

Final Needs Assessment for the Tulare Kern Funding Area Integrated Regional Water Management (IRWM) Disadvantaged Community Involvement Program

**Tulare Kern Funding Area
June 2020**

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Abbreviations

ACS	American Community Survey
BOD.....	Biochemical Oxygen Demand
CAA	Cleanup and Abatement Account
CBO	Community Based Organization
CCP	California State University, Sacramento Consensus and Collaboration Program
CDBG.....	Community Development Block Grant
CDFW	California Department of Fish and Wildlife
CDP.....	Census Designated Place
CIWQS	California Integrated Water Quality System
Cr6.....	Hexavalent Chromium
CSD.....	Community Services District
CTOX	Chronic Toxicity
CV-SALTS	Central Valley Salinity Alternatives for Long-Term Sustainability
CWC.....	California Water Code
CWD	County Water District
CWS	Community Water System
CWSRF.....	Clean Water State Revolving Fund
DAC.....	Disadvantaged Community
DACEEP	Disