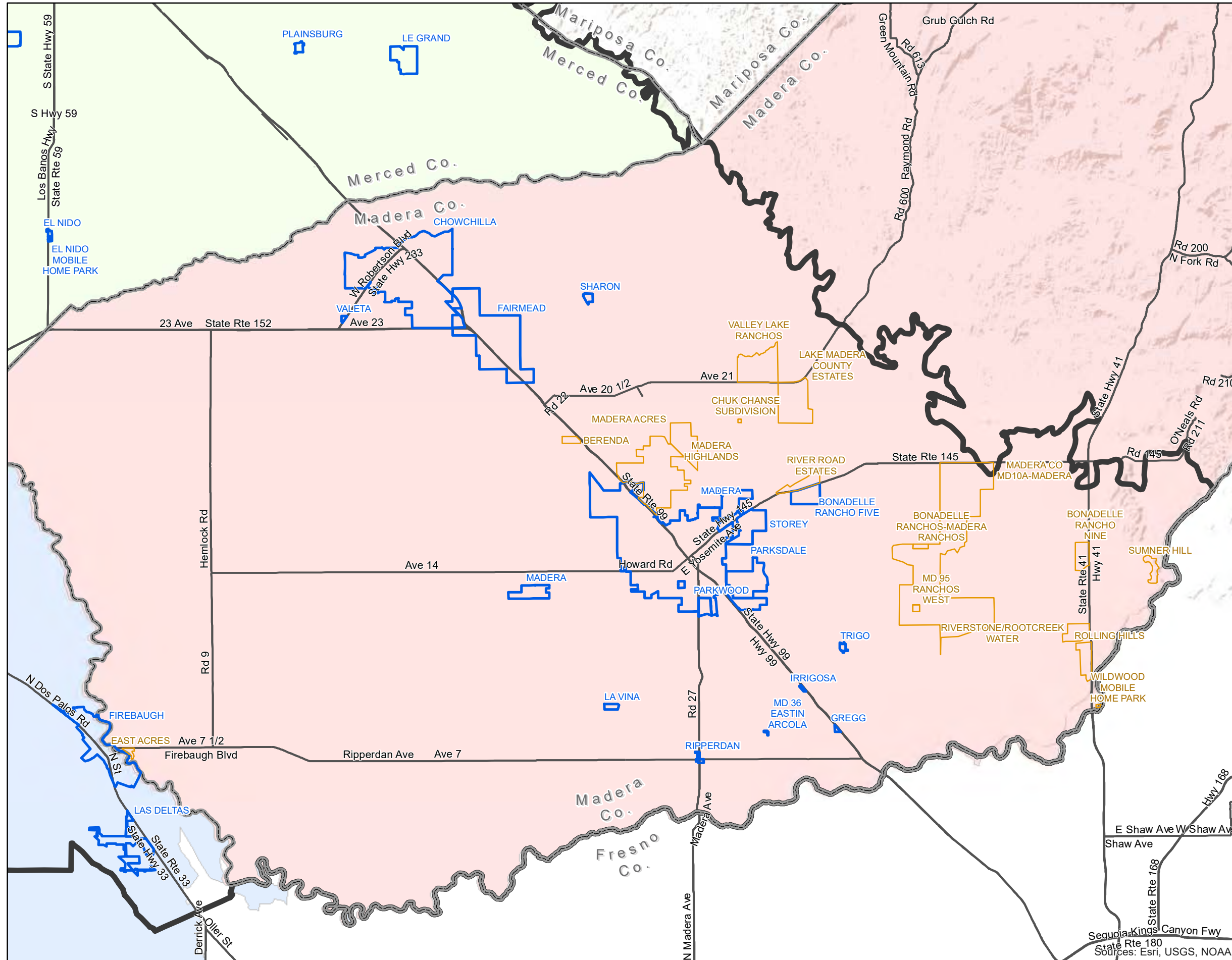
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4/5/2019 : G:\Woodard & Curran-2628\262818002-SJRFA DACIP\GIS\Map\Mapbooks\SJRFA\_Mapbook\_IRWMs.mxd

Sources: Esri, USGS, NOAA

# San Joaquin River Funding Area Map Book

## Madera Disadvantaged Communities

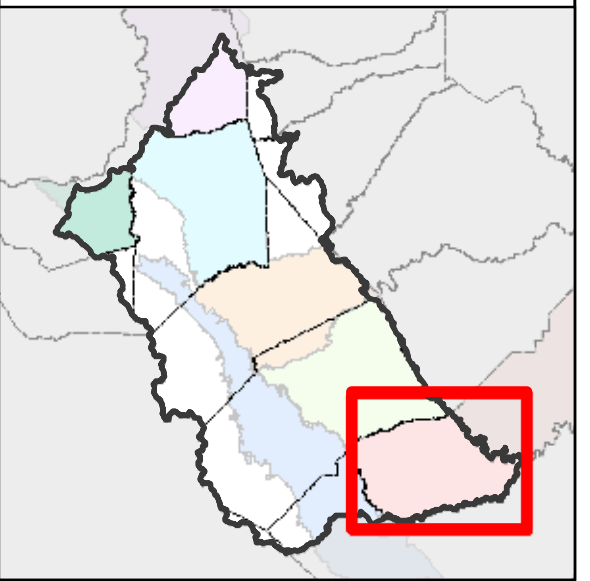


**Legend**

- San Joaquin River Funding Area
- Community (DAC or SDAC)
- Community (Not Disadvantaged)
- County

**IRWM Boundary**

- American River Basin
- East Contra Costa County
- East Stanislaus
- Eastern San Joaquin
- Madera
- Merced
- Westside - San Joaquin
- Outside IRWM



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





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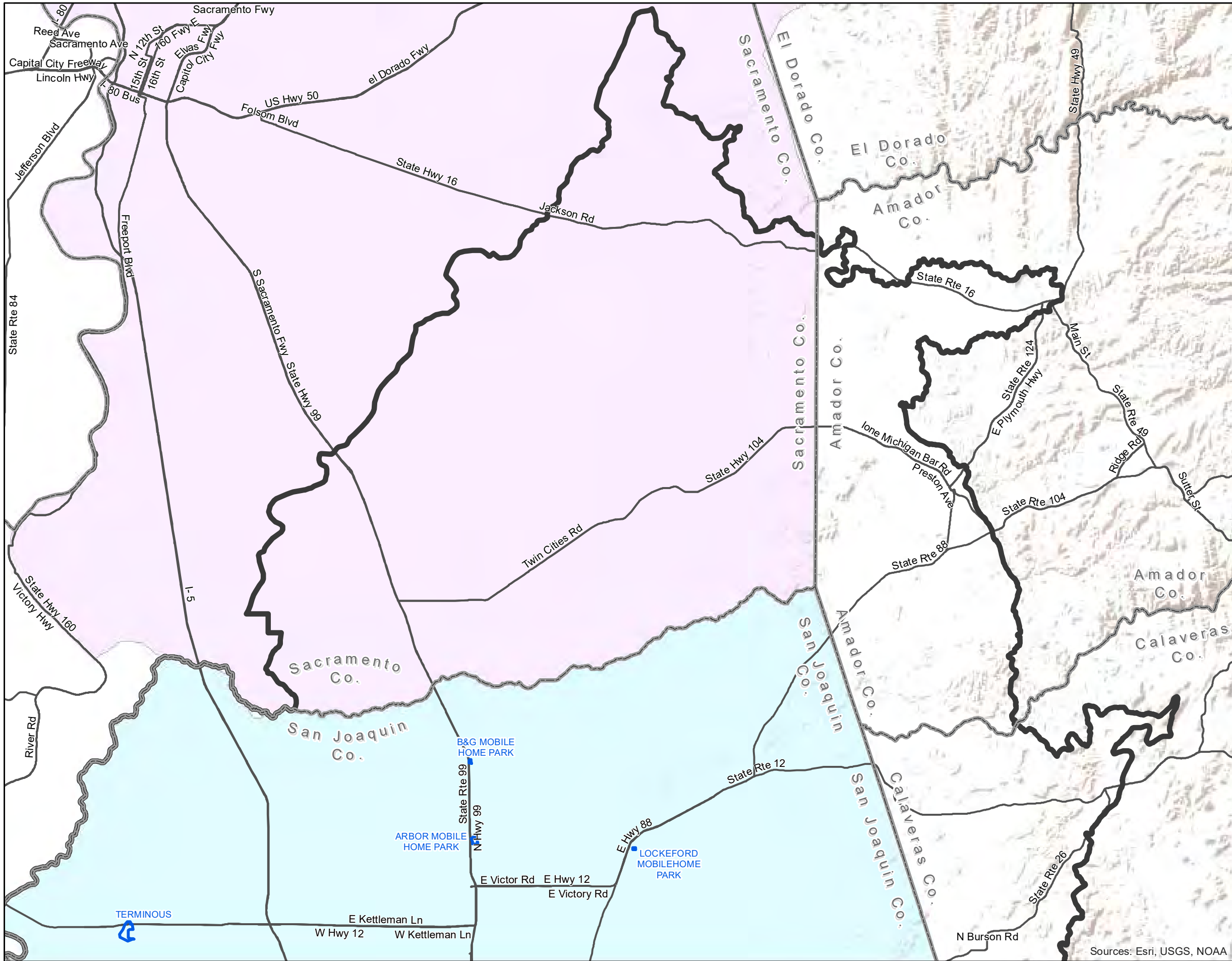
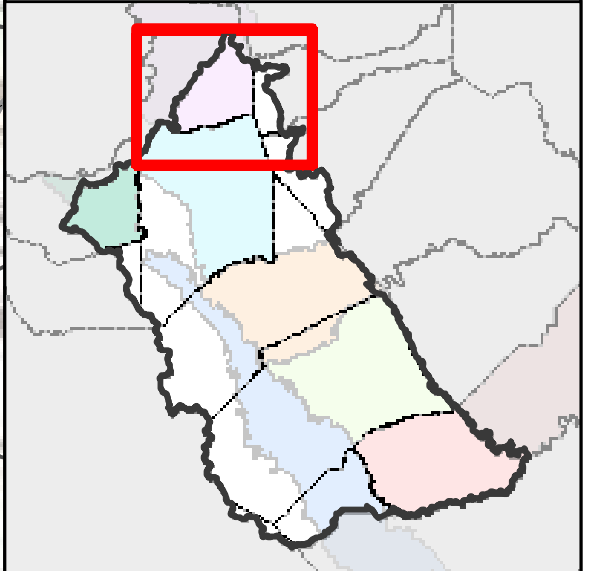
7/24/2019 : G:\Woodard & Curran-2628\262818002-SJRFA DACI\GIS\Map\Mapbooks\SJRFA\_SectionA\_Mapbook\_IRWMs.mxd

Sources: Esri, USGS, NOAA

# San Joaquin River Funding Area Map Book

## American River Basin Single Water Source

-  San Joaquin River Funding
-  Single Water Source Community (DAC or SDAC)
-  County
- IRWM Boundary**
-  American River Basin
-  East Contra Costa County
-  East Stanislaus
-  Eastern San Joaquin
-  Madera
-  Merced
-  Westside - San Joaquin
-  Outside IRWM



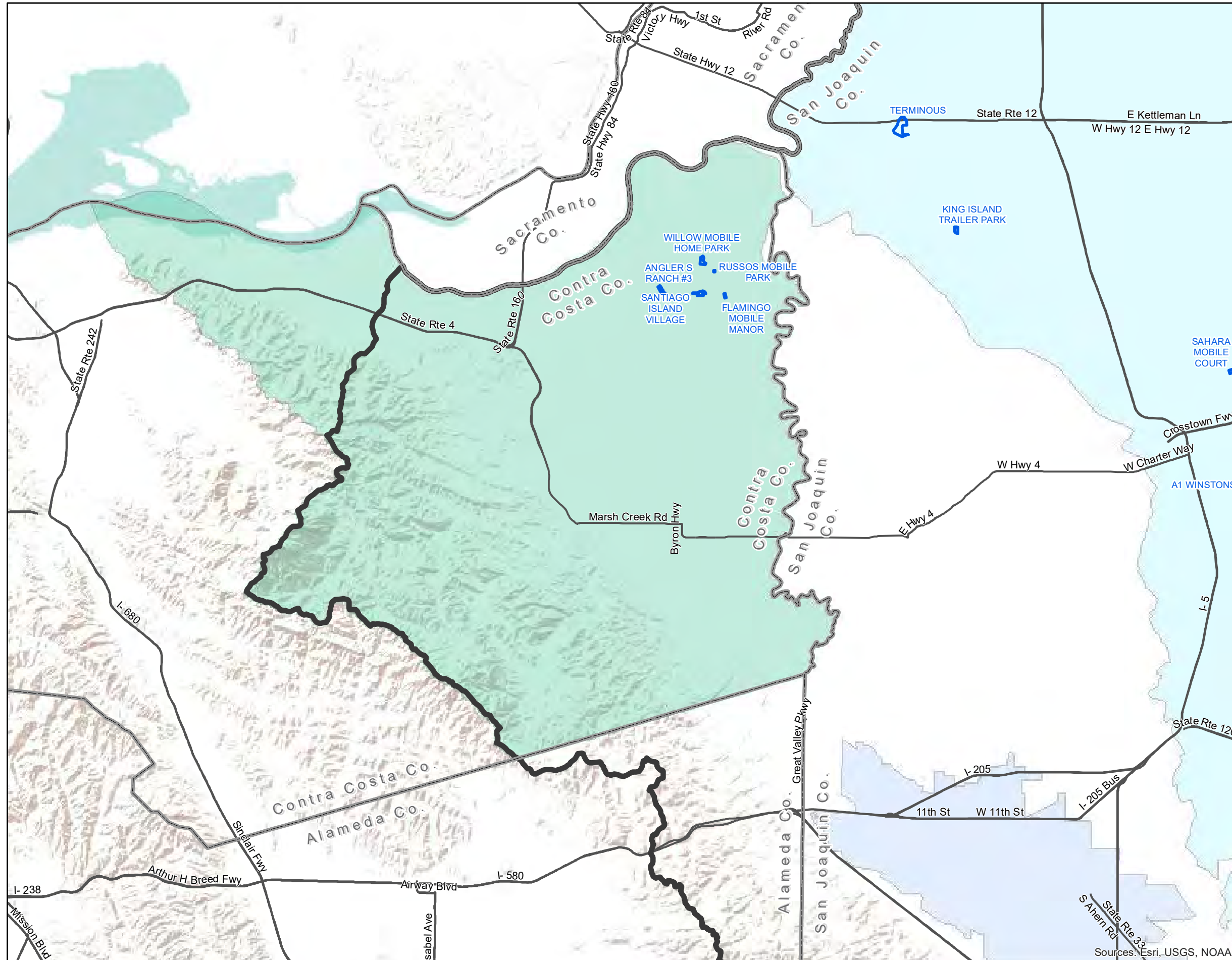
EST. 1969  
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 Miles

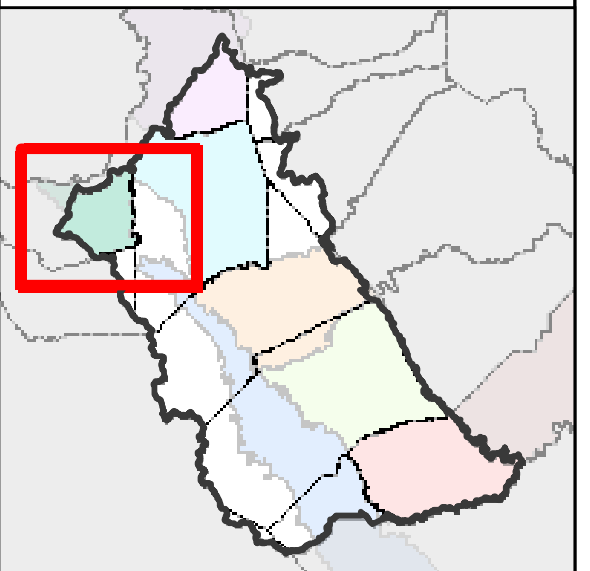
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Sources: Esri, USGS, NOAA

**San Joaquin River  
Funding Area Map Book**  
East Contra Costa County  
Single Water Source



- San Joaquin River Funding
- Single Water Source Community (DAC or SDAC)
- County
- IRWM Boundary**
- American River Basin
- East Contra Costa County
- East Stanislaus
- Eastern San Joaquin
- Madera
- Merced
- Westside - San Joaquin
- Outside IRWM



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



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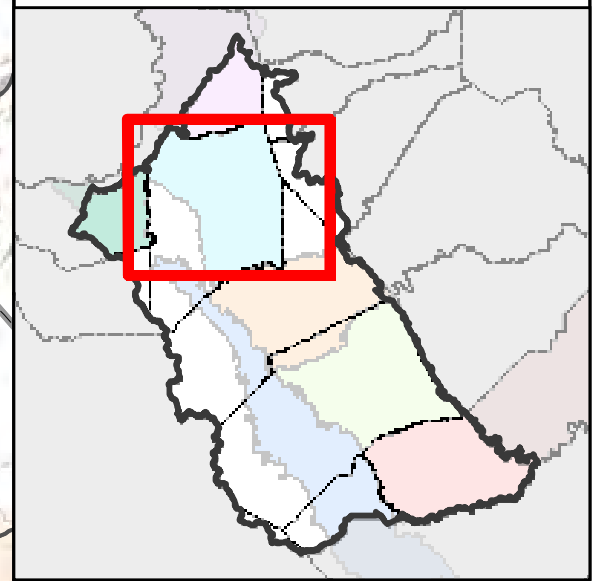
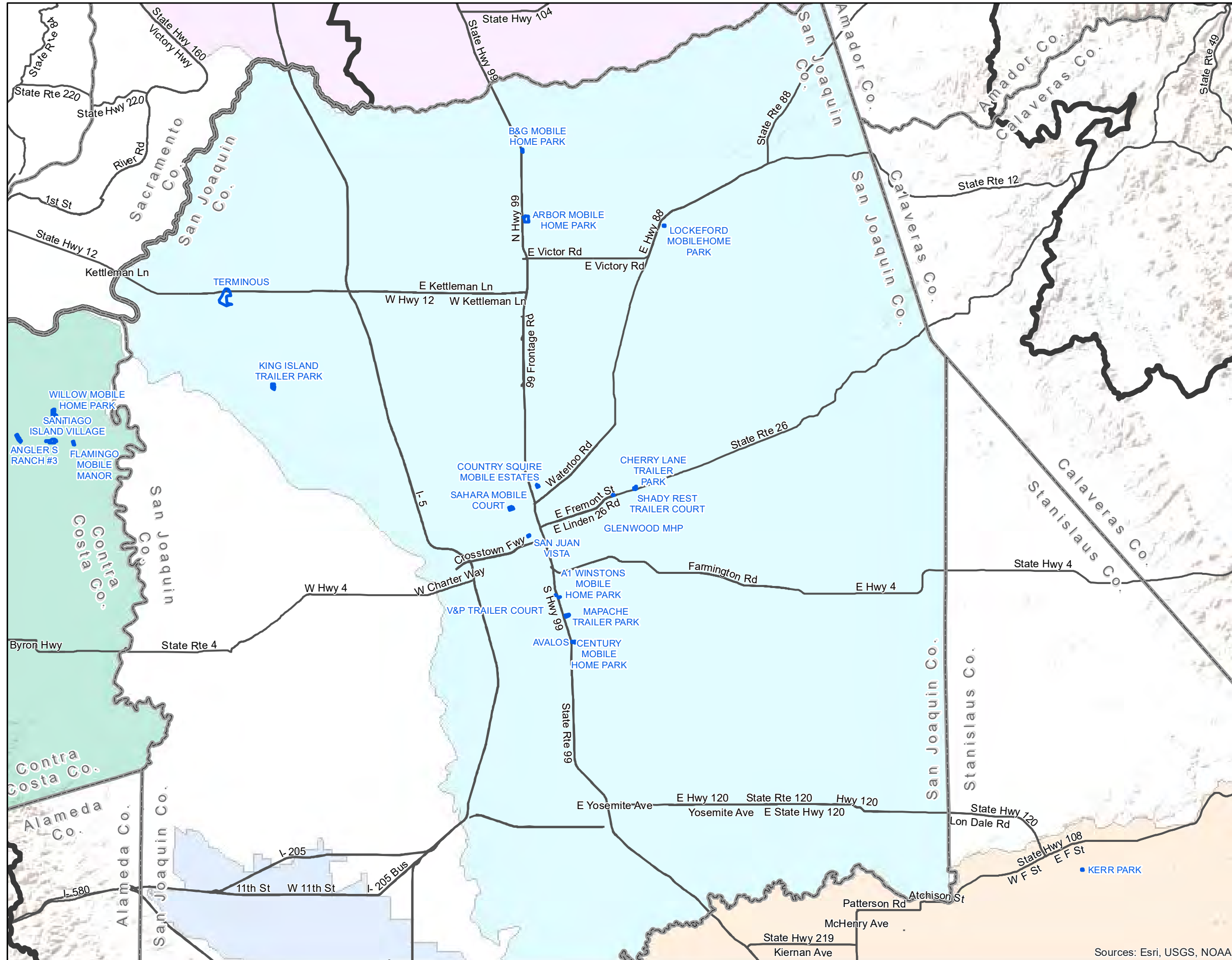
Sources: Esri, USGS, NOAA

# San Joaquin River Funding Area Map Book

## Eastern San Joaquin

### Single Water Source

-  San Joaquin River Funding
  -  Single Water Source Community (DAC or SDAC)
  -  County
- IRWM Boundary**
-  American River Basin
  -  East Contra Costa County
  -  East Stanislaus
  -  Eastern San Joaquin
  -  Madera
  -  Merced
  -  Westside - San Joaquin
  -  Outside IRWM



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
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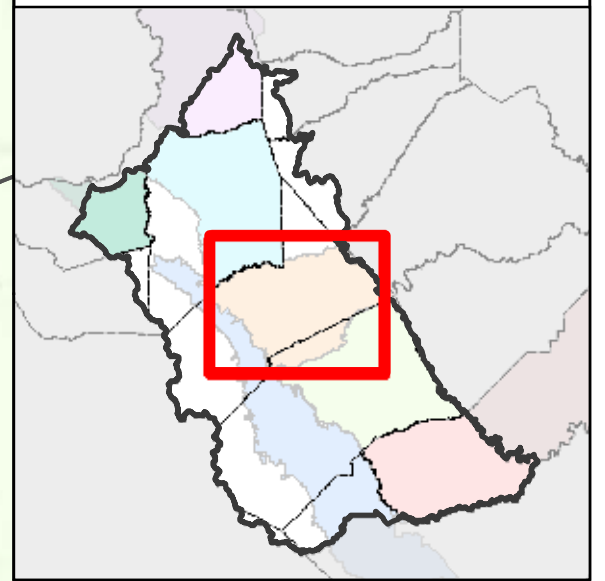
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Sources: Esri, USGS, NOAA

# San Joaquin River Funding Area Map Book

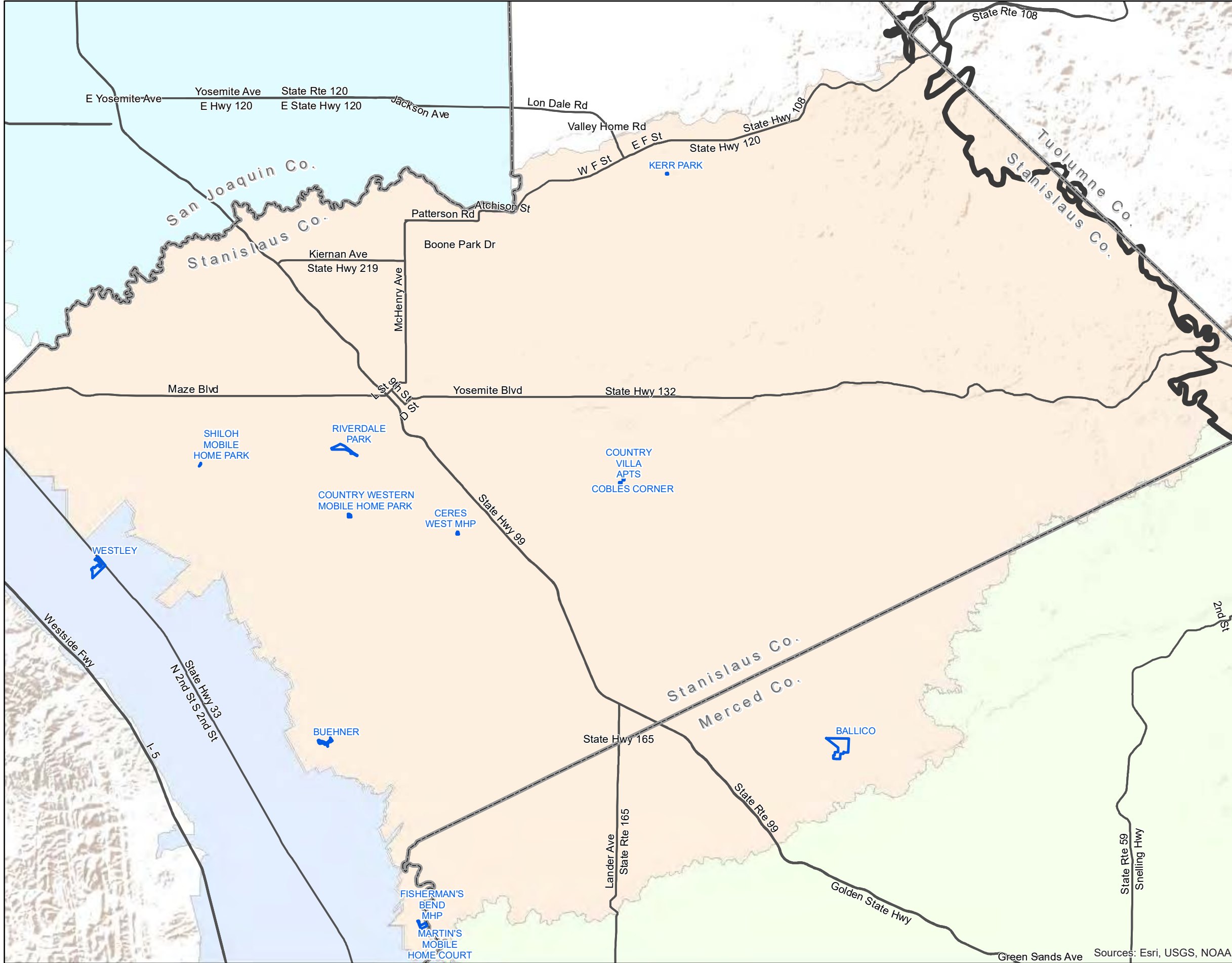
## East Stanislaus Single Water Source

-  San Joaquin River Funding Area
-  Single Water Source Community (DAC or SDAC)
-  County
- IRWM Boundary**
-  American River Basin
-  East Contra Costa County
-  East Stanislaus
-  Eastern San Joaquin
-  Madera
-  Merced
-  Westside - San Joaquin
-  Outside IRWM



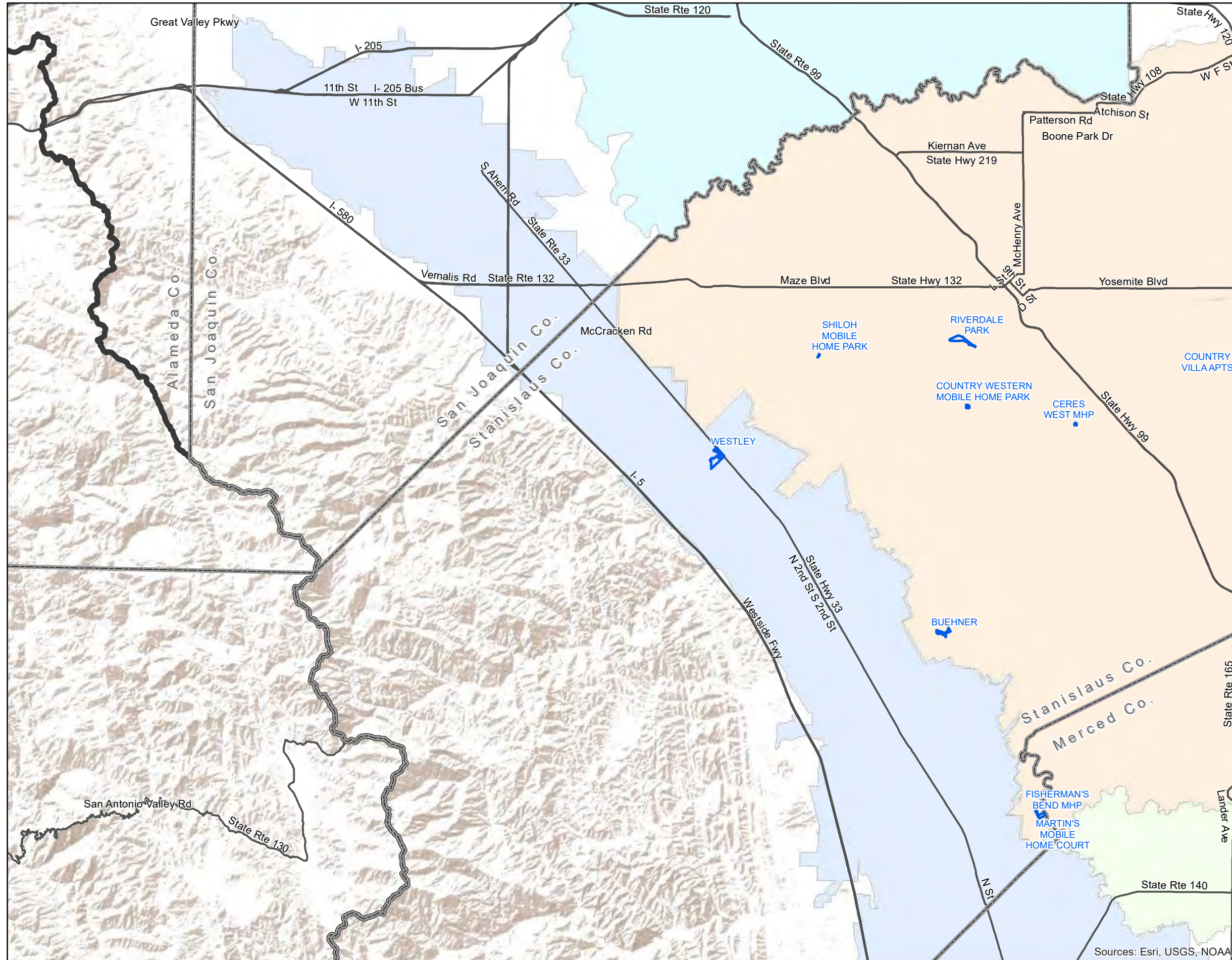
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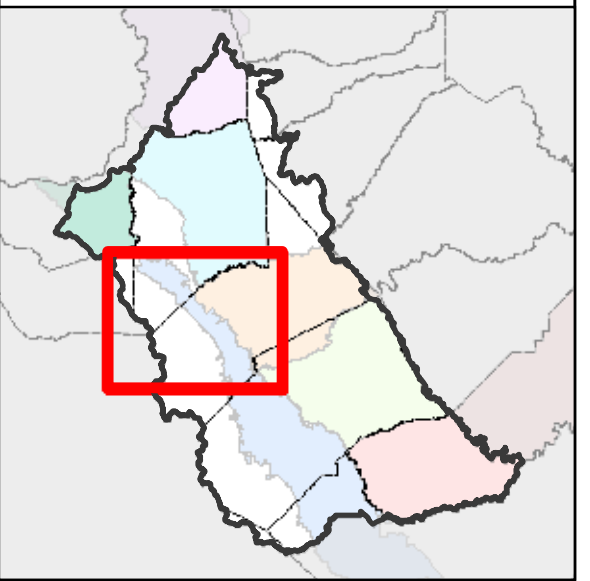



# San Joaquin River Funding Area Map Book

## Westside - San Joaquin North Single Water Source



- San Joaquin River Funding
- Single Water Source Community (DAC or SDAC)
- County
- IRWM Boundary**
- American River Basin
- East Contra Costa County
- East Stanislaus
- Eastern San Joaquin
- Madera
- Merced
- Westside - San Joaquin
- Outside IRWM



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



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 Miles

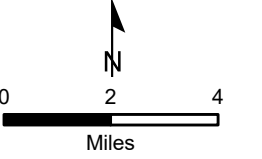
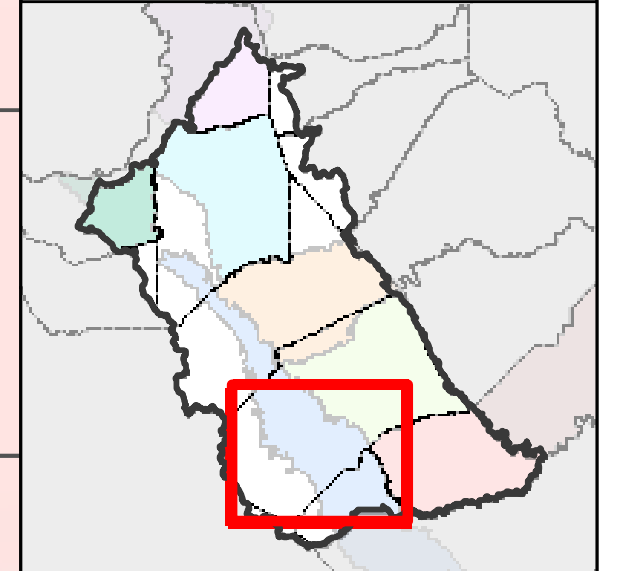
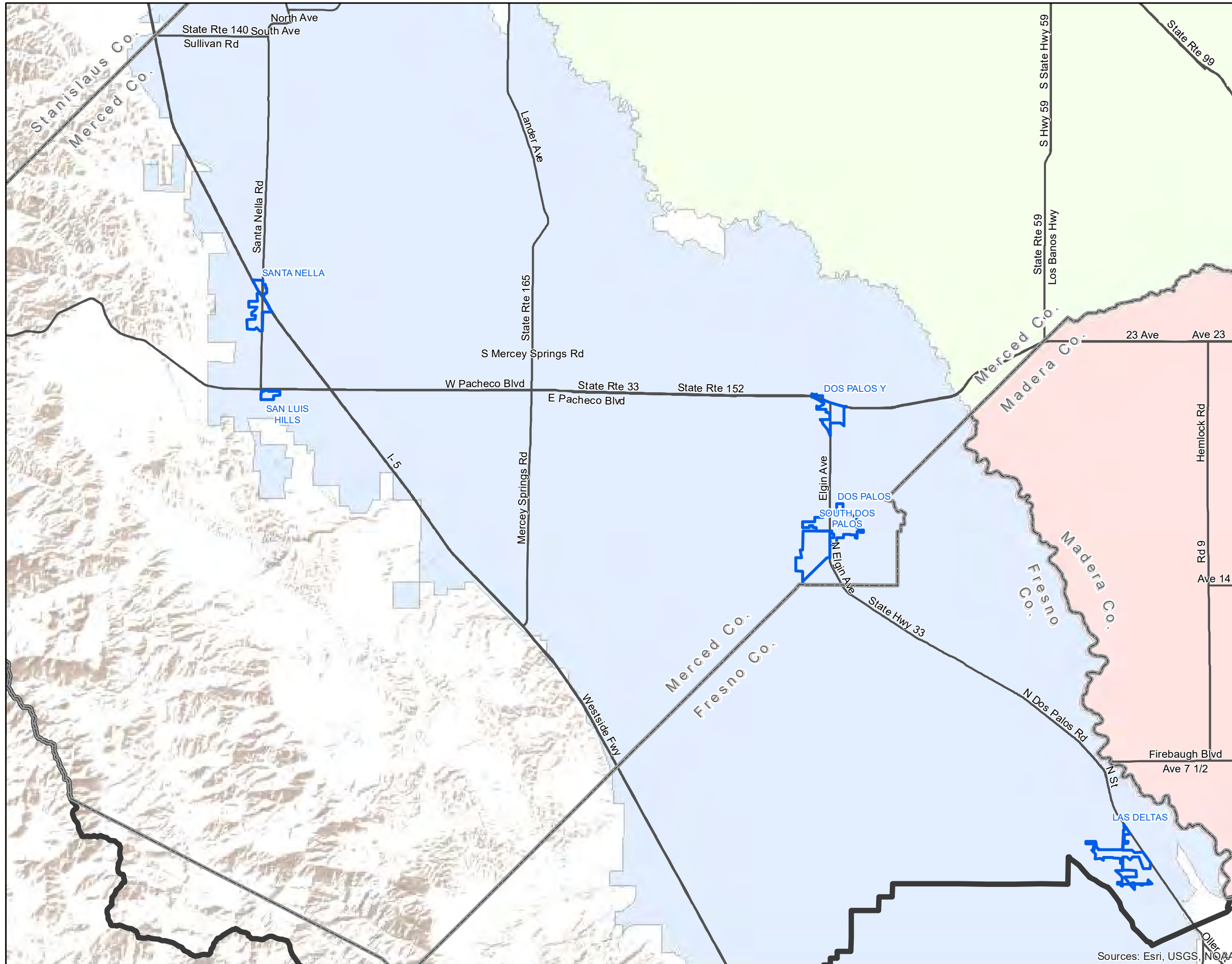
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Sources: Esri, USGS, NOAA

# San Joaquin River Funding Area Map Book

## Westside - San Joaquin South Single Water Source

-  San Joaquin River Funding
-  Single Water Source Community (DAC or SDAC)
-  County
- IRWM Boundary**
-  American River Basin
-  East Contra Costa County
-  East Stanislaus
-  Eastern San Joaquin
-  Madera
-  Merced
-  Westside - San Joaquin
-  Outside IRWM














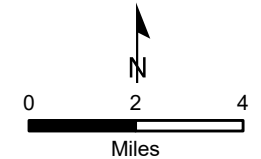
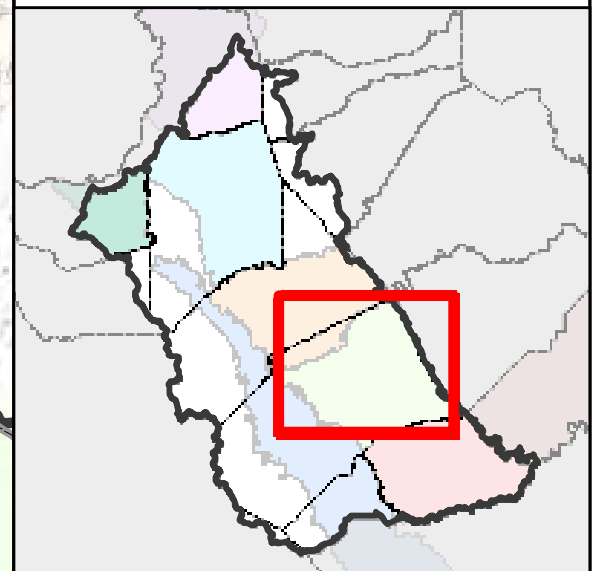
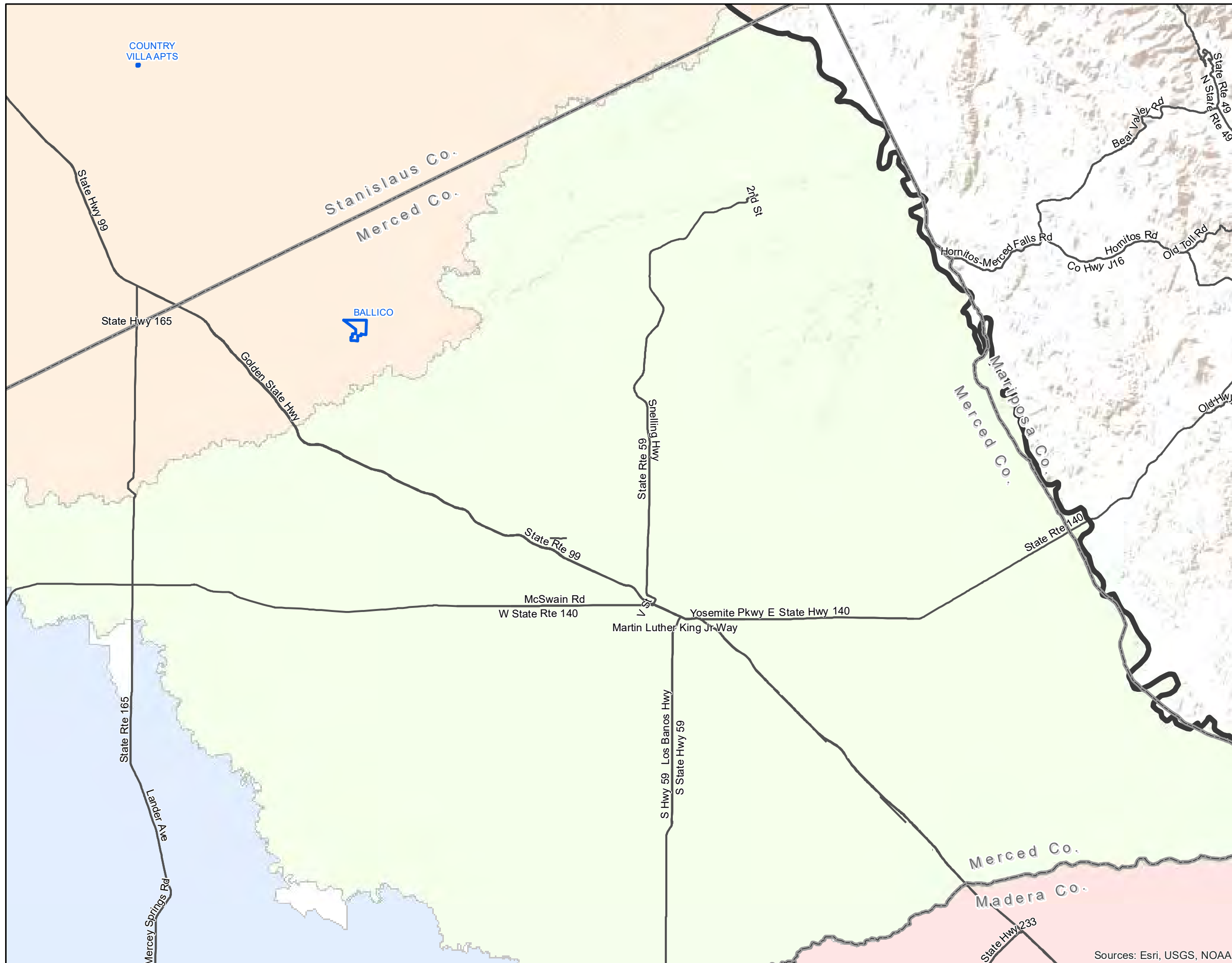
Sources: Esri, USGS, NOAA



# San Joaquin River Funding Area Map Book

## Merced Single Water Source

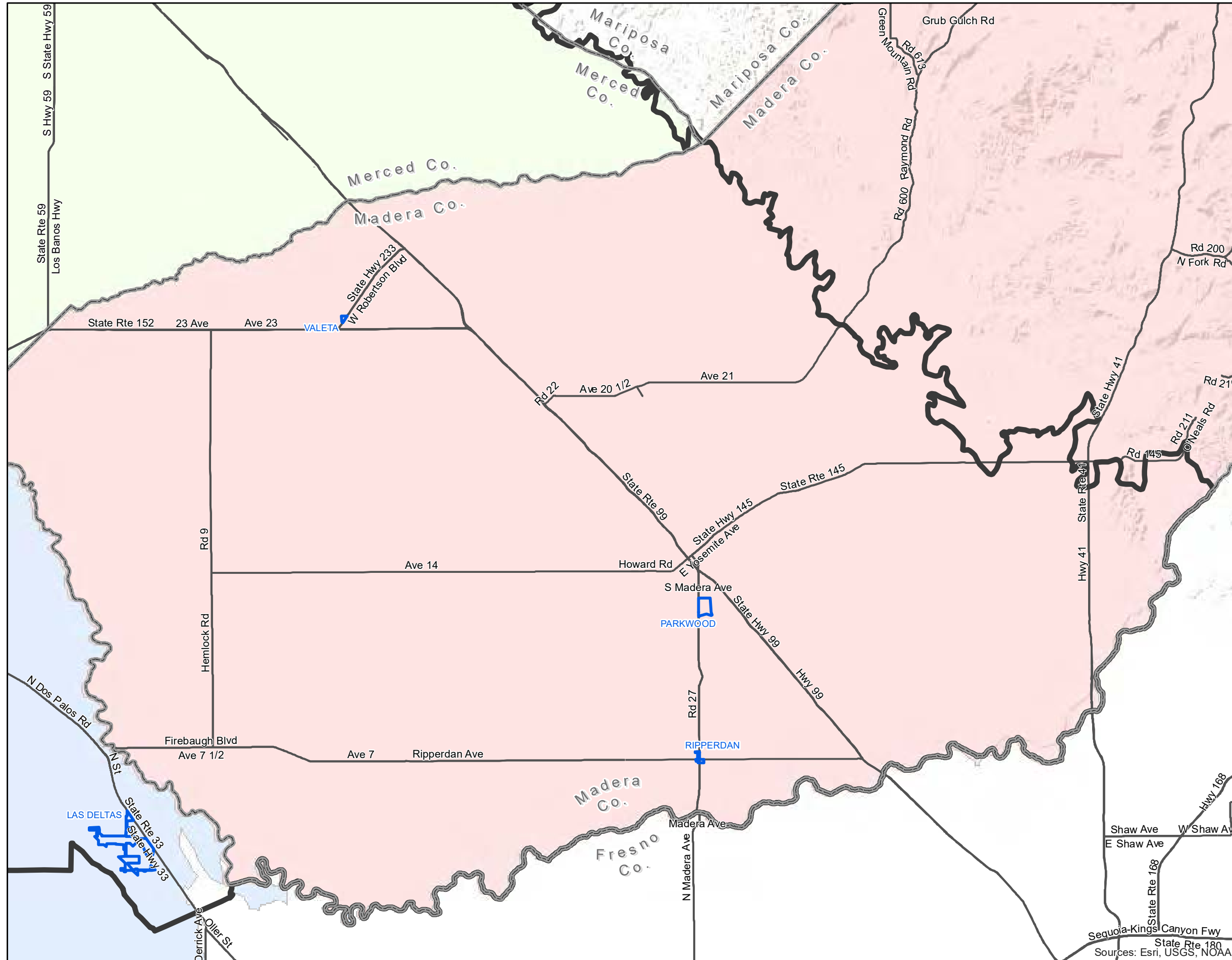
-  San Joaquin River Funding
-  Single Water Source Community (DAC or SDAC)
-  County
- IRWM Boundary**
-  American River Basin
-  East Contra Costa County
-  East Stanislaus
-  Eastern San Joaquin
-  Madera
-  Merced
-  Westside - San Joaquin
-  Outside IRWM



Sources: Esri, USGS, NOAA

# San Joaquin River Funding Area Map Book

## Madera Single Water Source

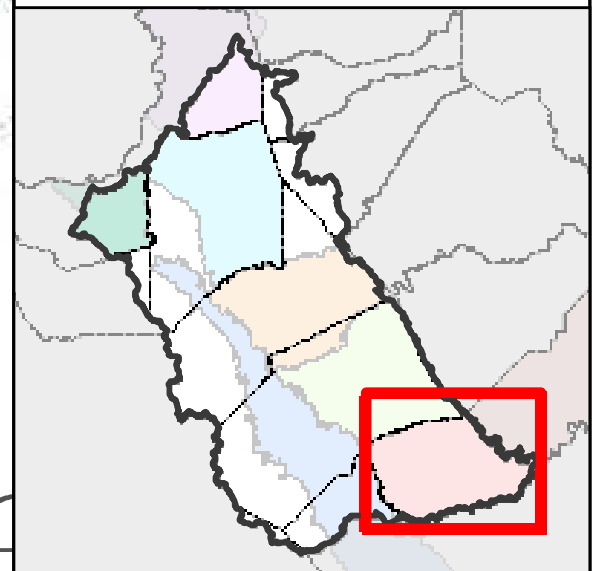


**Legend**

- San Joaquin River Funding
- Single Water Source Community (DAC or SDAC)
- County

**IRWM Boundary**

- American River Basin
- East Contra Costa County
- East Stanislaus
- Eastern San Joaquin
- Madera
- Merced
- Westside - San Joaquin
- Outside IRWM



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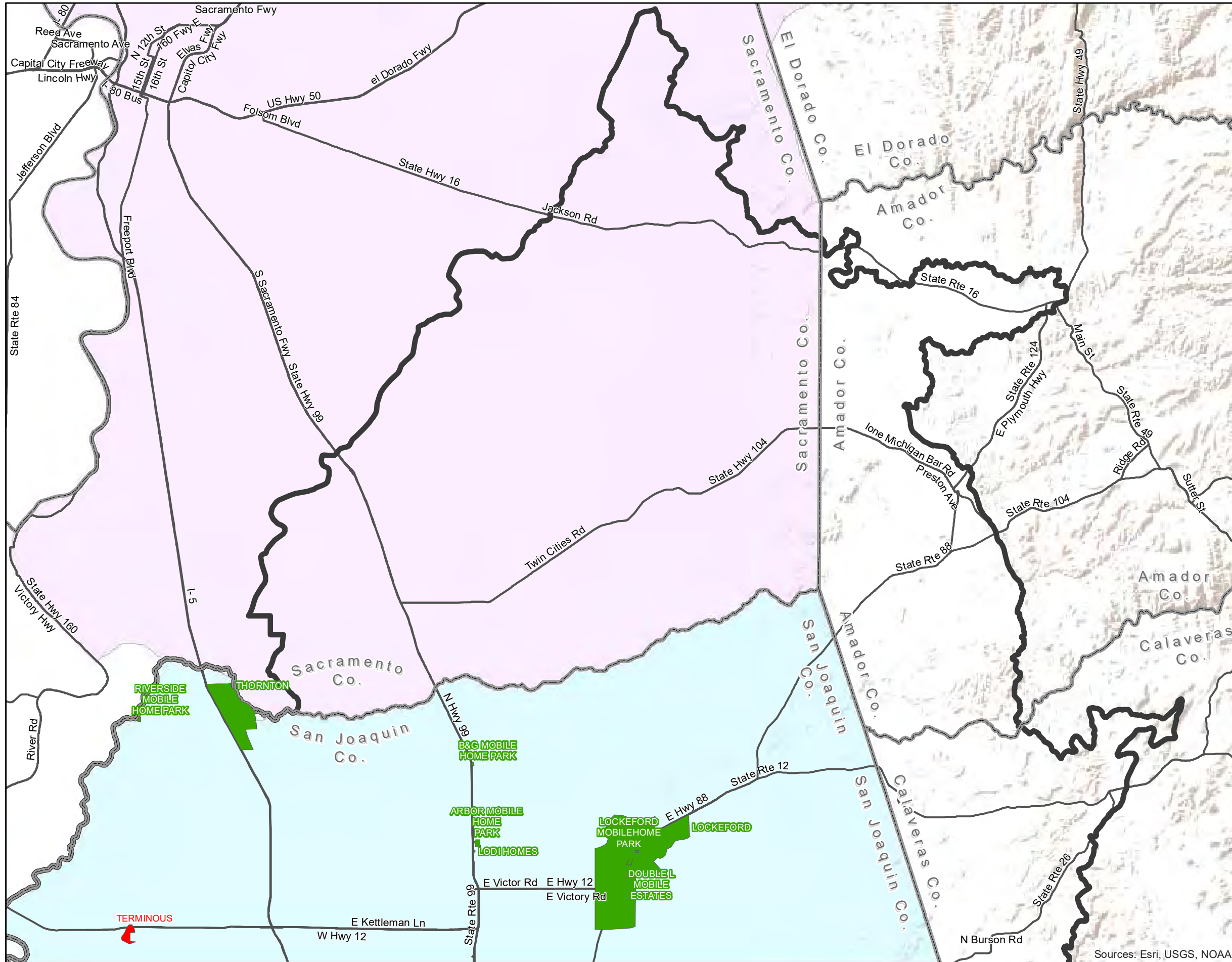
North arrow pointing up.

4/4/2019 : G:\Woodard & Curran-2628\262818002-SJRFA DACIP\GIS\Map\Mapbooks\SJRFA\_Mapbook\_SingleWaterSource.mxd

Sources: Esri, USGS, NOAA

# San Joaquin River Funding Area Map Book

## American River Basin Water Quality Compliance



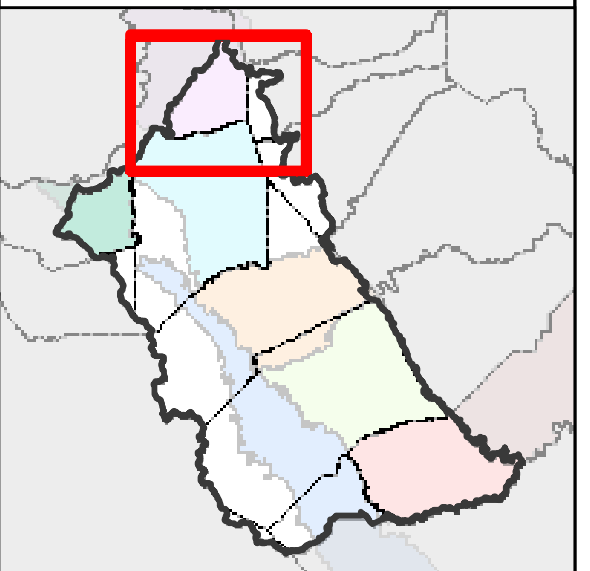
**San Joaquin River Funding Area**

**Water Quality Compliance Status**

- IN COMPLIANCE
- RETURNED TO COMPLIANCE
- OUT-OF-COMPLIANCE

**IRWM Boundary**

- American River Basin
- East Contra Costa County
- East Stanislaus
- Eastern San Joaquin
- Madera
- Merced
- Westside - San Joaquin
- Outside IRWM

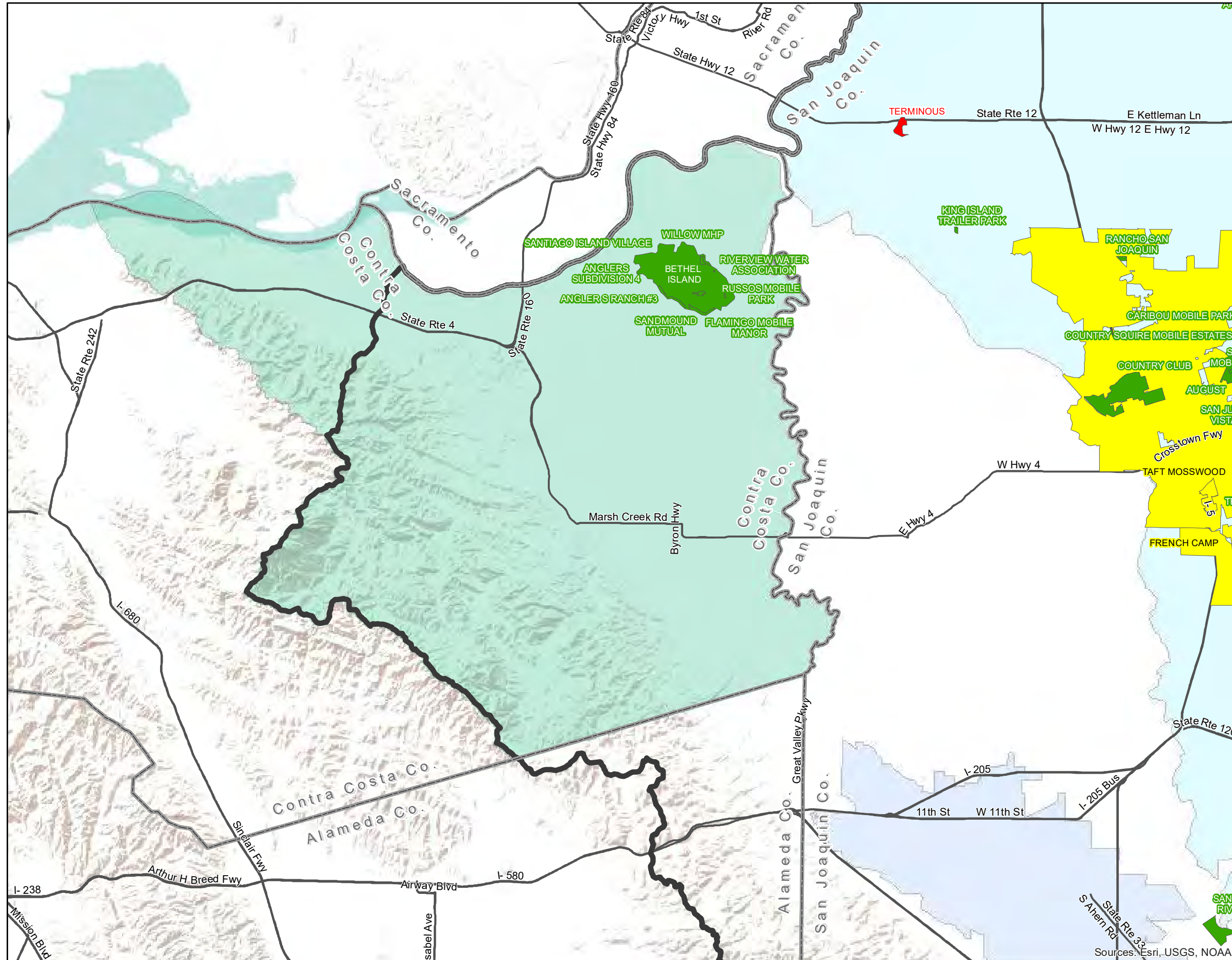


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# San Joaquin River Funding Area Map Book

## East Contra Costa County Water Quality Compliance



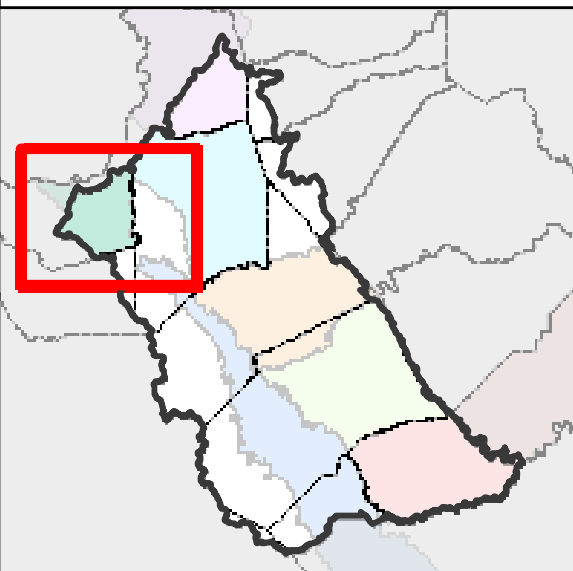
**San Joaquin River Funding Area**

**Water Quality Compliance Status**

- IN COMPLIANCE
- RETURNED TO COMPLIANCE
- OUT-OF-COMPLIANCE

**IRWM Boundary**

- American River Basin
- East Contra Costa County
- East Stanislaus
- Eastern San Joaquin
- Madera
- Merced
- Westside - San Joaquin
- Outside IRWM



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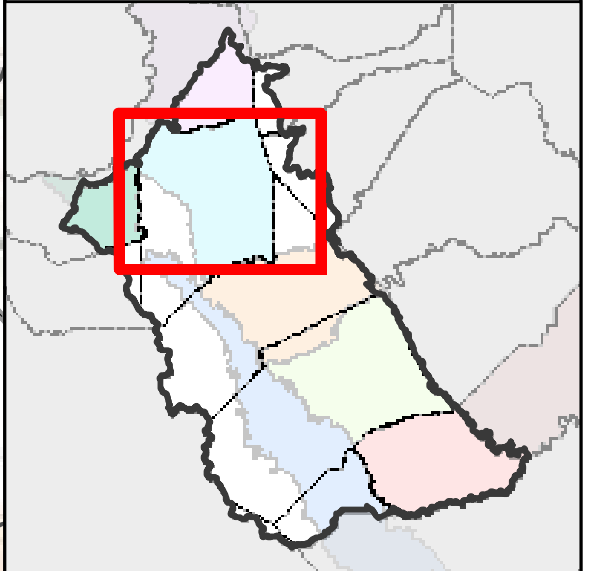
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Sources: Esri, USGS, NOAA

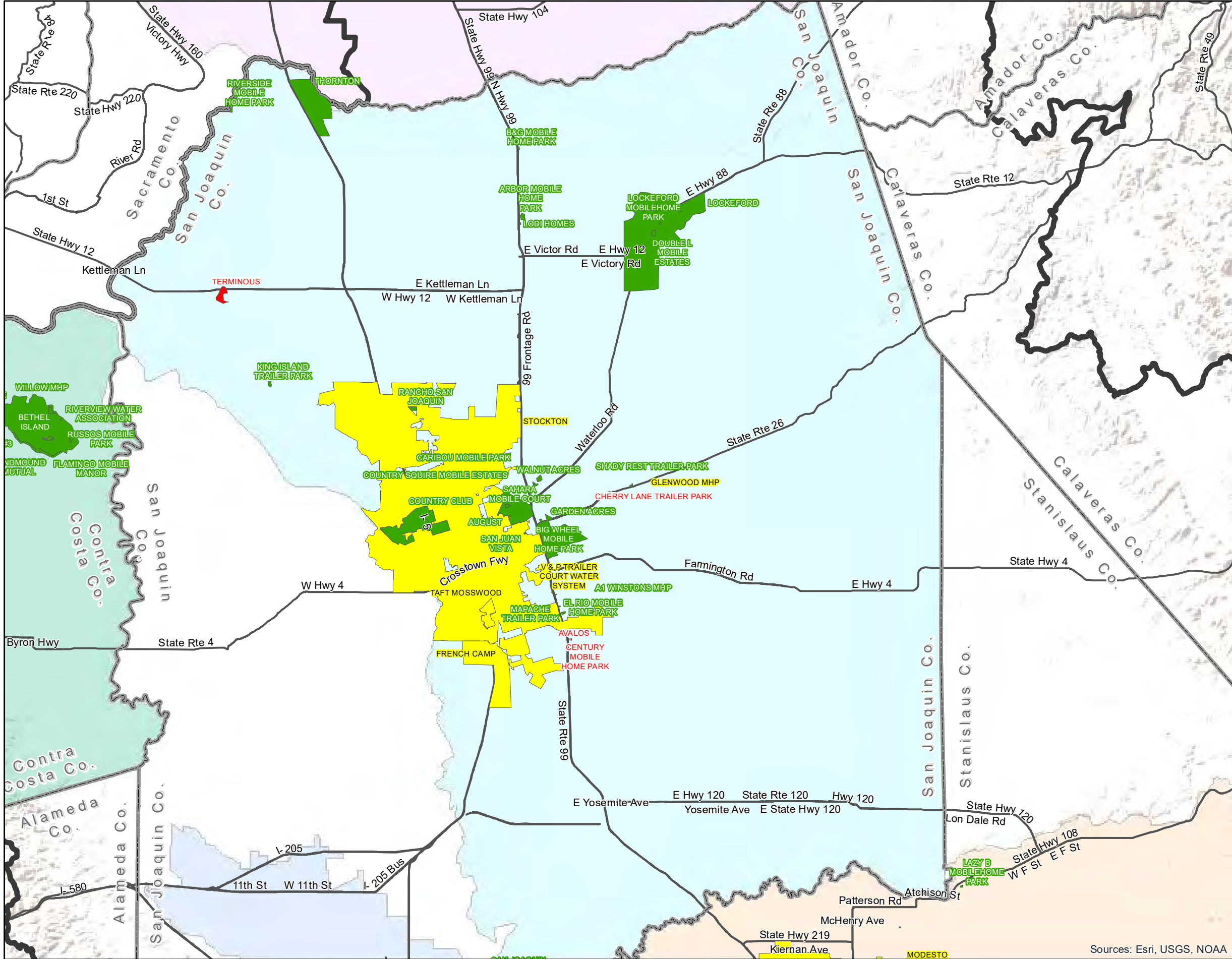
# San Joaquin River Funding Area Map Book

## Eastern San Joaquin Water Quality Compliance

- San Joaquin River Funding Area
- Water Quality Compliance Status**
- IN COMPLIANCE
- RETURNED TO COMPLIANCE
- OUT-OF-COMPLIANCE
- IRWM Boundary**
- American River Basin
- East Contra Costa County
- East Stanislaus
- Eastern San Joaquin
- Madera
- Merced
- Westside - San Joaquin
- Outside IRWM



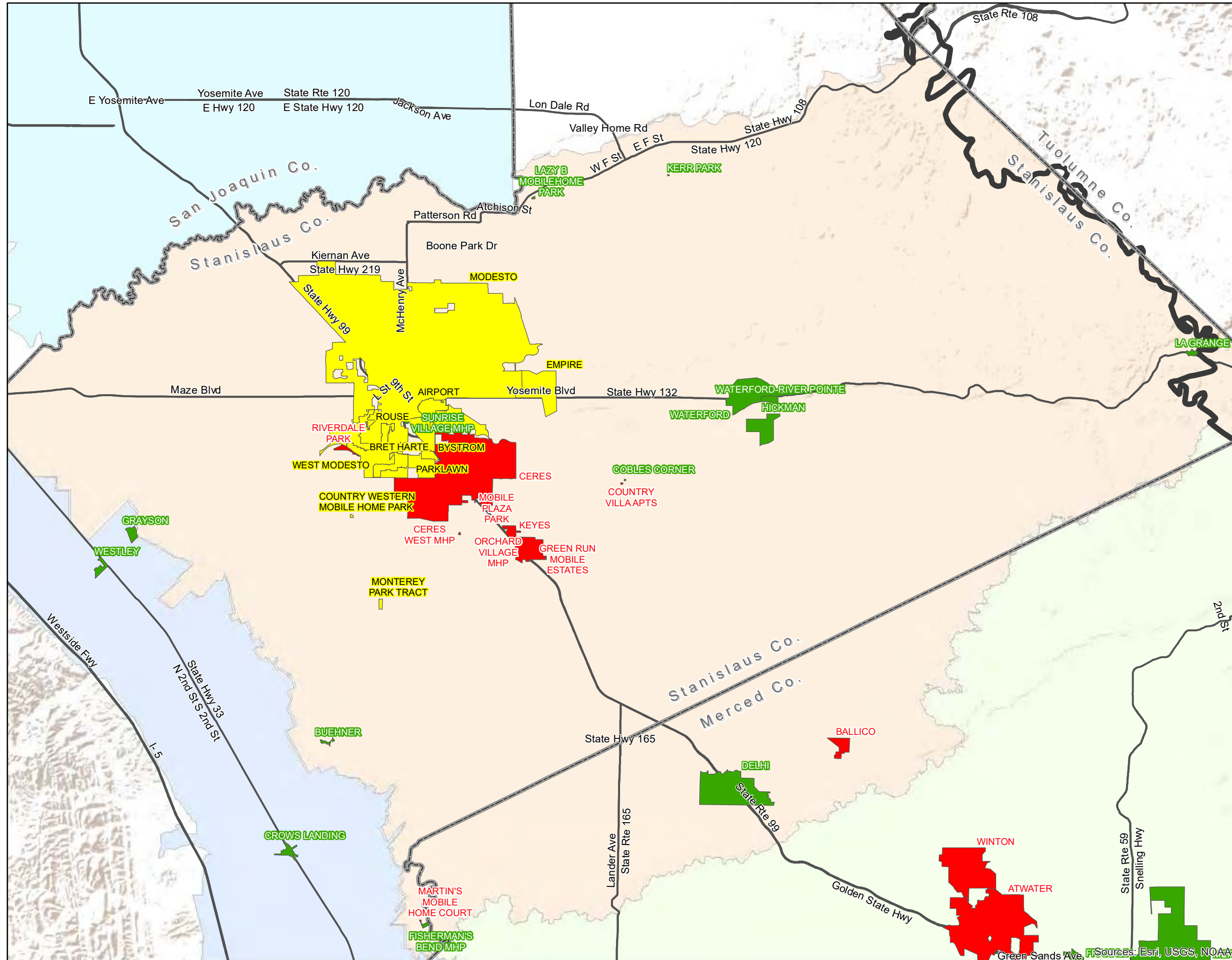
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Sources: Esri, USGS, NOAA

# San Joaquin River Funding Area Map Book

## East Stanislaus Water Quality Compliance



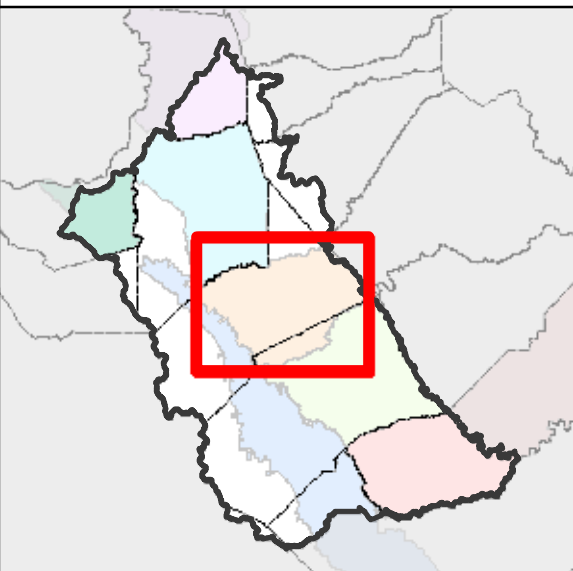
**San Joaquin River Funding Area**

**Water Quality Compliance Status**

- IN COMPLIANCE
- RETURNED TO COMPLIANCE
- OUT-OF-COMPLIANCE

**IRWM Boundary**

- American River Basin
- East Contra Costa County
- East Stanislaus
- Eastern San Joaquin
- Madera
- Merced
- Westside - San Joaquin
- Outside IRWM



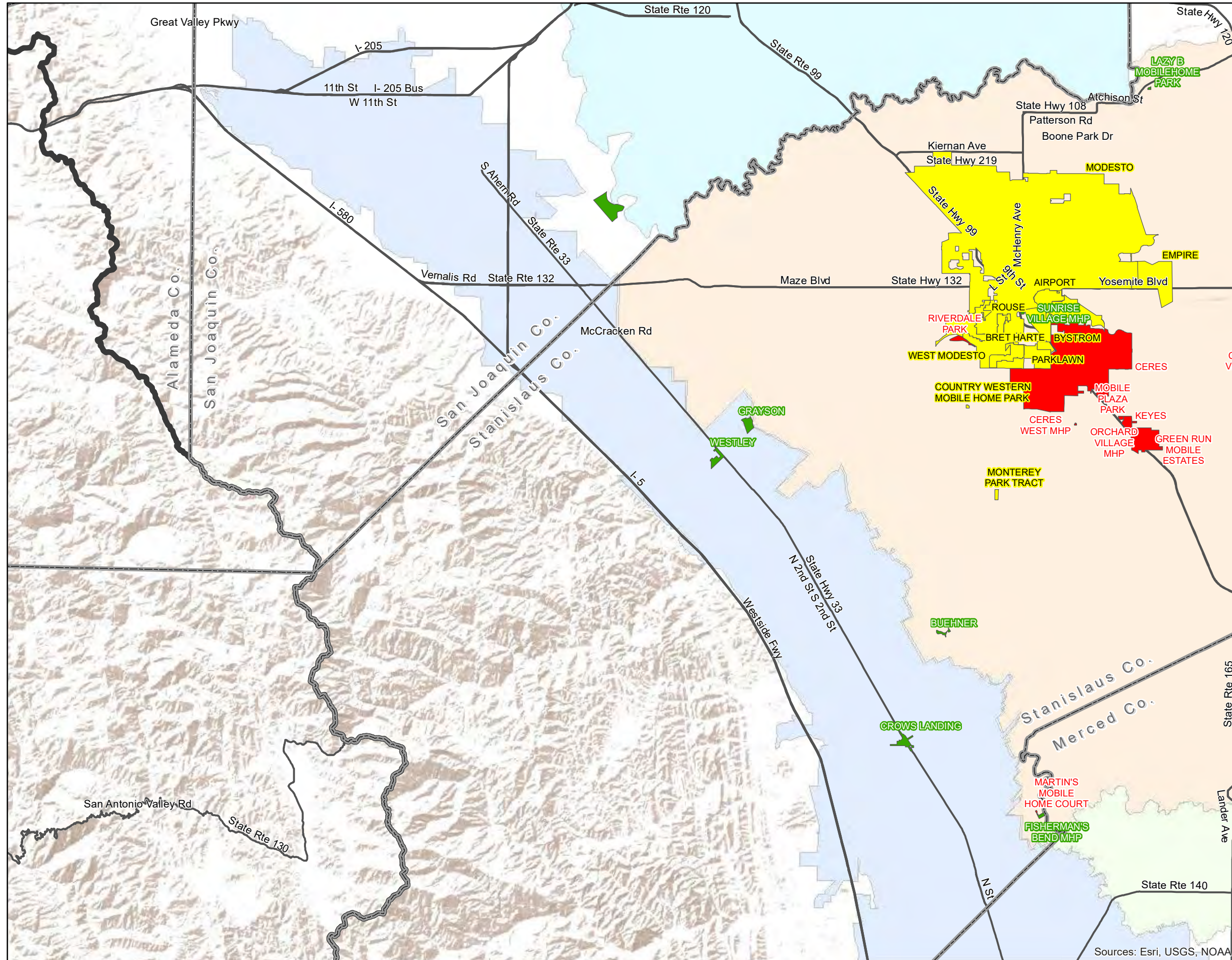
EST. 1968  
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# San Joaquin River Funding Area Map Book

## Westside - San Joaquin North Water Quality Compliance



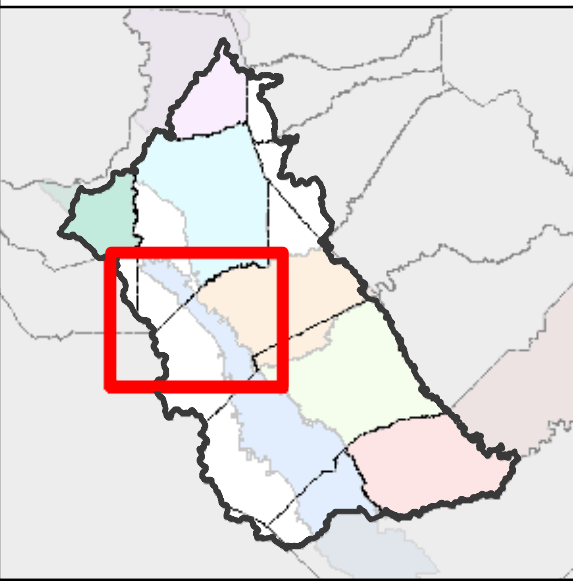
**San Joaquin River Funding Area**

**Water Quality Compliance Status**

- IN COMPLIANCE
- RETURNED TO COMPLIANCE
- OUT-OF-COMPLIANCE

**IRWM Boundary**

- American River Basin
- East Contra Costa County
- East Stanislaus
- Eastern San Joaquin
- Madera
- Merced
- Westside - San Joaquin
- Outside IRWM



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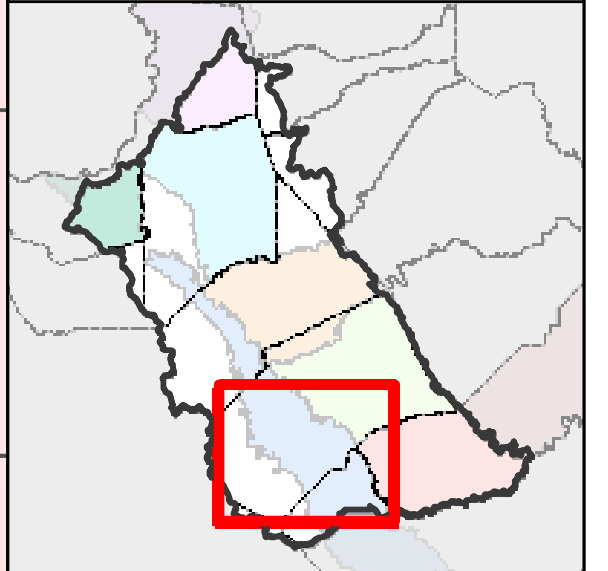
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Sources: Esri, USGS, NOAA

# San Joaquin River Funding Area Map Book

## Westside - San Joaquin South Water Quality Compliance

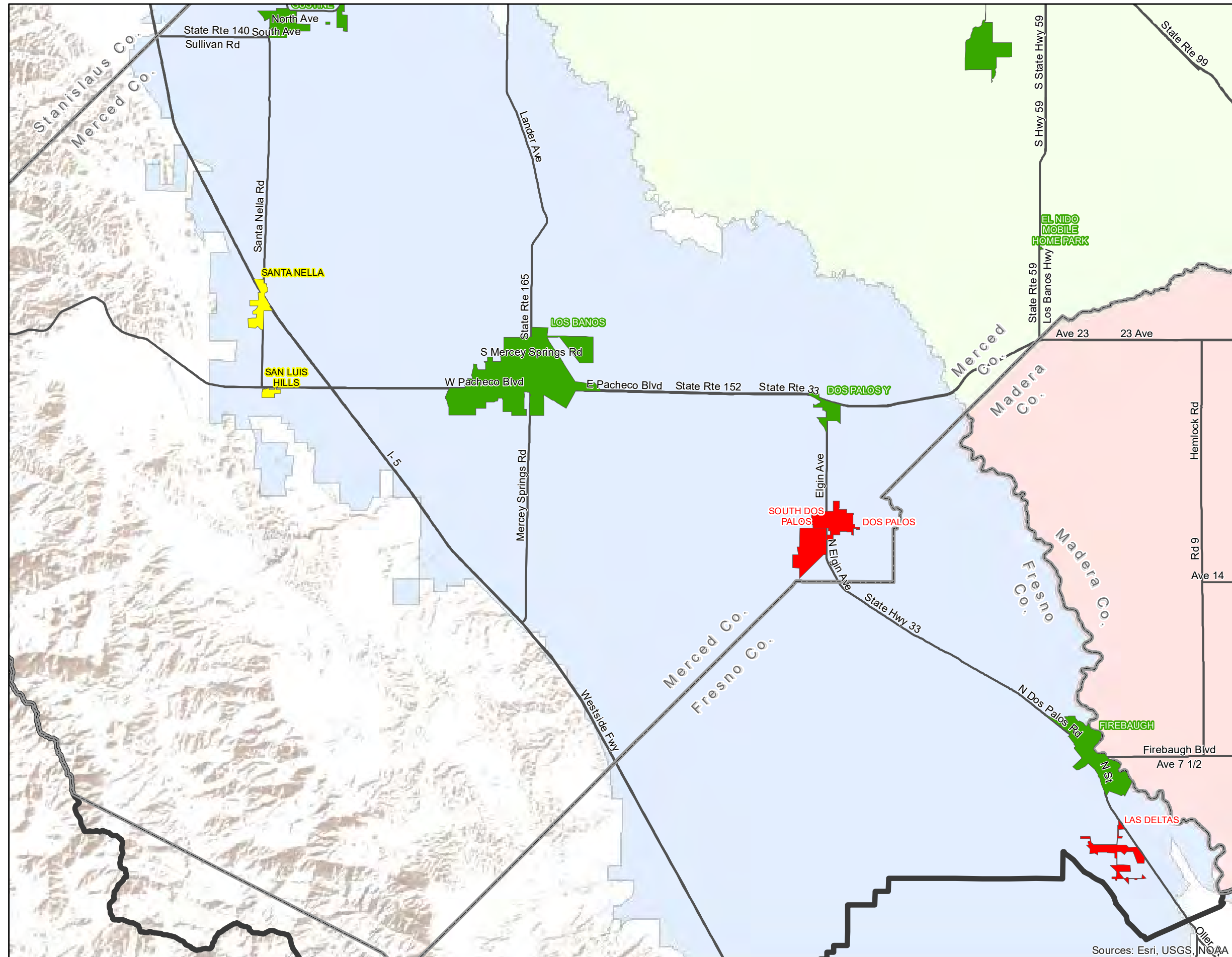
-  San Joaquin River Funding Area
- Water Quality Compliance Status**
-  IN COMPLIANCE
-  RETURNED TO COMPLIANCE
-  OUT-OF-COMPLIANCE
- IRWM Boundary**
-  American River Basin
-  East Contra Costa County
-  East Stanislaus
-  Eastern San Joaquin
-  Madera
-  Merced
-  Westside - San Joaquin
-  Outside IRWM



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










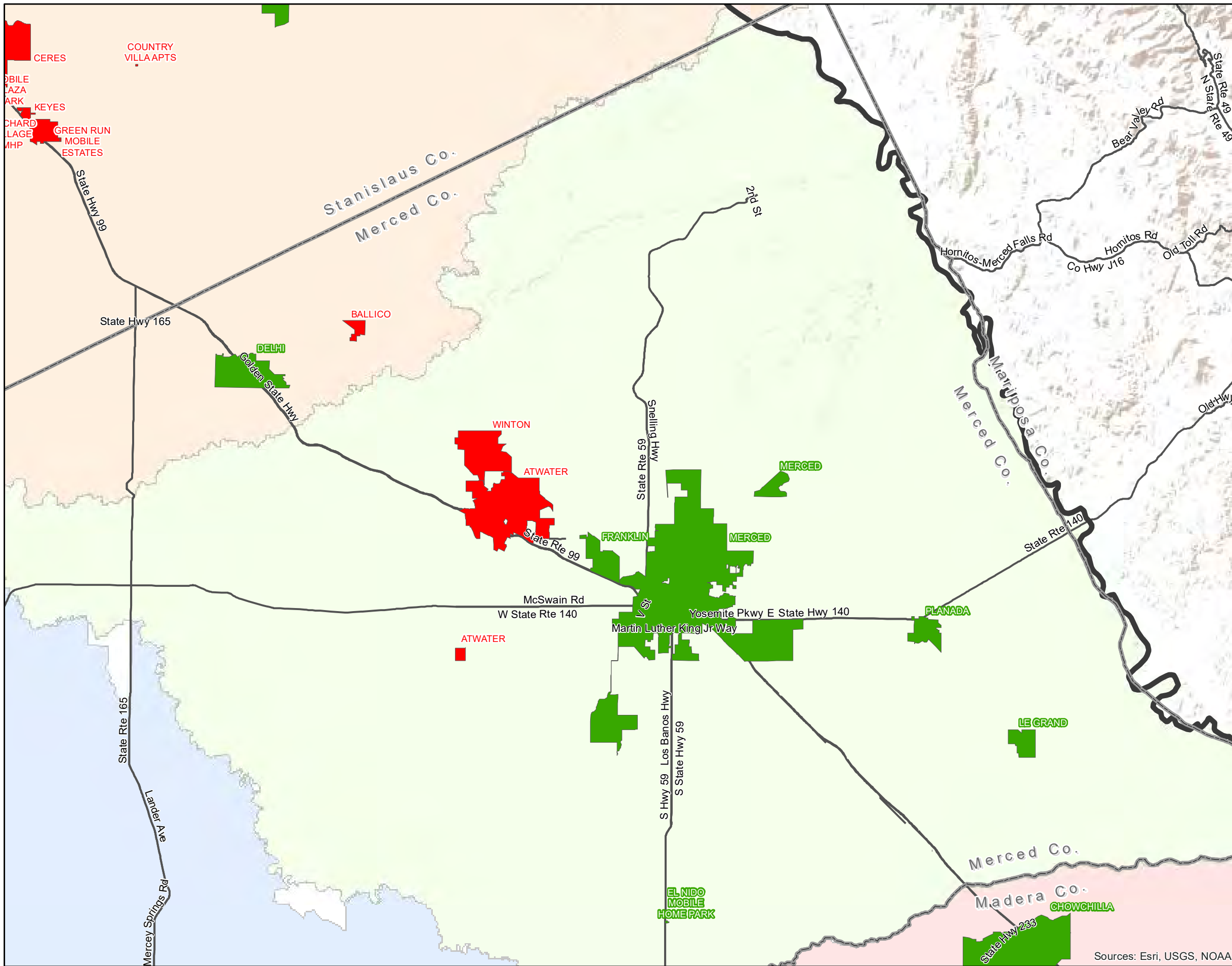
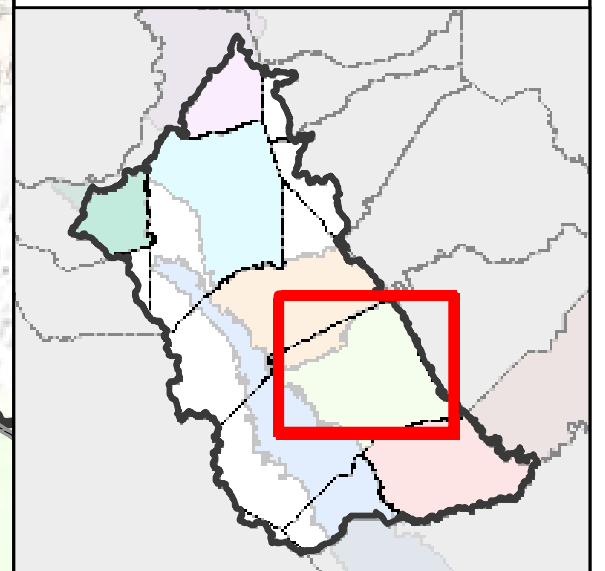


# San Joaquin River Funding Area Map Book

## Merced

### Water Quality Compliance

-  San Joaquin River Funding Area
- Water Quality Compliance Status**
-  IN COMPLIANCE
-  RETURNED TO COMPLIANCE
-  OUT-OF-COMPLIANCE
- IRWM Boundary**
-  American River Basin
-  East Contra Costa County
-  East Stanislaus
-  Eastern San Joaquin
-  Madera
-  Merced
-  Westside - San Joaquin
-  Outside IRWM



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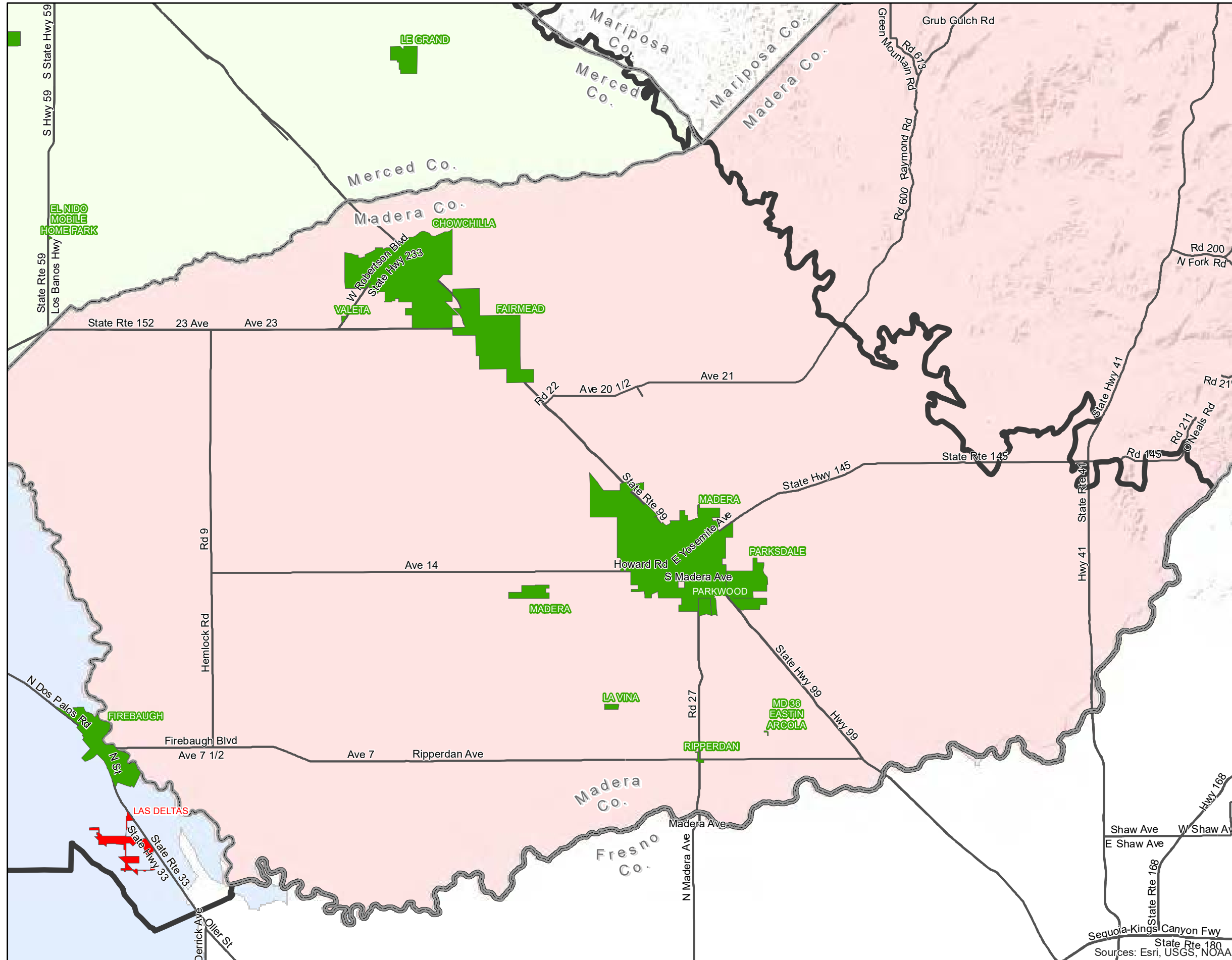


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Sources: Esri, USGS, NOAA

# San Joaquin River Funding Area Map Book

## Madera Water Quality Compliance



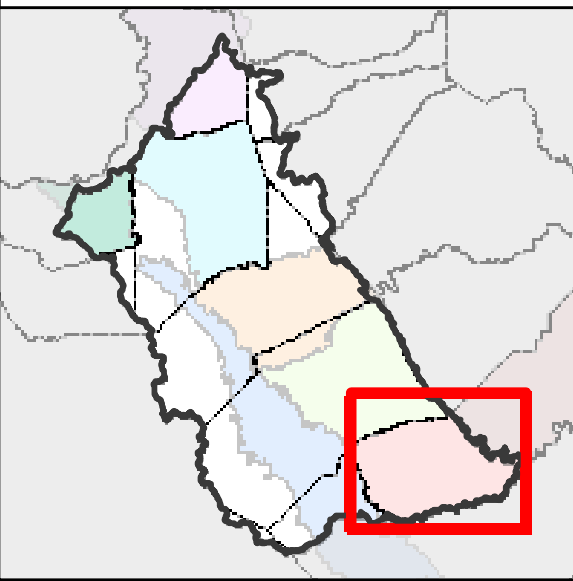
**San Joaquin River Funding Area**

**Water Quality Compliance Status**

- IN COMPLIANCE
- RETURNED TO COMPLIANCE
- OUT-OF-COMPLIANCE

**IRWM Boundary**

- American River Basin
- East Contra Costa County
- East Stanislaus
- Eastern San Joaquin
- Madera
- Merced
- Westside - San Joaquin
- Outside IRWM



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






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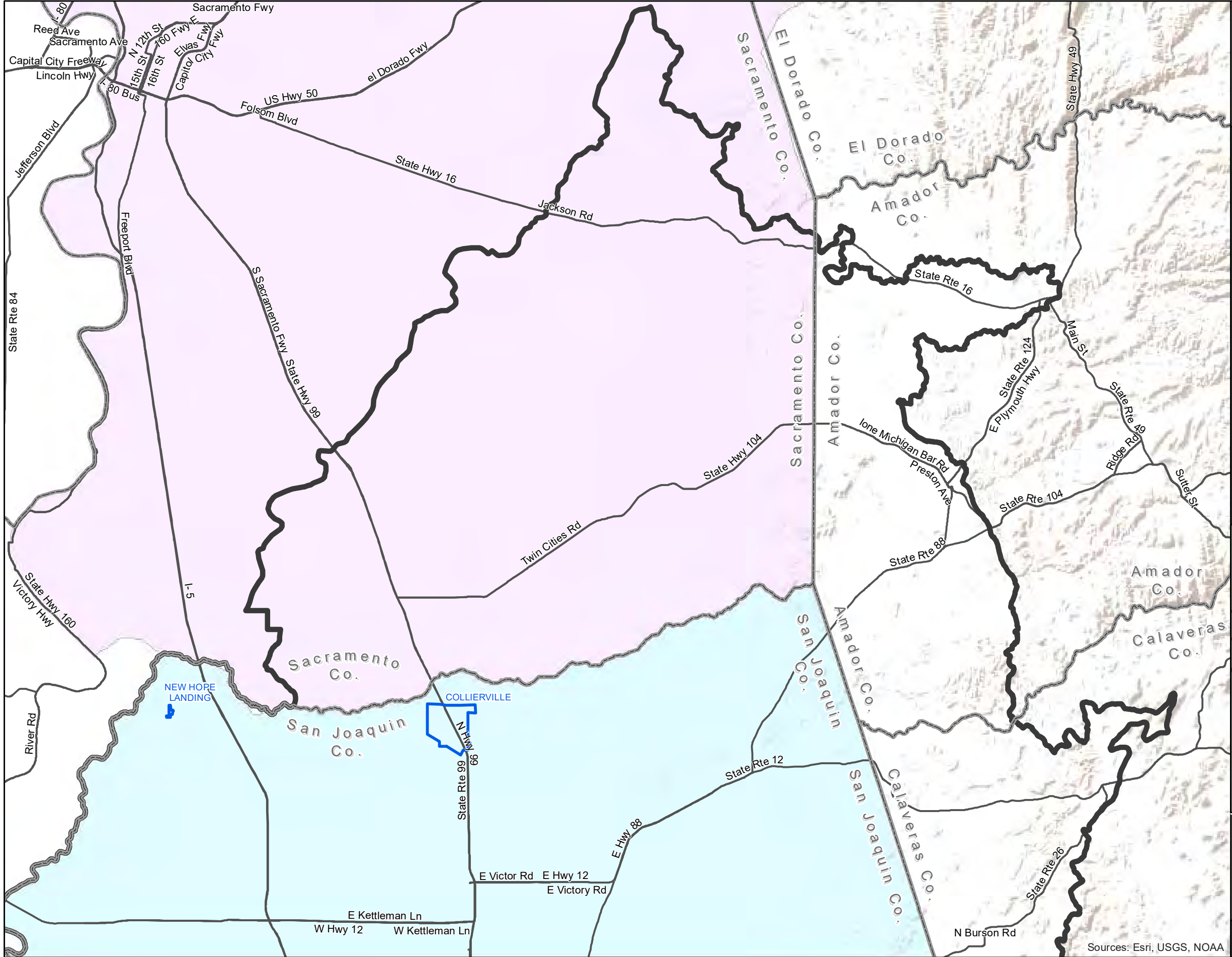
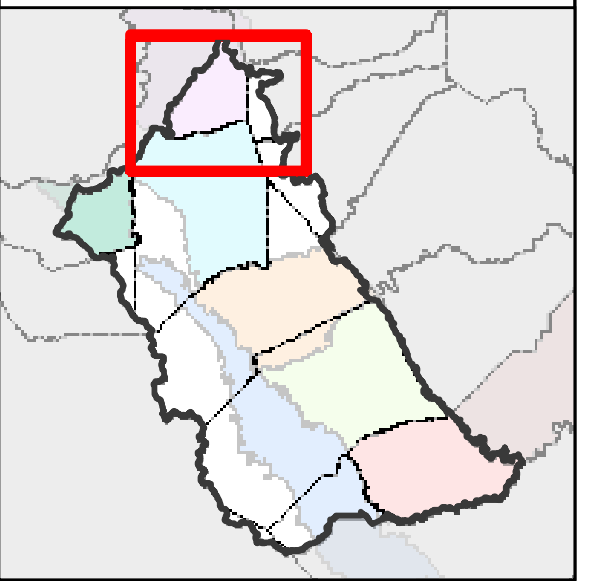
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Sources: Esri, USGS, NOAA

# San Joaquin River Funding Area Map Book

## American River Basin Private Well Communities

-  San Joaquin River Funding Area
  -  Private Well Community (DAC or SDAC)
  -  County
- IRWM Boundary**
-  American River Basin
  -  East Contra Costa County
  -  East Stanislaus
  -  Eastern San Joaquin
  -  Madera
  -  Merced
  -  Westside - San Joaquin
  -  Outside IRWM














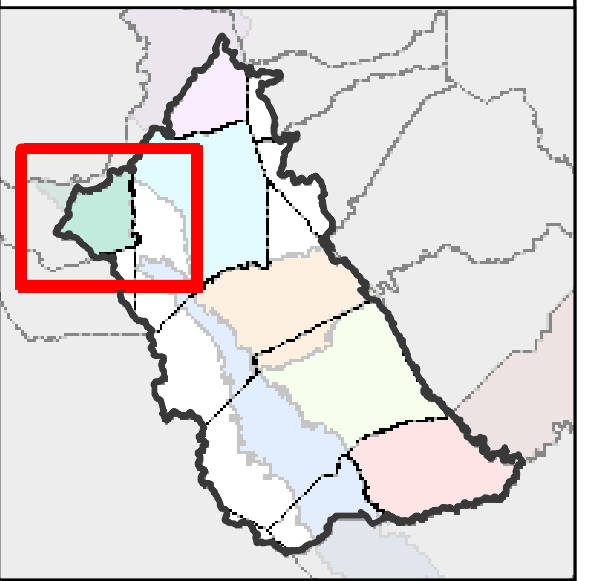
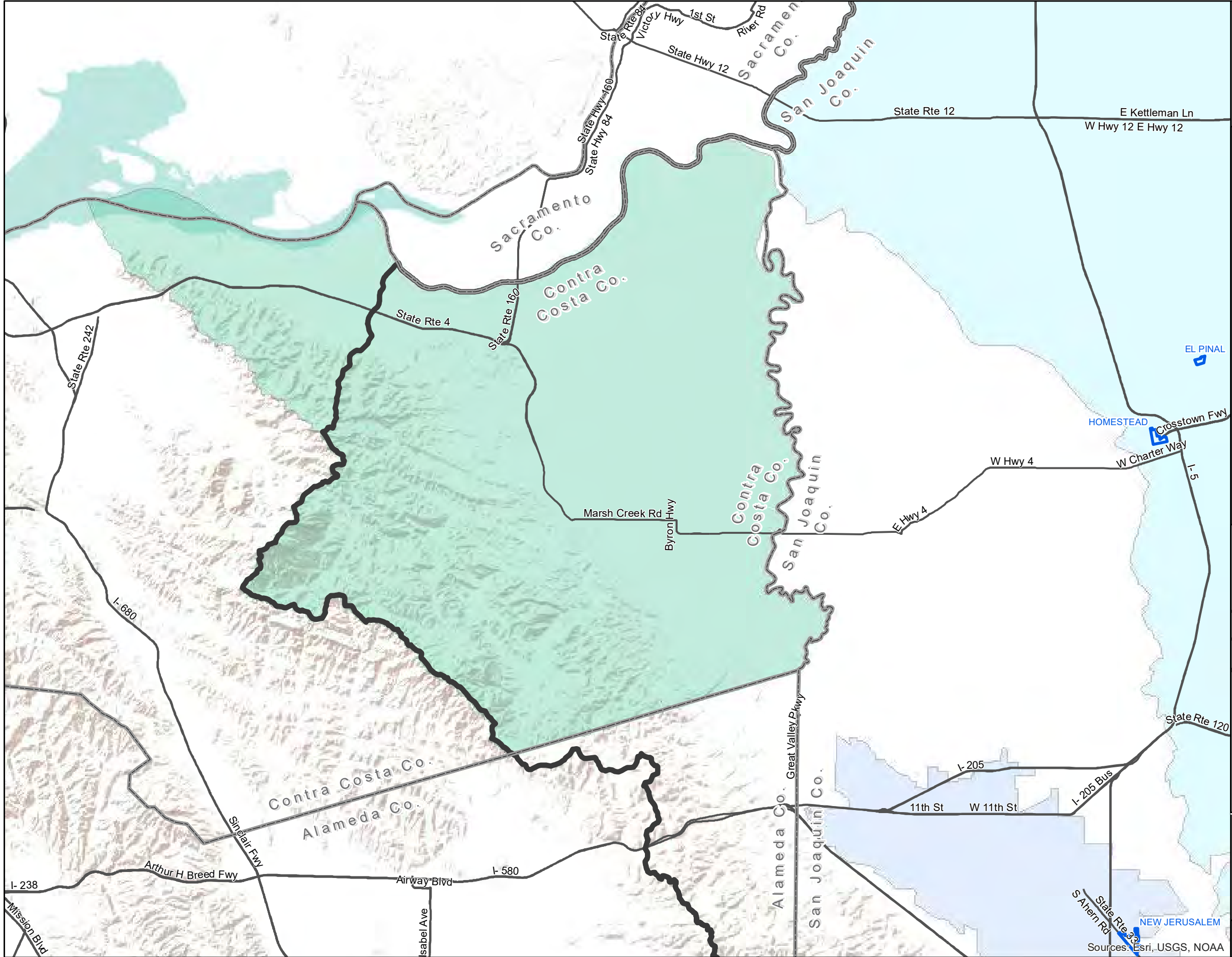
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Sources: Esri, USGS, NOAA

**San Joaquin River  
Funding Area Map Book**  
East Contra Costa County  
Private Well Communities

-  San Joaquin River Funding Area
-  Private Well Community (DAC or SDAC)
-  County
- IRWM Boundary**
-  American River Basin
-  East Contra Costa County
-  East Stanislaus
-  Eastern San Joaquin
-  Madera
-  Merced
-  Westside - San Joaquin
-  Outside IRWM



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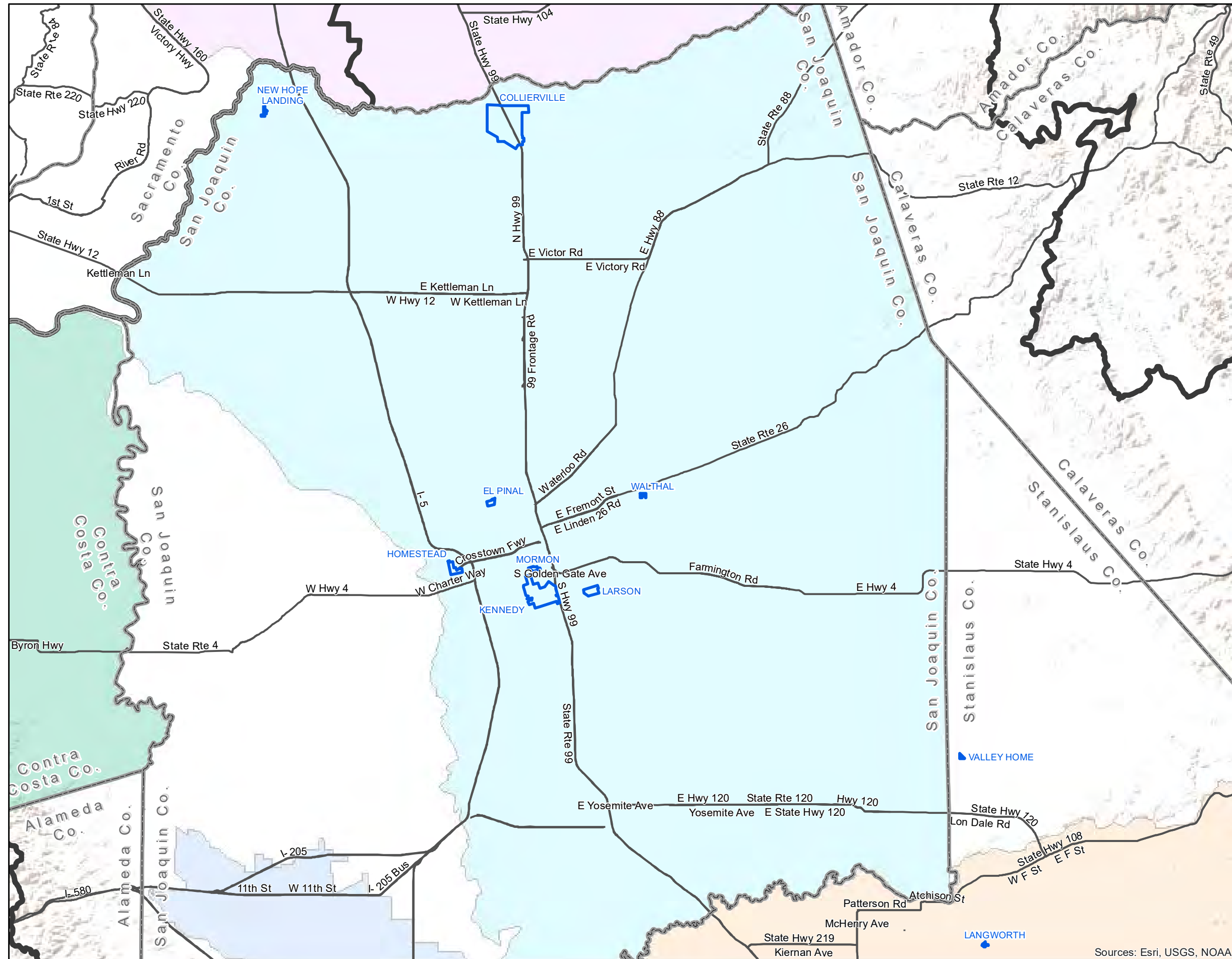
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Sources: Esri, USGS, NOAA

# San Joaquin River Funding Area Map Book

## Eastern San Joaquin Private Well Communities

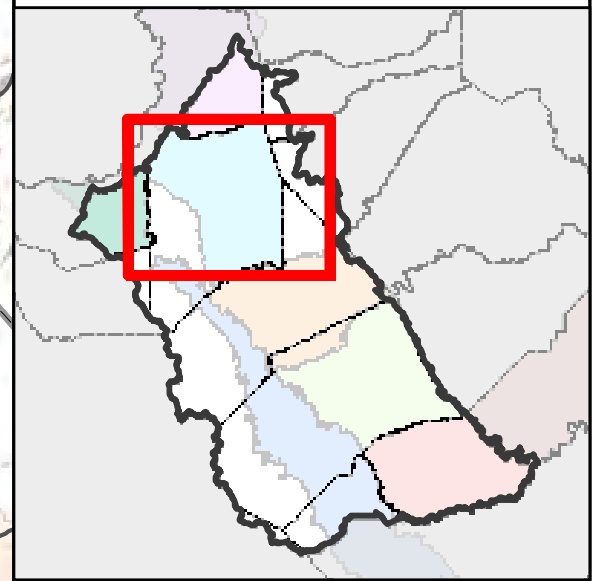


**Legend**

- San Joaquin River Funding Area
- Private Well Community (DAC or SDAC)
- County

**IRWM Boundary**

- American River Basin
- East Contra Costa County
- East Stanislaus
- Eastern San Joaquin
- Madera
- Merced
- Westside - San Joaquin
- Outside IRWM



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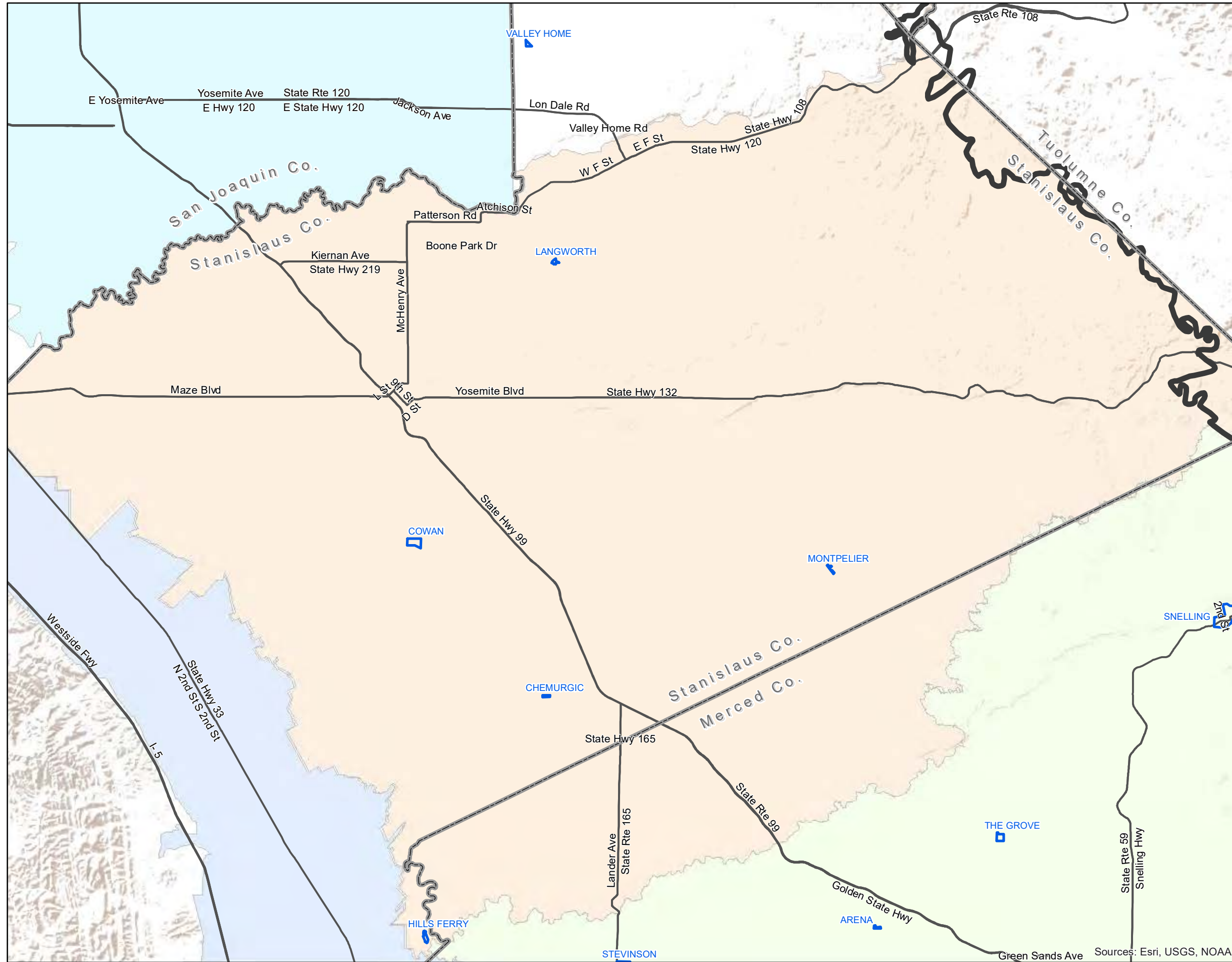
EST. 1969

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 Miles

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# San Joaquin River Funding Area Map Book

## East Stanislaus Private Well Communities

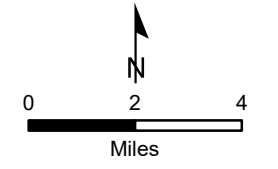
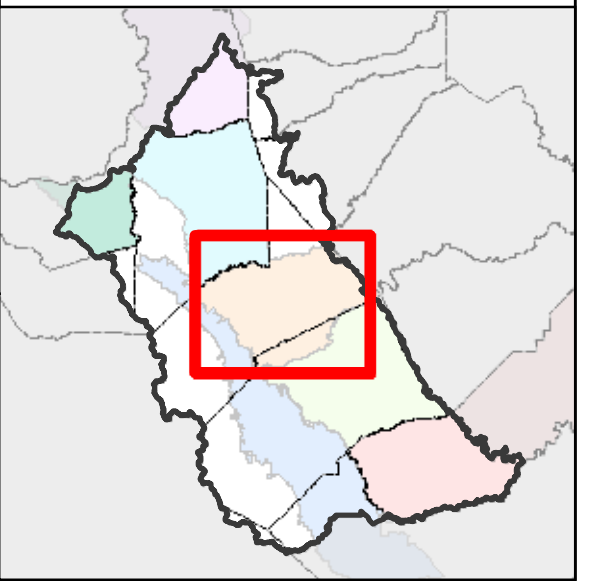


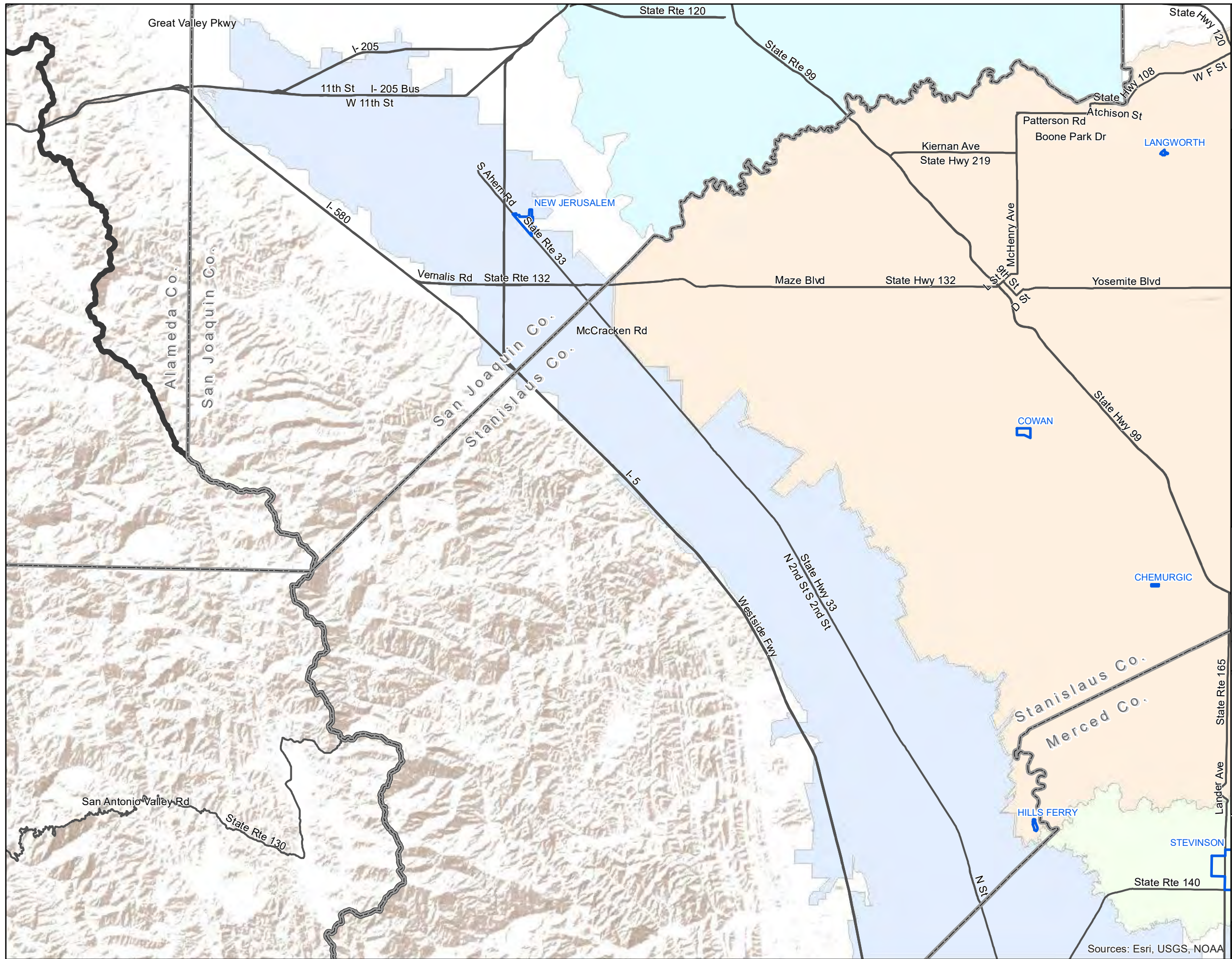
**Legend**

- San Joaquin River Funding Area
- Private Well Community (DAC or SDAC)
- County

**IRWM Boundary**

- American River Basin
- East Contra Costa County
- East Stanislaus
- Eastern San Joaquin
- Madera
- Merced
- Westside - San Joaquin
- Outside IRWM





# San Joaquin River Funding Area Map Book

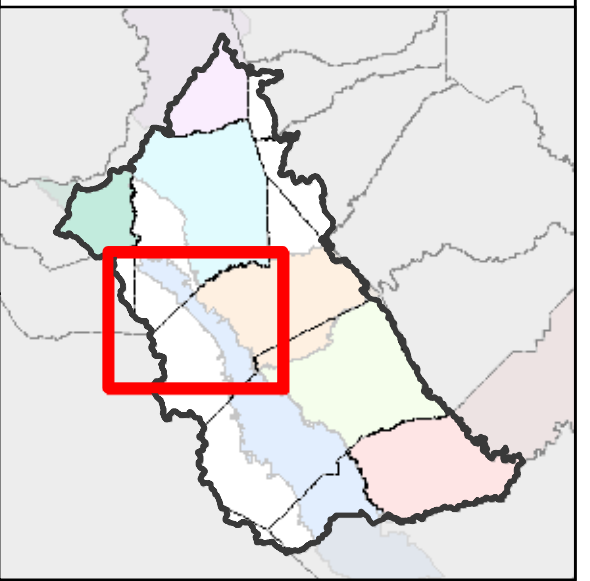
## Westside - San Joaquin North Private Well Communities

**Legend**

- San Joaquin River Funding Area
- Private Well Community (DAC or SDAC)
- County

**IRWM Boundary**

- American River Basin
- East Contra Costa County
- East Stanislaus
- Eastern San Joaquin
- Madera
- Merced
- Westside - San Joaquin
- Outside IRWM














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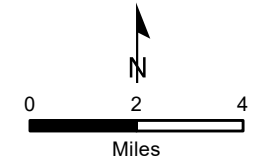
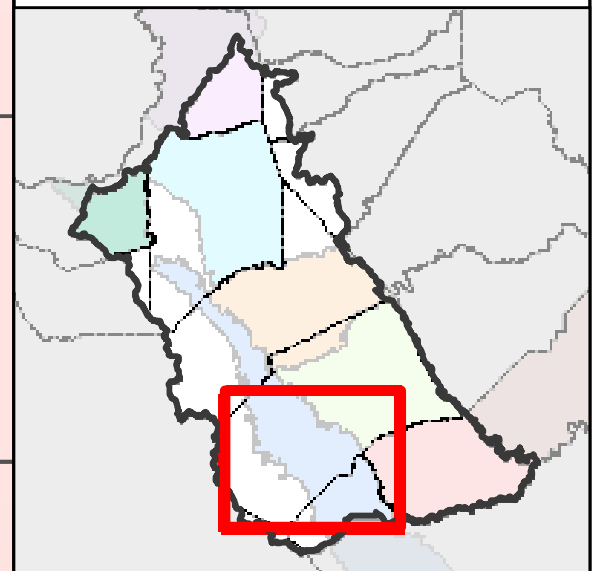
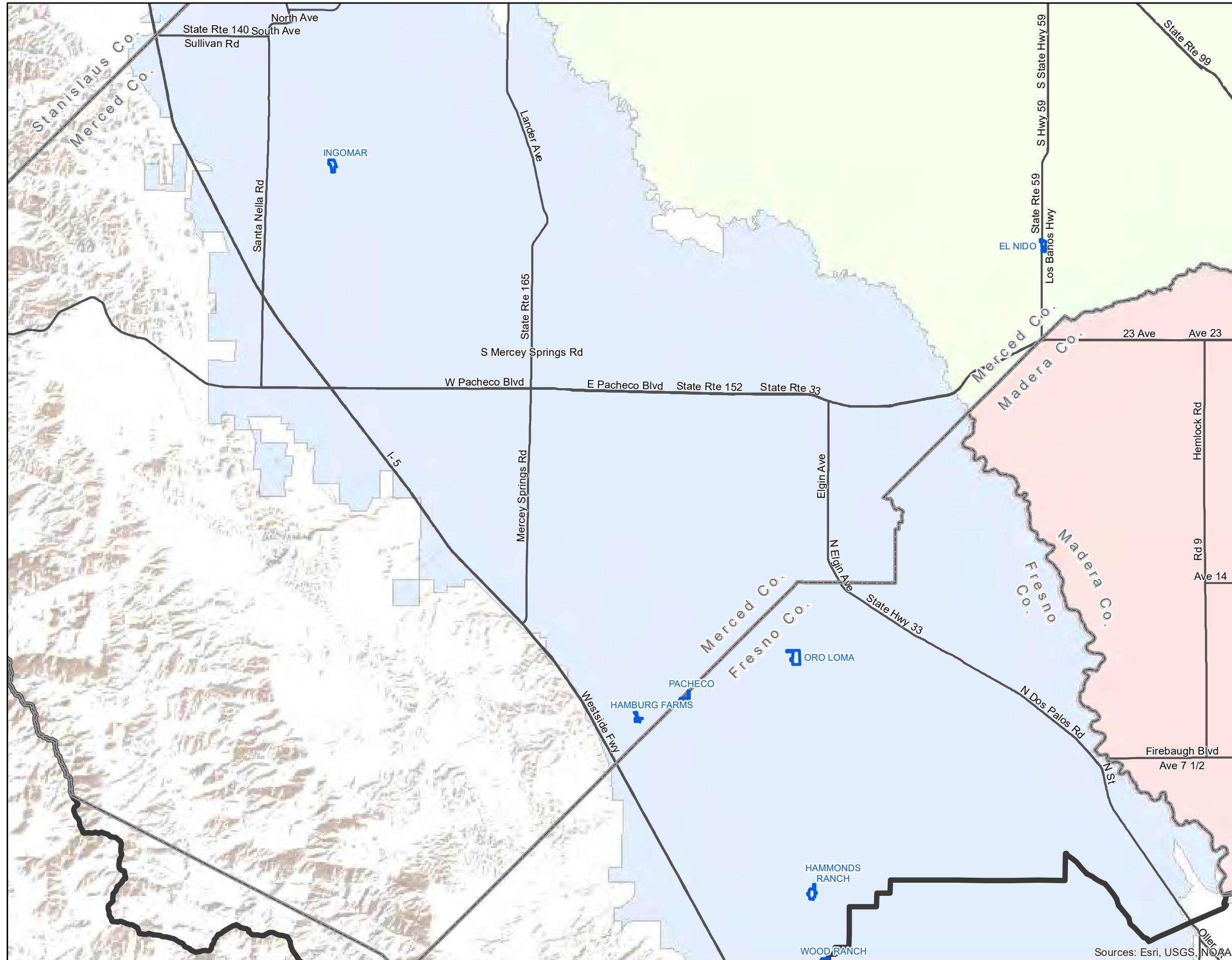
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Miles

North arrow pointing up.

# San Joaquin River Funding Area Map Book

## Westside - San Joaquin South Private Well Communities

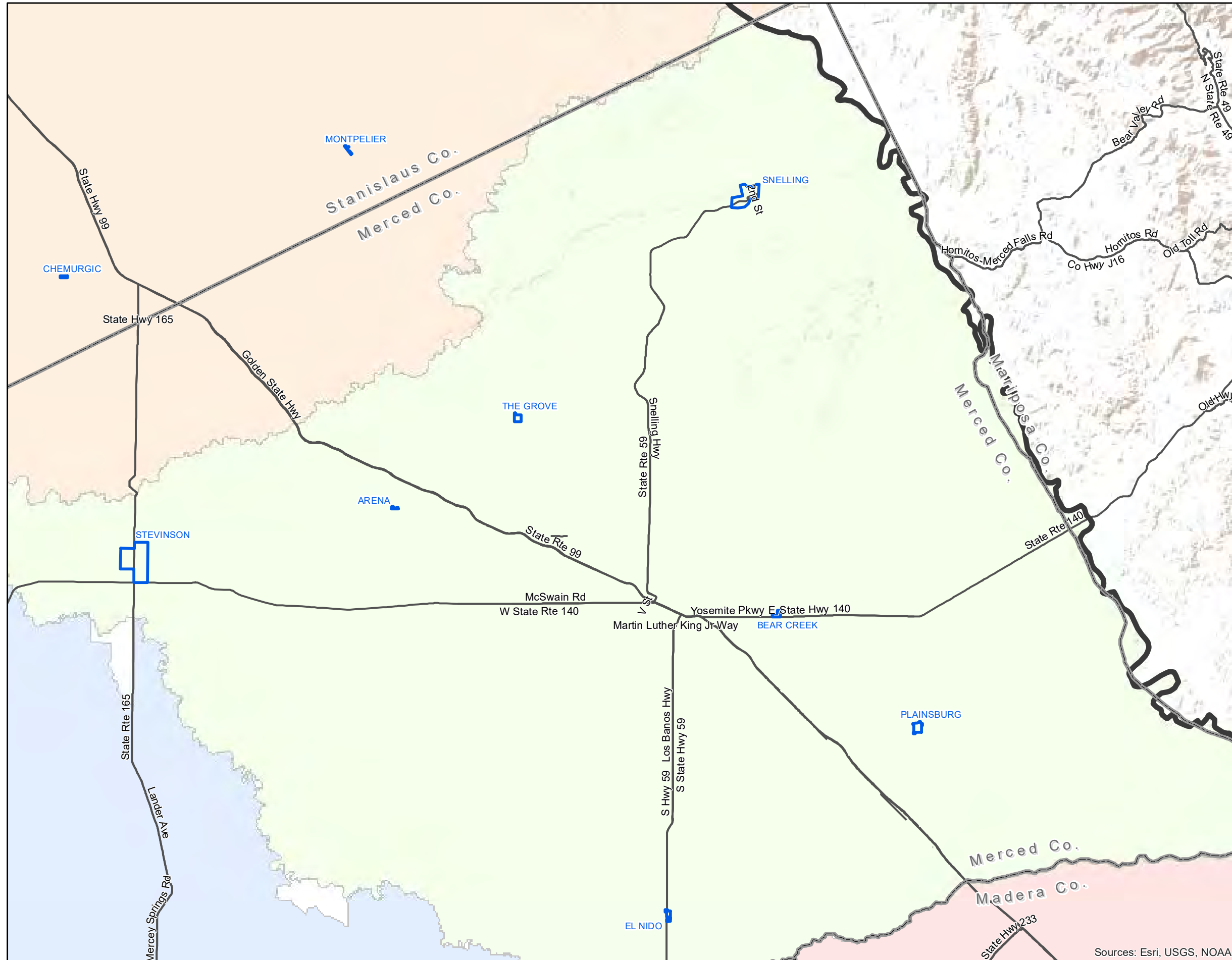
-  San Joaquin River Funding Area
  -  Private Well Community (DAC or SDAC)
  -  County
- IRWM Boundary**
-  American River Basin
  -  East Contra Costa County
  -  East Stanislaus
  -  Eastern San Joaquin
  -  Madera
  -  Merced
  -  Westside - San Joaquin
  -  Outside IRWM



Sources: Esri, USGS, NOAA



**San Joaquin River  
Funding Area Map Book**  
Merced  
Private Well Communities

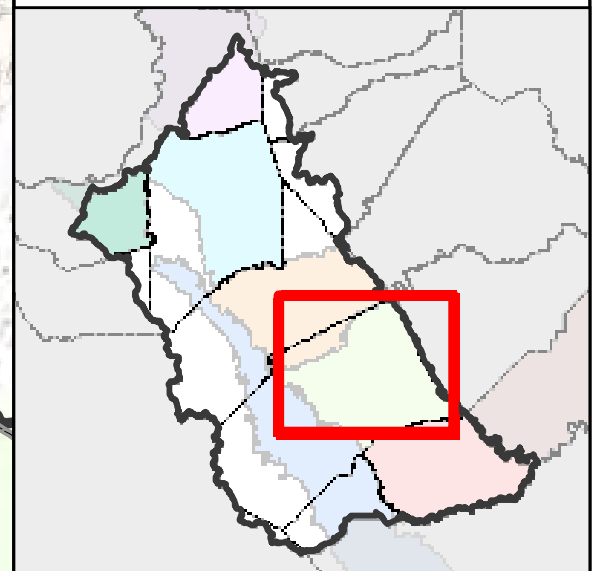


**Legend**

- San Joaquin River Funding Area
- Private Well Community (DAC or SDAC)
- County

**IRWM Boundary**

- American River Basin
- East Contra Costa County
- East Stanislaus
- Eastern San Joaquin
- Madera
- Merced
- Westside - San Joaquin
- Outside IRWM



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0 2 4  
Miles

North arrow pointing up.

# San Joaquin River Funding Area Map Book

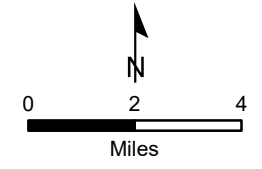
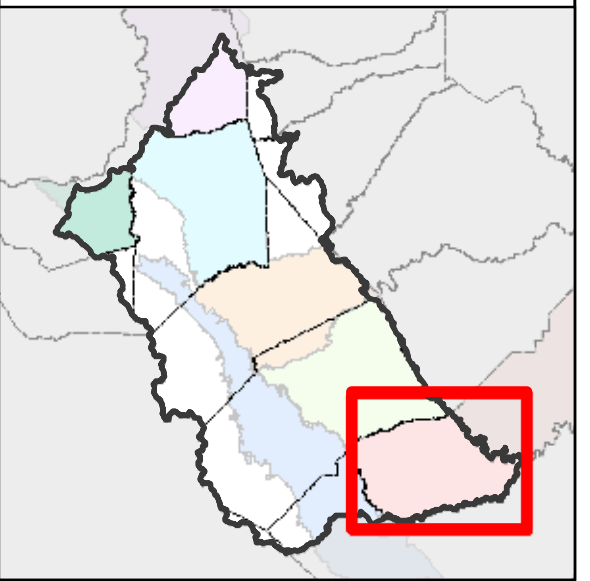
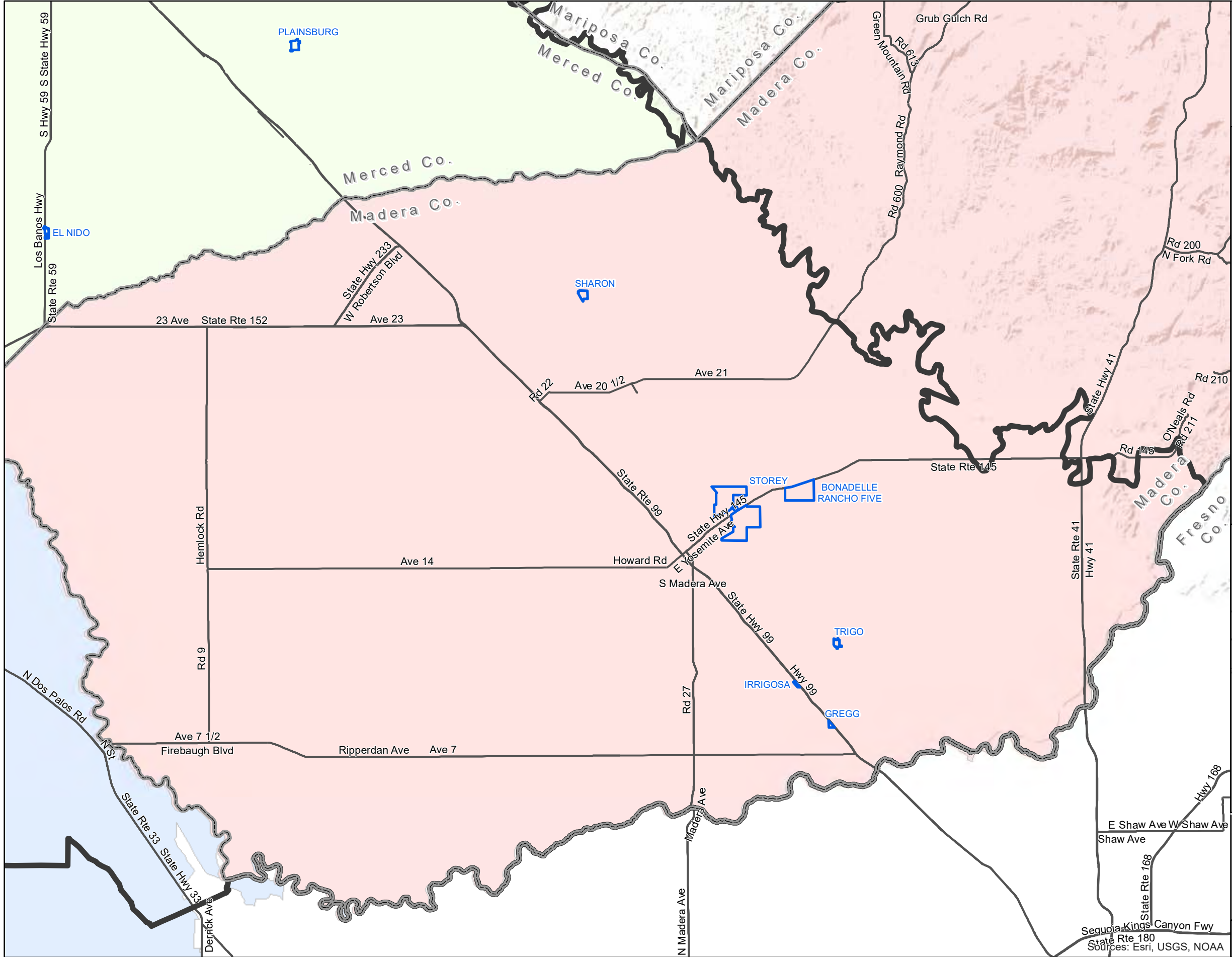
## Madera Private Well Communities

**Legend**

- San Joaquin River Funding Area
- Private Well Community (DAC or SDAC)
- County

**IRWM Boundary**

- American River Basin
- East Contra Costa County
- East Stanislaus
- Eastern San Joaquin
- Madera
- Merced
- Westside - San Joaquin
- Outside IRWM









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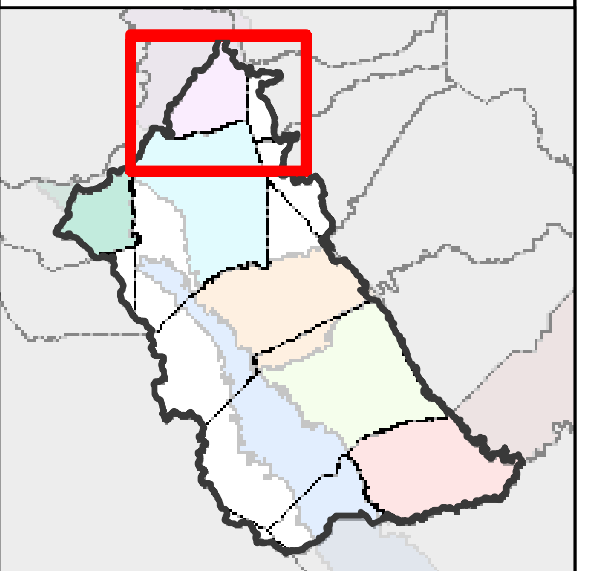
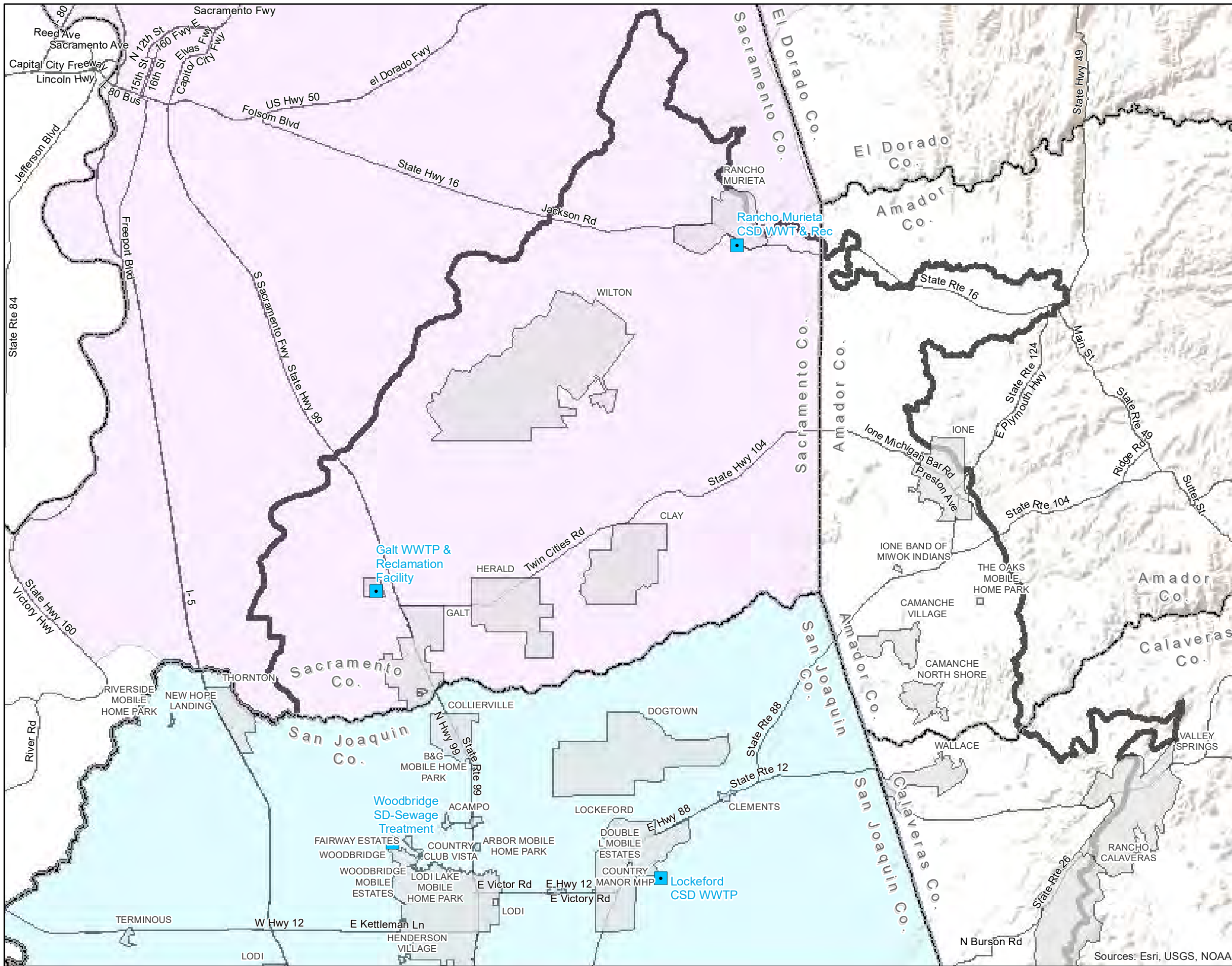
Sources: Esri, USGS, NOAA

# San Joaquin River Funding Area Map Book

## American River Basin Wastewater Treatment Facilities

-  San Joaquin River Funding Area
-  County
-  Community
-  Wastewater Treatment Facility

- IRWM Boundary**
-  American River Basin
  -  East Contra Costa County
  -  East Stanislaus
  -  Eastern San Joaquin
  -  Madera
  -  Merced
  -  Westside - San Joaquin
  -  Outside IRWM

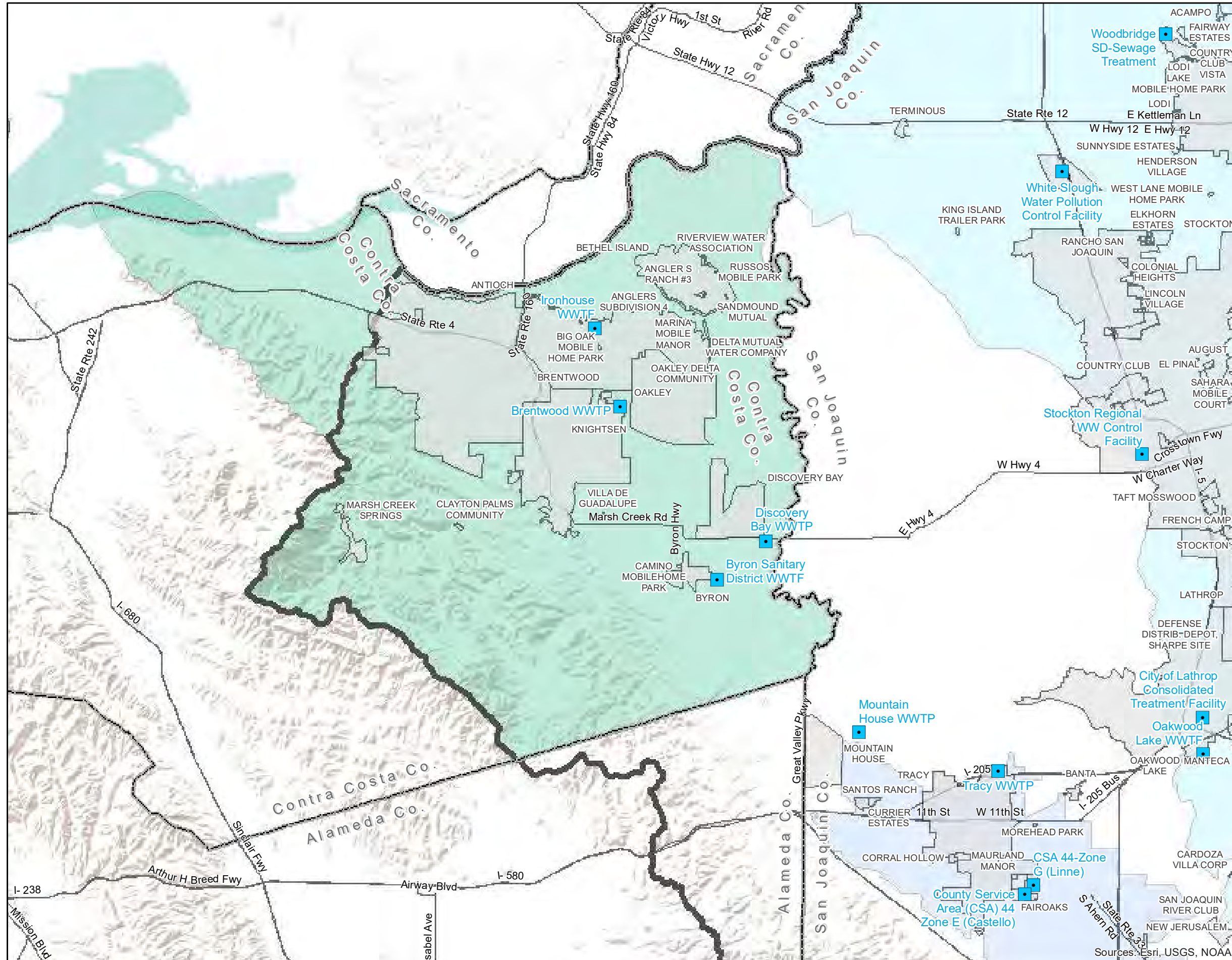


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# San Joaquin River Funding Area Map Book

## East Contra Costa County Wastewater Treatment Facilities

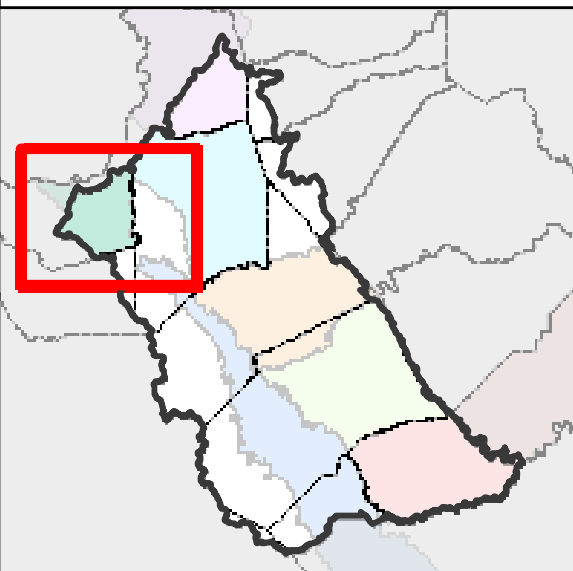


**San Joaquin River Funding Area**

- San Joaquin River Funding Area
- County
- Community
- Wastewater Treatment Facility

**IRWM Boundary**

- American River Basin
- East Contra Costa County
- East Stanislaus
- Eastern San Joaquin
- Madera
- Merced
- Westside - San Joaquin
- Outside IRWM



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 Miles

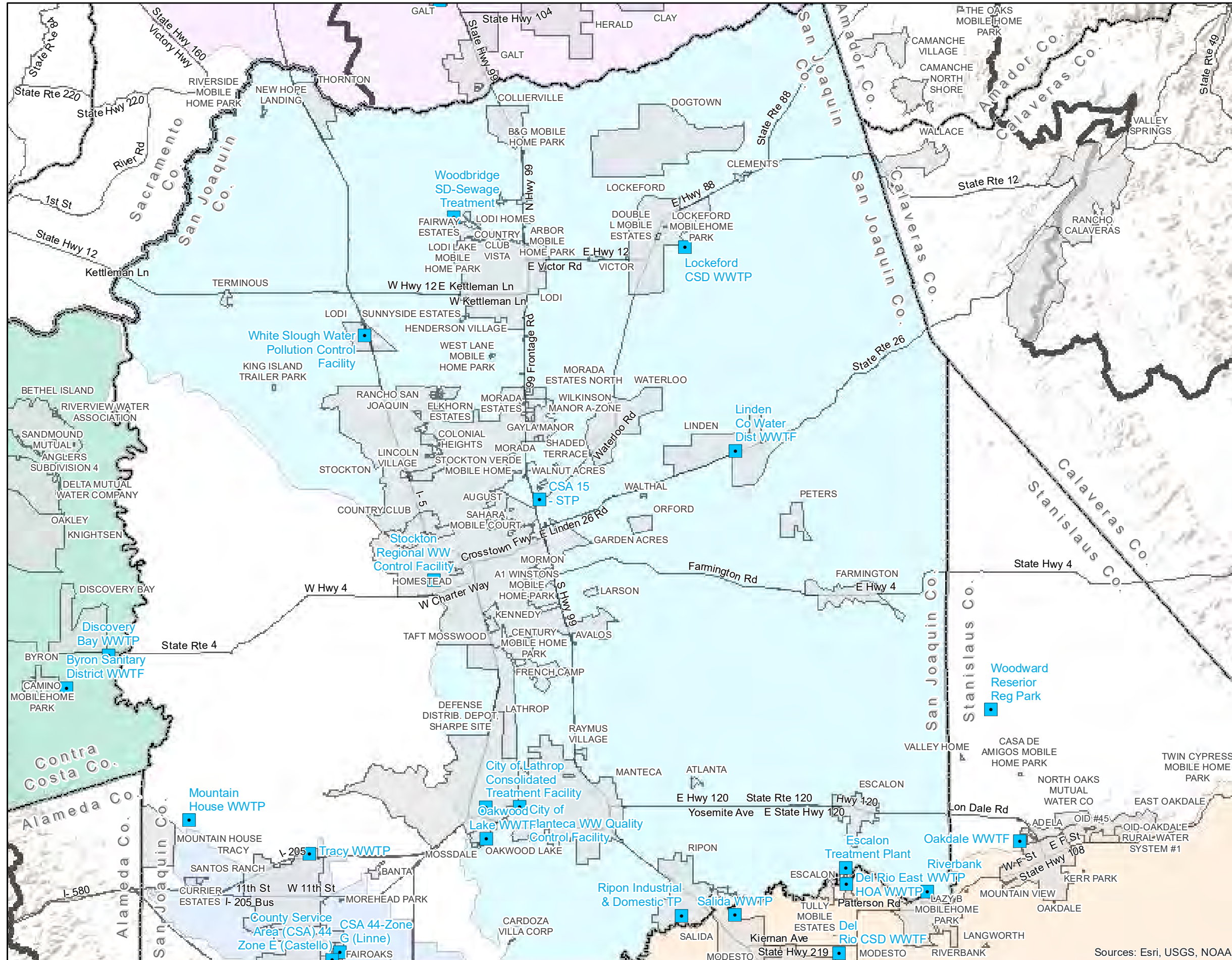
North Arrow

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Sources: Esri, USGS, NOAA

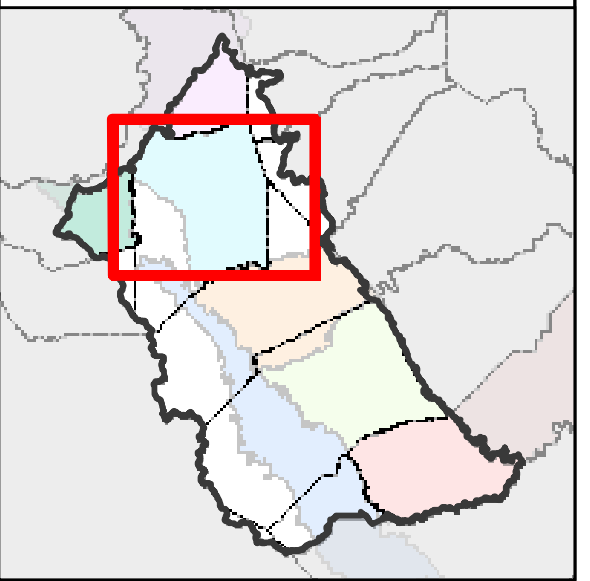
# San Joaquin River Funding Area Map Book

## Eastern San Joaquin Wastewater Treatment Facilities



- San Joaquin River Funding Area
- County
- Community
- Wastewater Treatment Facility

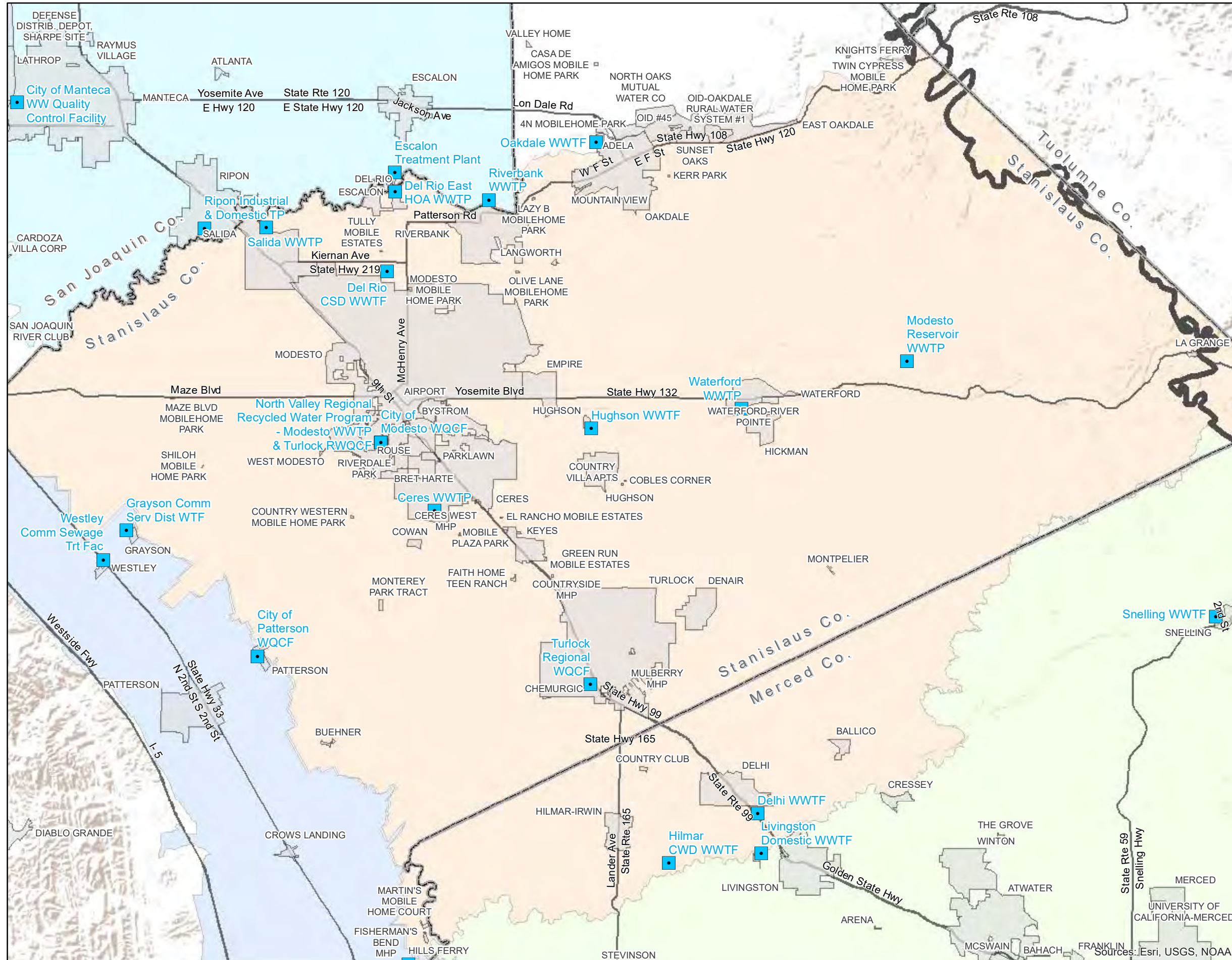
- IRWM Boundary**
- American River Basin
  - East Contra Costa County
  - East Stanislaus
  - Eastern San Joaquin
  - Madera
  - Merced
  - Westside - San Joaquin
  - Outside IRWM



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# San Joaquin River Funding Area Map Book

## East Stanislaus Wastewater Treatment Facilities

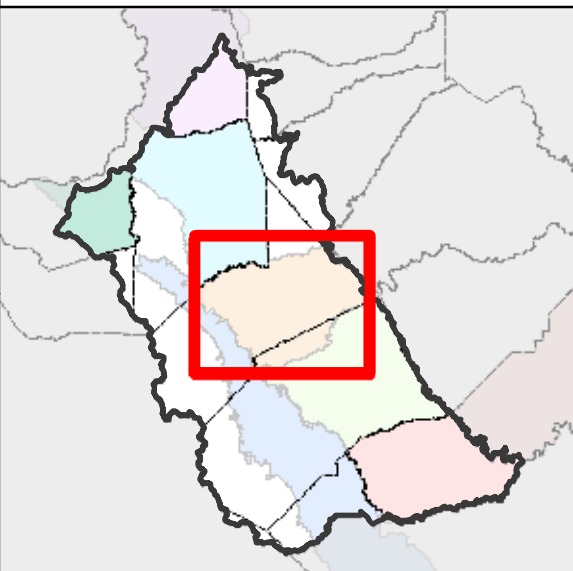


**Legend**

- San Joaquin River Funding Area
- County
- Community
- Wastewater Treatment Facility

**IRWM Boundary**

- American River Basin
- East Contra Costa County
- East Stanislaus
- Eastern San Joaquin
- Madera
- Merced
- Westside - San Joaquin
- Outside IRWM



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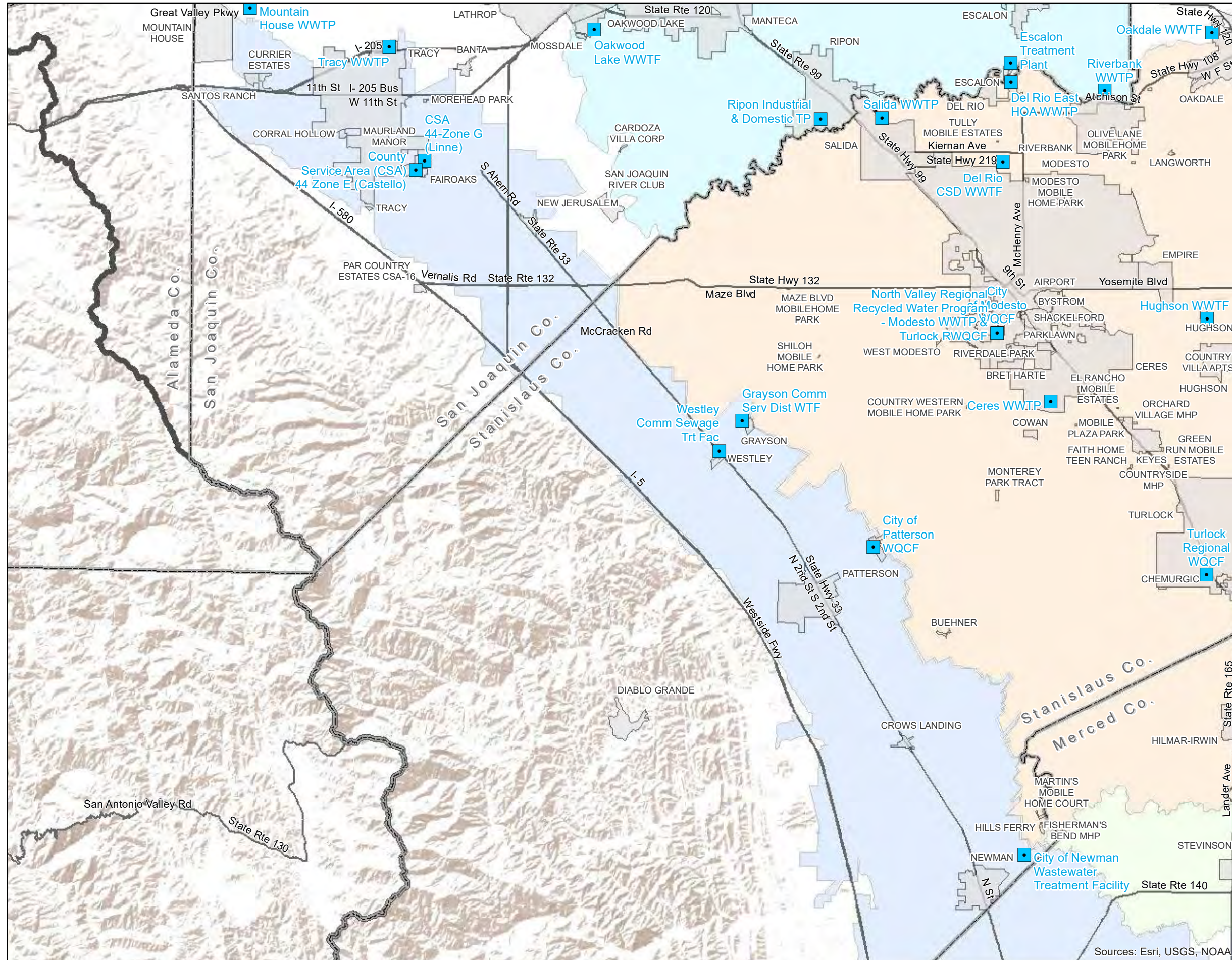
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Sources: Esri, USGS, NOAA

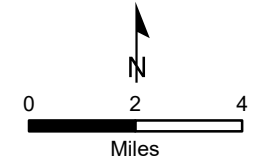
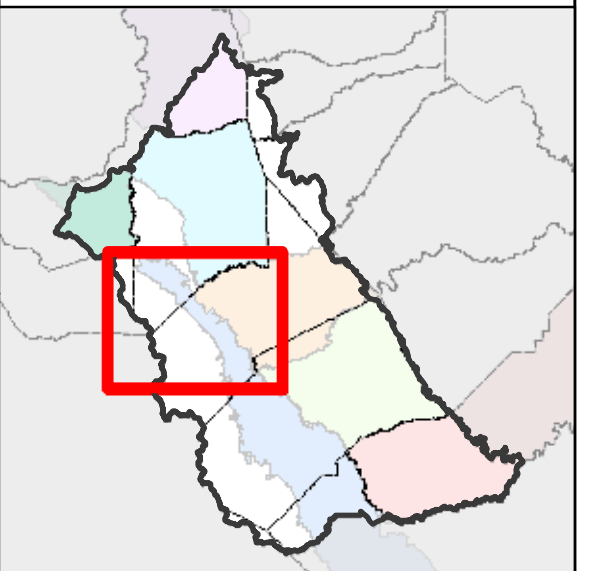
# San Joaquin River Funding Area Map Book

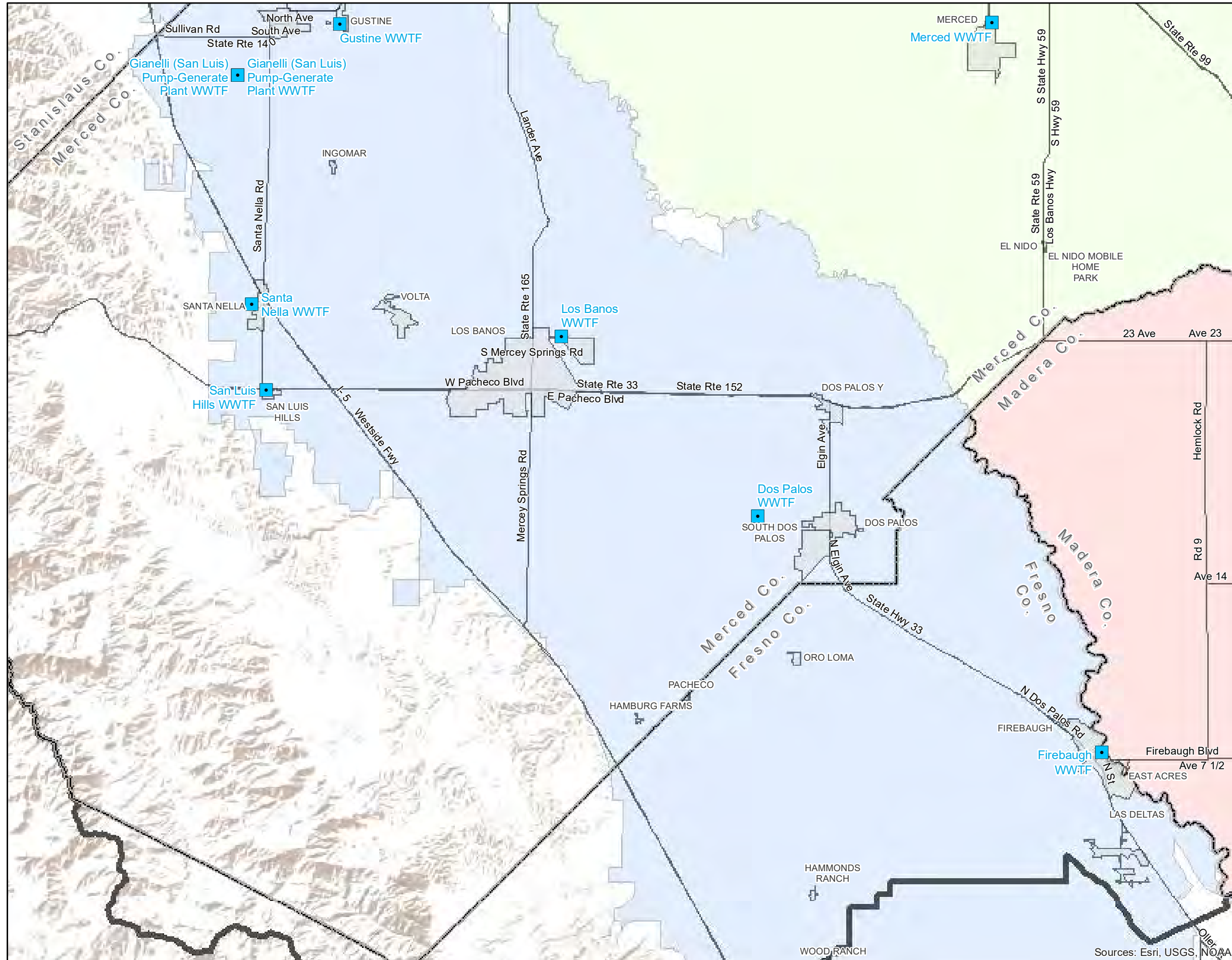
## Westside - San Joaquin North Wastewater Treatment Facilities



- San Joaquin River Funding Area
- County
- Community
- Wastewater Treatment Facility

- IRWM Boundary**
- American River Basin
  - East Contra Costa County
  - East Stanislaus
  - Eastern San Joaquin
  - Madera
  - Merced
  - Westside - San Joaquin
  - Outside IRWM





# San Joaquin River Funding Area Map Book

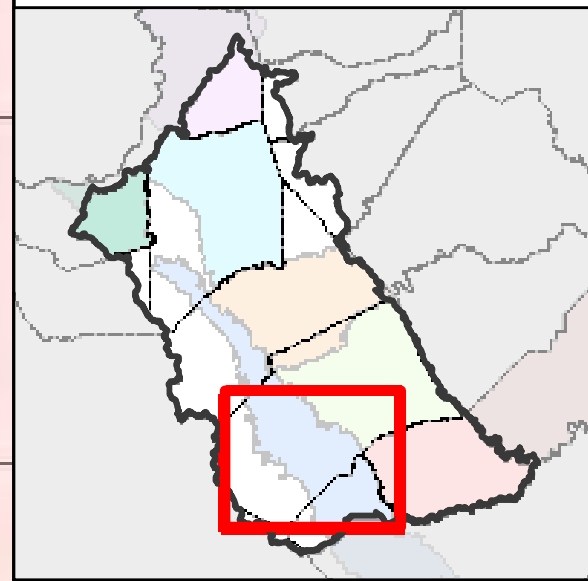
## Westside - San Joaquin South Wastewater Treatment Facilities

**Legend**

- San Joaquin River Funding Area
- County
- Community
- Wastewater Treatment Facility

**IRWM Boundary**

- American River Basin
- East Contra Costa County
- East Stanislaus
- Eastern San Joaquin
- Madera
- Merced
- Westside - San Joaquin
- Outside IRWM



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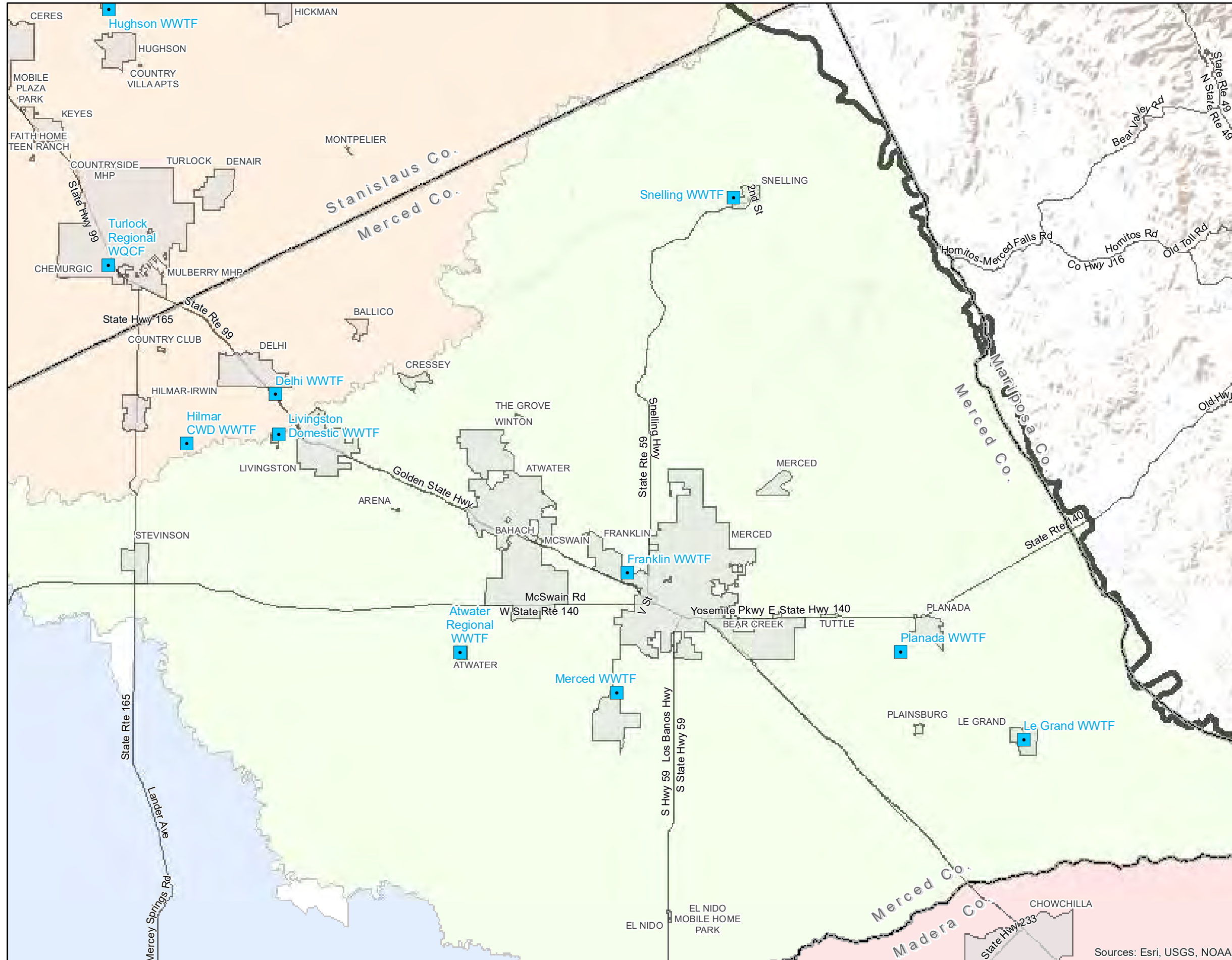
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Sources: Esri, USGS, NOAA



# San Joaquin River Funding Area Map Book

## Merced Wastewater Treatment Facilities

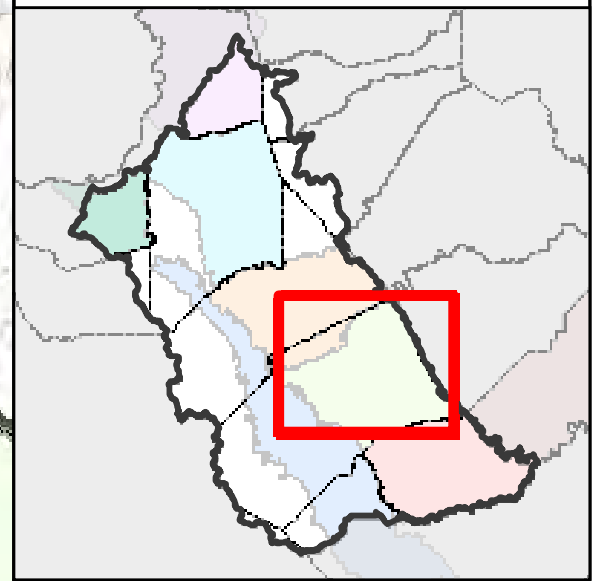


**Legend**

- San Joaquin River Funding Area
- County
- Community
- Wastewater Treatment Facility

**IRWM Boundary**

- American River Basin
- East Contra Costa County
- East Stanislaus
- Eastern San Joaquin
- Madera
- Merced
- Westside - San Joaquin
- Outside IRWM

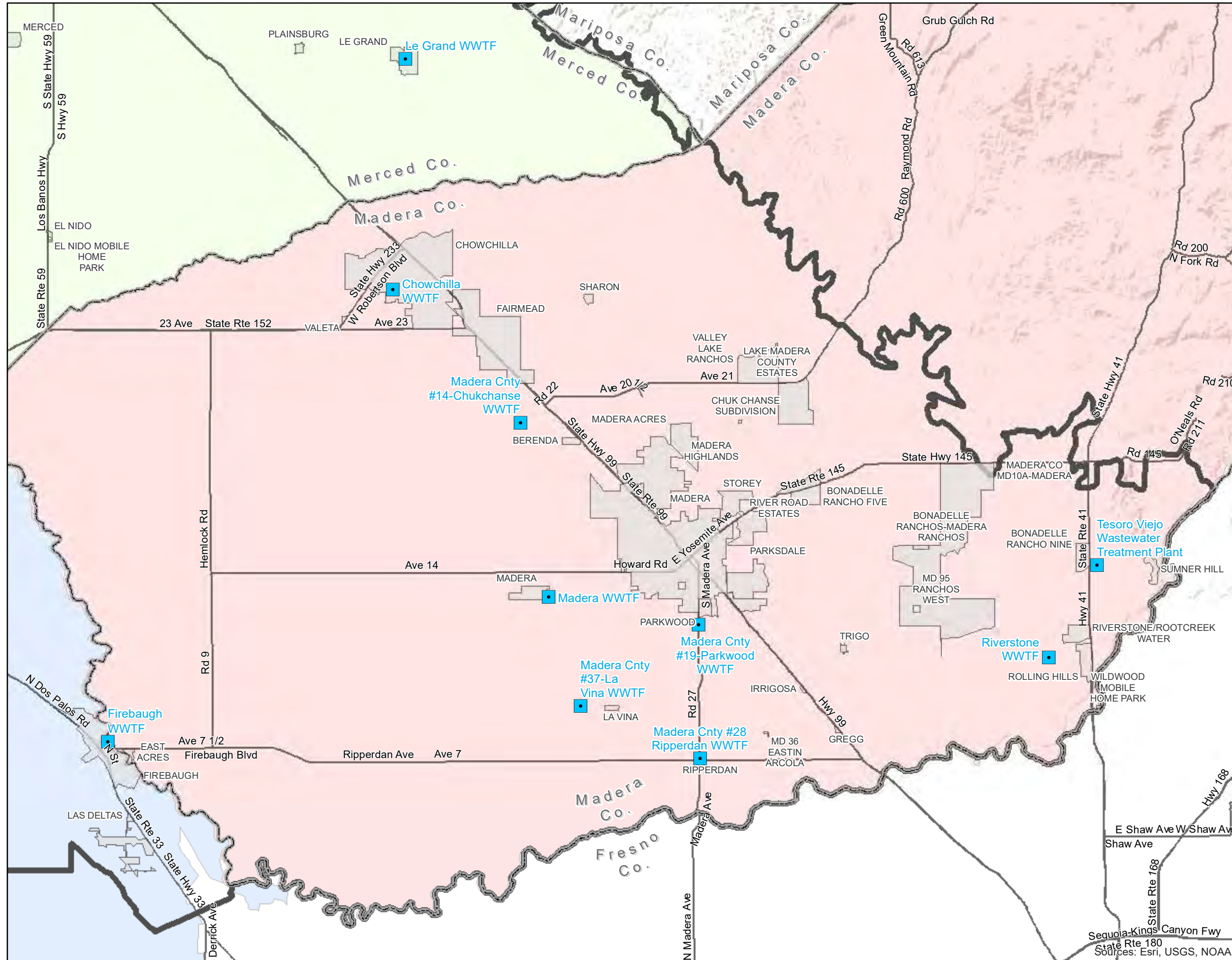


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Miles

# San Joaquin River Funding Area Map Book

## Madera Wastewater Treatment Facilities

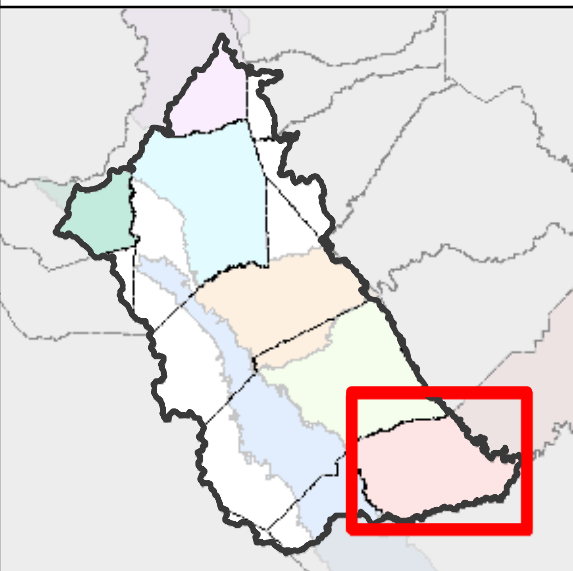


**Legend**

- San Joaquin River Funding Area
- County
- Community
- Wastewater Treatment Facility

**IRWM Boundary**

- American River Basin
- East Contra Costa County
- East Stanislaus
- Eastern San Joaquin
- Madera
- Merced
- Westside - San Joaquin
- Outside IRWM



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Miles

North arrow pointing up.

7/24/2019 : G:\Woodard & Curran-2628\262818002-SJRFA DACI\GIS\Map\Mapbooks\SJRFA\_SectionE\_Mapbook\_WWTF.mxd

Sources: Esri, USGS, NOAA

**Appendix B –**

**Additional Maps Provided by Stakeholder Advisory Committee**

# County Islands: Areas Lacking Storm Drainage Systems

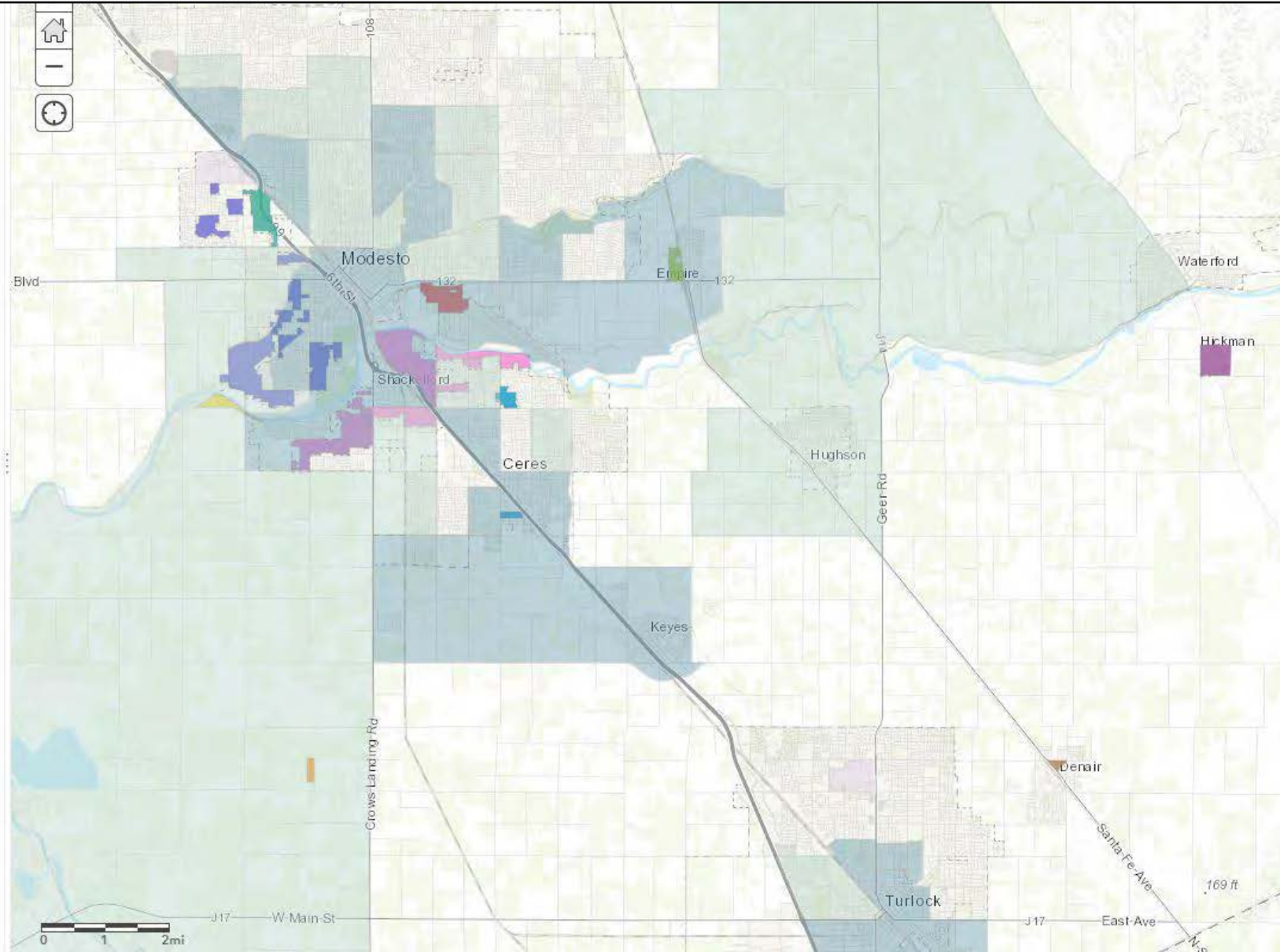
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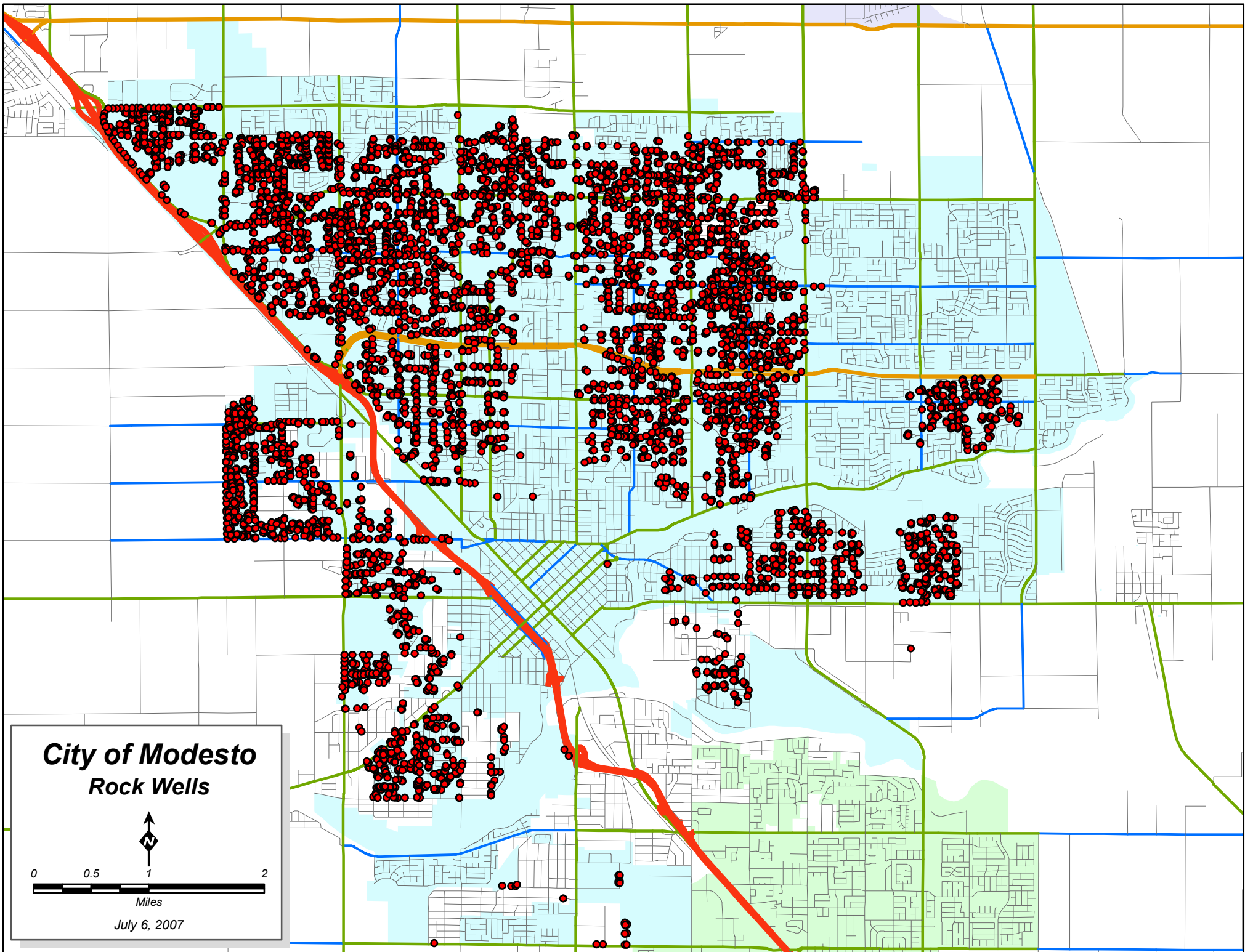
### DACs by Tract

- MHI14\_Long
- Disadvantaged Community
- Severely Disadvantaged Community
- No Data Available

### DUCs

- AIRPORT
- CERES
- EMPIRE
- HICKMAN
- MONTEREY TRACT
- RIVERDALE
- S MOD / N CERES
- TURLOCK
- W MOD industr
- WEST MODESTO

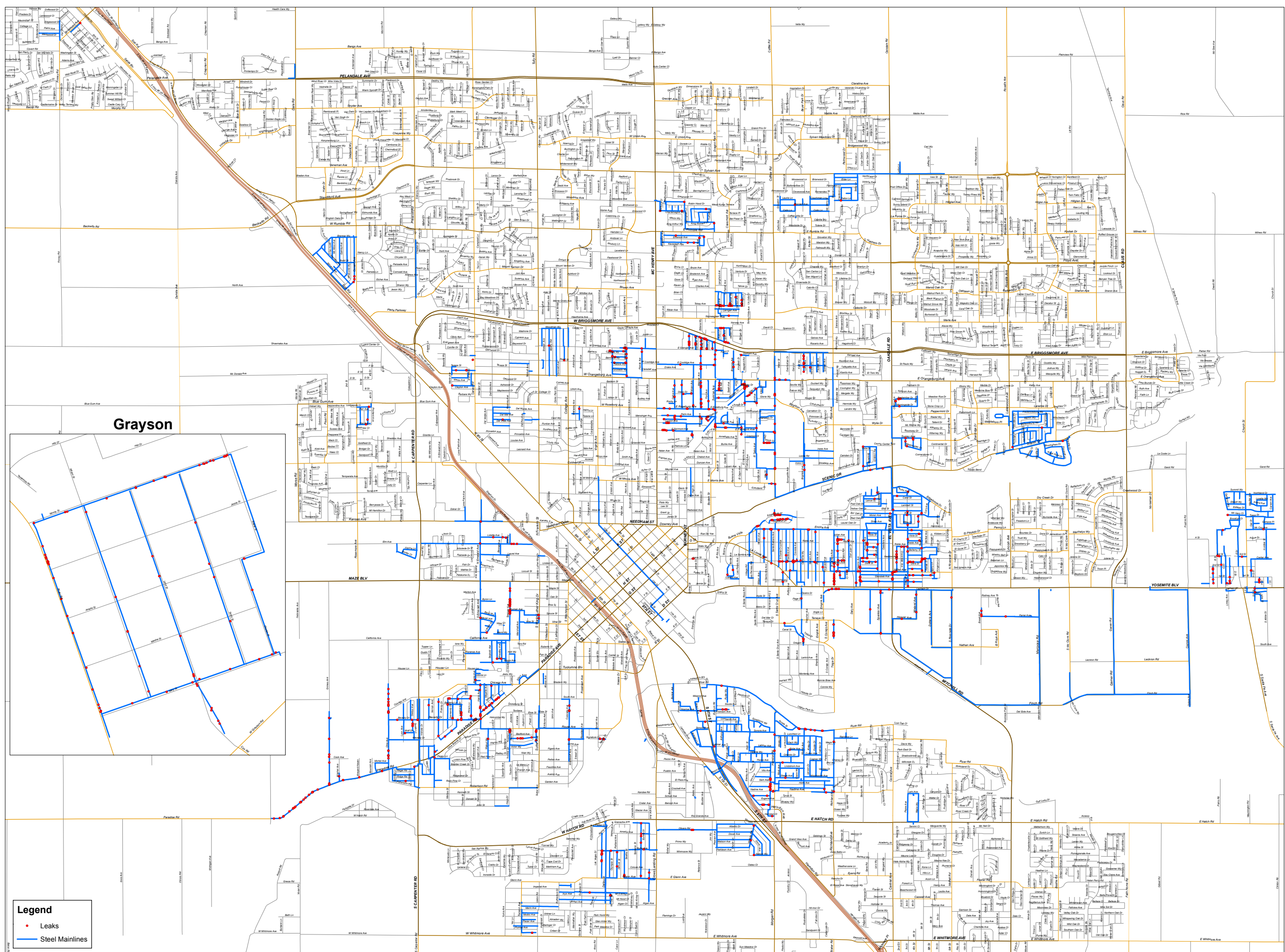




# City of Modesto Rock Wells



July 6, 2007



Grayson

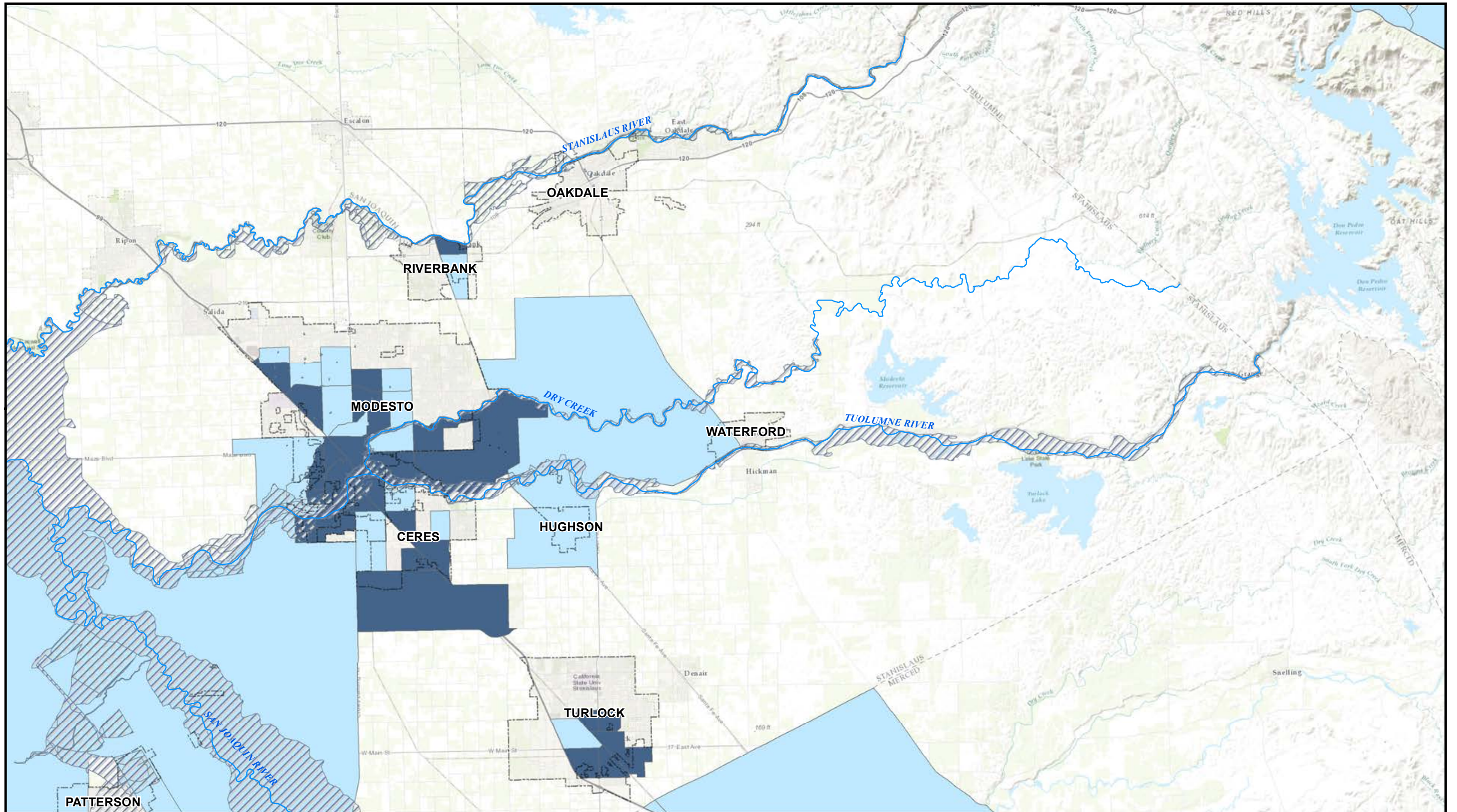
**Legend**  
 • Leaks  
 — Steel Mains



Date: 11/2/2015

**City of Modesto**  
 Steel Mains with Leaks





**PETERSON . BRUSTAD . INC**  
ENGINEERING . CONSULTING

1180 Iron Point Rd., Suite 260  
Folsom, CA 95630

Phone: (916) 608-2212  
Fax: (916) 608-2232



City Boundary

**FEMA Flood Zone**

100yr Flood Zone

500yr Flood Zone

**DWR DAC Tracts**

Severely Disadvantaged Community

Disadvantaged Community

0 1.5 3 Miles

1 in = 3 miles

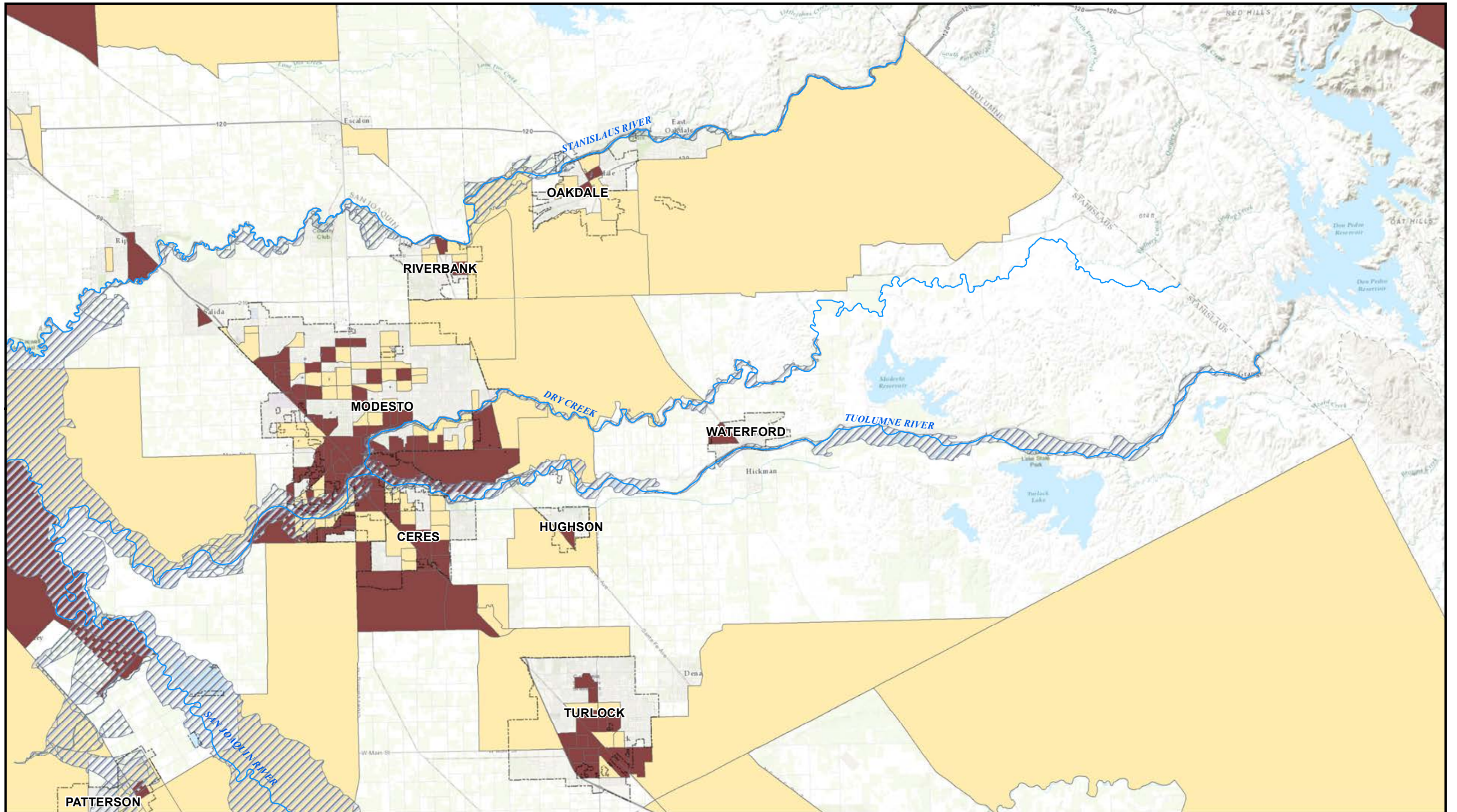
June 2017

CITY OF MODESTO

**DWR Disadvantaged Community (DAC) Designations along the Lower Tuolumne River Corridor**

FIGURE

**1**



City Boundary  
FEMA Flood Zone  
100yr Flood Zone  
500yr Flood Zone

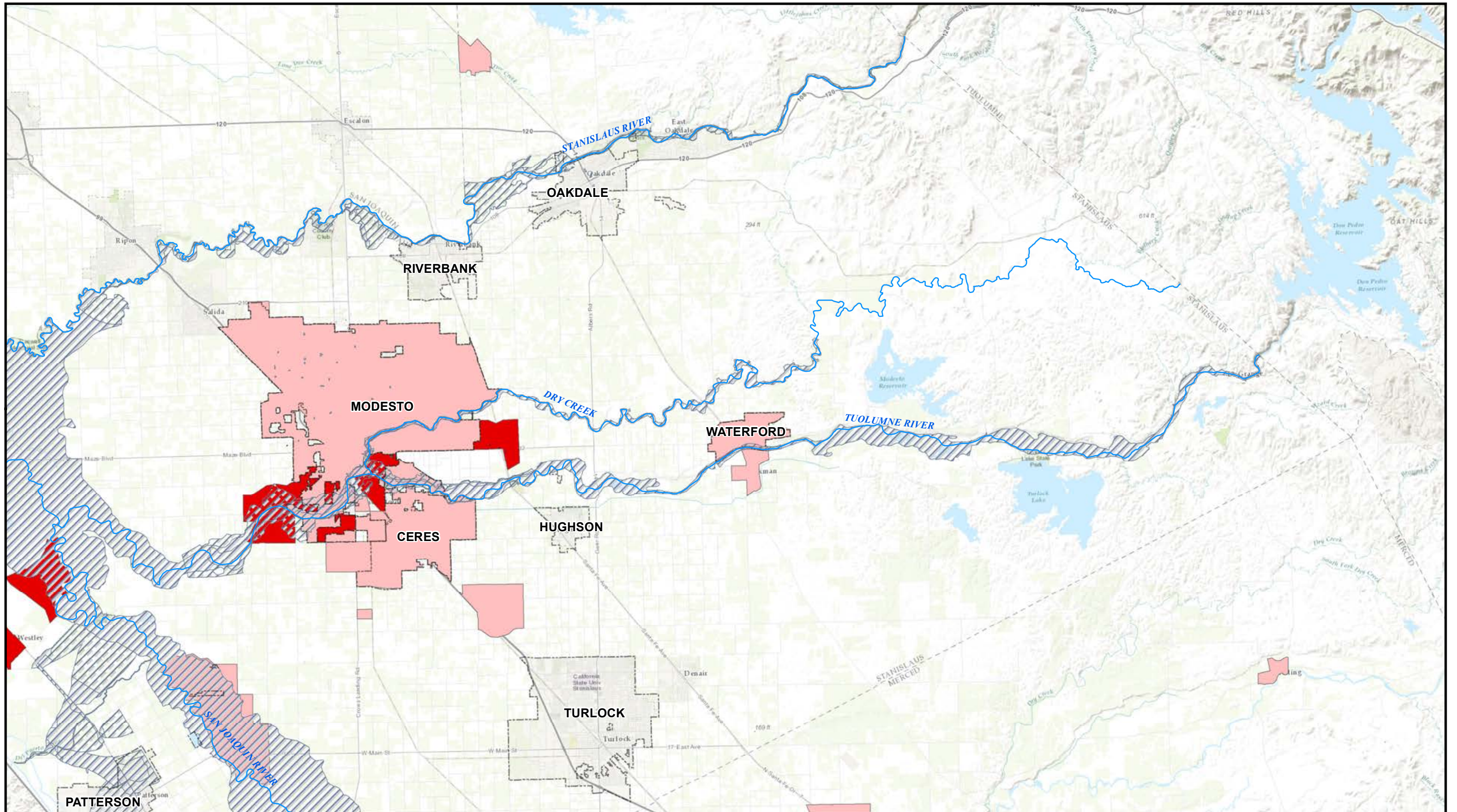
**DWR DAC Blocks**  
Severely Disadvantaged Community  
Disadvantaged Community

0 1.5 3  
Miles  
1 in = 3 miles  
June 2017

CITY OF MODESTO  
**DWR Disadvantaged Community (DAC) Designations  
along the Lower Tuolumne River Corridor**

FIGURE  
**2**





**PETERSON . BRUSTAD . INC**  
ENGINEERING . CONSULTING

1180 Iron Point Rd., Suite 260  
Folsom, CA 95630

Phone: (916) 608-2212  
Fax: (916) 608-2232



City Boundary

**FEMA Flood Zone**

100yr Flood Zone

500yr Flood Zone

**DWR DAC Places**

Data Not Available

Severely Disadvantaged Community

Disadvantaged Community

0 1.5 3 Miles

1 in = 3 miles

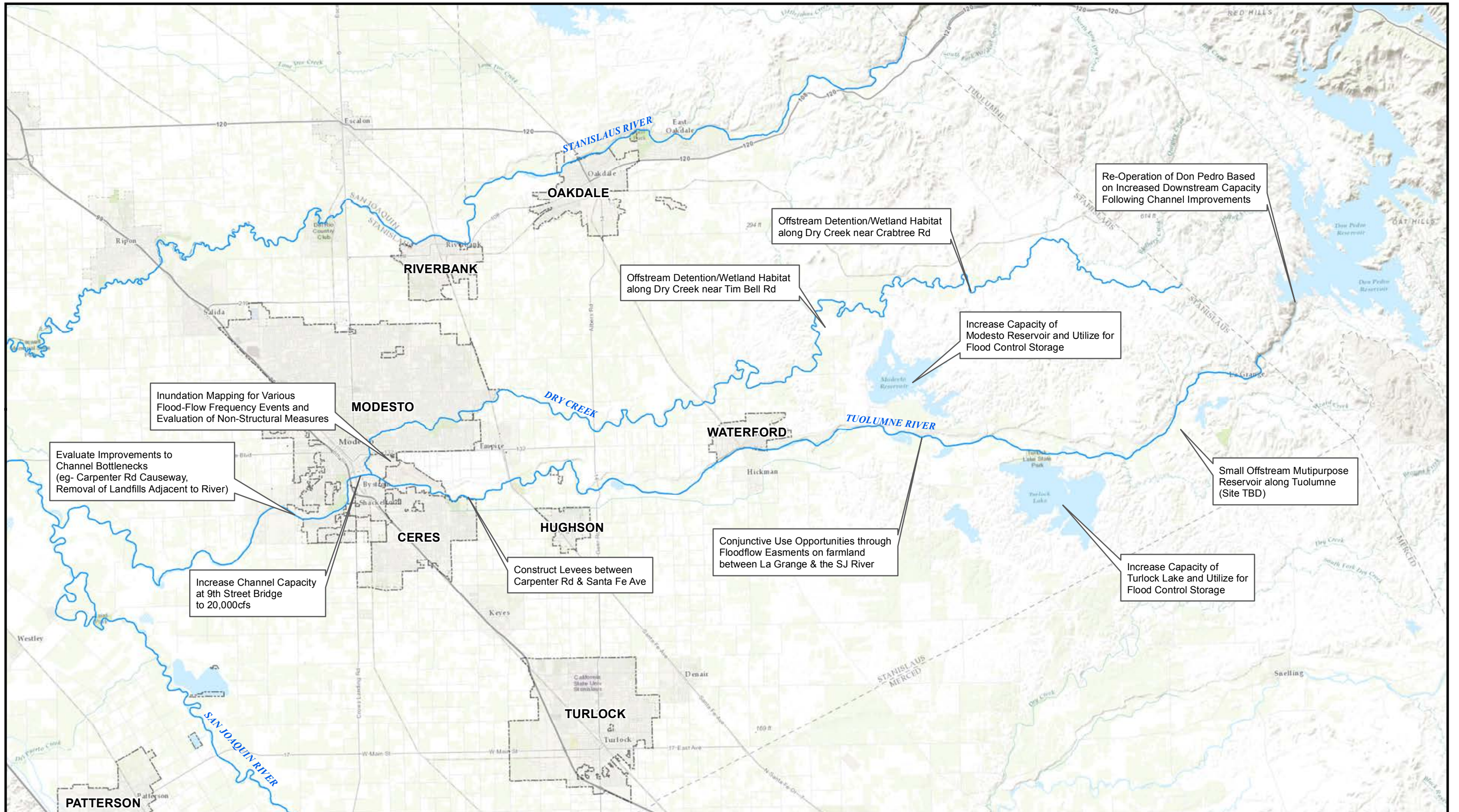
June 2017

CITY OF MODESTO

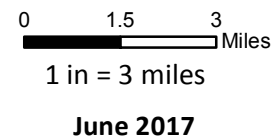
**DWR Disadvantaged Community (DAC) Designations along the Lower Tuolumne River Corridor**

FIGURE

**3**



City Boundary



**Appendix C –  
Community Survey Tool**

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**Proposition 1 Integrated Regional Water Management  
Disadvantaged Community Involvement Program  
San Joaquin River Funding Area**

**Disadvantaged Community IRWM Participation Survey**

Self-Help Enterprises and The Environmental Justice Coalition for Water are assessing the present level of Disadvantaged Community (DAC) engagement in the Integrated Regional Water Management (IRWM) program. The results from the assessment will be used to provide recommendations for efforts funded through the San Joaquin River Funding Area DAC Involvement Program.

This survey will help improve our understanding of your community's knowledge of IRWM planning processes and how to overcome any barriers to participation in IRWM-related activities. This survey will also gather information about your community's water needs. If you have any questions about this survey, please contact Ilse Lopez-Narvaez at (559) 802-1597 or [ilsen@selfhelpenterprises.org](mailto:ilsen@selfhelpenterprises.org). Thank you for taking the time to share your thoughts with us.

Date: \_\_\_\_\_

Name/Title of Person Completing Survey: \_\_\_\_\_

Community/Entity Name: \_\_\_\_\_

Street Address: \_\_\_\_\_

Telephone: \_\_\_\_\_

Email Address: \_\_\_\_\_

Preferred Language for Correspondence: \_\_\_\_\_

1. Which of the following best describes you? (Select one)
  - a. Water district/company/system director or manager
  - b. Water district/company/system staff
  - c. Private well owner
  - d. Community resident
  
2. On a scale of 1 to 5, with 5 being very knowledgeable, how would you rate your knowledge about IRWM? Please circle your answer.

Not Knowledgeable    1    2    3    4    5    Very Knowledgeable
  
3. In which IRWM region is your community located? Please circle your best answer.
  - a. American River Basin IRWM
  - b. Cosumnes, American, Bear, Yuba (CABY) IRWM
  - c. East Contra Costa County IRWM
  - d. East Stanislaus IRMW
  - e. Eastern San Joaquin IRWM
  - f. Madera IRWM
  - g. Merced IRWM
  - h. Mokelumne/Amador/Calaveras (MAC) IRWM

- i. Tuolumne-Stanislaus IRWM
- j. Westside-San Joaquin IRWM
- k. Other: \_\_\_\_\_
- l. Do Not Know

4. Do you or a member of your community participate in IRWM meetings?

- Yes       No       Unknown

5. If yes, who participates? Select all that apply.

- a. Self
- b. Community Resident (Name: \_\_\_\_\_)
- c. Board Member (Name: \_\_\_\_\_)
- d. District/Company Staff (Name: \_\_\_\_\_)
- e. Other \_\_\_\_\_ (Please specify) (Name: \_\_\_\_\_)

6. If yes, what motivates you to participate?

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7. If no, why have you not participated?

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8. Has your community ever applied for IRWM funding?

- Yes       No       Unknown

9. If yes, was your project awarded funding?

- Yes       No       Unknown

10. If funding was not awarded or you never applied, why not?

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11. What factors, if any, prevent or make it difficult for you or your community to participate in IRWM planning efforts?

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12. What do you think is needed to support/improve community participation in IRWM planning efforts?

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13. Would you or a member of your community be interested in participating in any of the following IRWM activities? Please circle any and all activities that are of interest.

- a. Attend an IRWM board or advisory committee meeting
- b. Serve on an advisory committee or work group
- c. Attend a workshop to learn more about IRWM
- d. Host a meeting to share information about IRWM, including a site visit to your community
- e. Participate in additional, more detailed surveys, interviews, or other information sharing

14. What improvements does your community need?

- a. Water Quality
- b. Water Supply
- c. Water Metering
- d. Water Distribution
- e. Sewer Collection
- f. Wastewater Treatment
- g. Storm Water
- h. Affordability/Pricing (Water, Wastewater, Sewer, Storm water)
- i. Unknown
- j. Other \_\_\_\_\_

15. Please be more specific about your community's water needs:

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16. Are there any other people or organizations you think we should be in touch with?

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17. In the event we need to follow up, what times would work best for you?

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*Thank you for taking the time to complete this survey.*

**Proposición 1 Manejo Integral del Agua Regional**  
**Programa de Participación de Comunidades de Bajo Recursos**  
**Área de Financiación de San Joaquín**

**Encuesta de Participación de las Comunidades de Bajo Recursos en IRWM**

Las organizaciones Environmental Justice Coalition for Water y Self-Help Enterprises están evaluando el nivel de participación de las Comunidades de Bajo Recursos (DACs, por sus siglas en ingles) en el programa de Manejo Integral del Agua Regional (IRWM, por sus siglas en ingles). Los resultados de esta encuesta se utilizarán para desarrollar recomendaciones para los esfuerzos financiados a través del Programa de Participación de DACs del Área de Financiación de San Joaquín.

Esta encuesta nos ayudará a mejorar nuestra comprensión del conocimiento de su comunidad sobre los procesos de planificación de IRWM y como superar posibles barreras para la participación en actividades relacionadas con IRWM. Esta encuesta también busca recolectar información acerca de las necesidades de agua de su comunidad. Si tiene alguna pregunta sobre esta encuesta, contáctese con Ilse Lopez-Narvaez al (559) 802-1597 o [ilsen@selfhelpenterprises.org](mailto:ilsen@selfhelpenterprises.org). Muchas gracias por tomarse el tiempo para compartir sus pensamientos con nosotros.

Fecha: \_\_\_\_\_

Nombre/Título de la persona que está completando esta encuesta: \_\_\_\_\_

Nombre de su comunidad/entidad: \_\_\_\_\_

Dirección: \_\_\_\_\_

Teléfono: \_\_\_\_\_

Correo Electrónico: \_\_\_\_\_

Idioma Preferido para la Correspondencia: \_\_\_\_\_

1. ¿Cuál de los siguientes te describe mejor? (Seleccione uno)
  - a. Director o gerente del distrito/compañía/sistemas de agua
  - b. Empleado del distrito/compañía/sistemas de agua
  - c. Dueño de pozo domestico
  - d. Residente de comunidad
  
2. En una escala de 1 a 5, con 5 siendo muy informado, ¿cómo calificaría su conocimiento sobre IRWM? Por favor circule su respuesta.  
No Informado    1    2    3    4    5    Muy Informado
  
3. ¿En cuál de los siguientes grupos de IRWM se encuentra su comunidad? Por favor circule su mejor respuesta.
  - a. American River Basin IRWM
  - b. Consumnes, American, Bear, Yuba (CABY) IRWM
  - c. East Contra Costa County IRWM
  - d. East Stanislaus IRMW
  - e. Eastern San Joaquin IRWM
  - f. Madera IRWM

- g. Merced IRWM
- h. Mokelumne/Amador/Calaveras (MAC) IRWM
- i. Tuolumne-Stanislaus IRWM
- j. Westside-San Joaquin IRWM
- k. Otro: \_\_\_\_\_
- l. No lo sé

4. ¿Usted o un miembro de su comunidad participa en las reuniones de IRWM?

- Si       No       No lo sé

5. Si es así, ¿quién participa? Seleccione todas las que le correspondan.

- a. Yo
- b. Residente de comunidad (Nombre: \_\_\_\_\_)
- c. Miembro de la mesa directiva (Nombre: \_\_\_\_\_)
- d. Personal del distrito/compañía
- e. Otro \_\_\_\_\_ (Por favor especifique)

6. Si participas, ¿qué te motiva a participar? \_\_\_\_\_

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7. Si no, ¿por qué no has participado? \_\_\_\_\_

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8. ¿Alguna vez su comunidad ha solicitado financiamiento de IRWM?

- Si       No       No lo sé

9. Si ha solicitado financiamiento, ¿se le otorgaron fondos a su proyecto?

- Si       No       No lo sé

10. Si no se otorgaron fondos, o nunca solicitó, ¿por qué no? \_\_\_\_\_

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11. ¿Qué factores, si los hay, impiden o dificultan que usted o su comunidad participen en los esfuerzos de planificación de IRWM?

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12. ¿Qué crees que se necesita para apoyar / mejorar la participación de la comunidad en los esfuerzos de planificación de IRWM?

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13. ¿Estaría usted o un miembro de su comunidad interesado en participar en alguna de las siguientes actividades de IRWM? Por favor circule las actividades de interés.
- a. Asistir a una junta de IRWM o una reunión del comité asesor
  - b. Servir en un comité asesor
  - c. Asistir a un taller para aprender más sobre IRWM
  - d. Organizar una reunión para compartir información sobre IRWM, incluyendo una visita a tu comunidad
  - e. Participa en encuestas adicionales y más detalladas

14. ¿Qué progresos necesita tu comunidad?
- a. Calidad de agua
  - b. Suministro de agua
  - c. Medición del agua
  - d. Distribución de agua
  - e. Colección de drenaje
  - f. Tratamiento de aguas negras
  - g. Aguas pluviales
  - h. Asequibilidad / Precios (agua, agua de drenaje, aguas residuales, aguas pluviales)
  - i. No lo sé
  - j. Otros: \_\_\_\_\_

15. Por favor especifíquese acerca de las necesidades de agua de su comunidad:

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16. ¿Hay otras personas u organizaciones con las que crees que deberíamos estar en contacto?

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17. Si necesitamos hacer un seguimiento, ¿qué horarios serían los mejores para usted?


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*Muchas gracias por tomarse el tiempo para completar esta encuesta.*



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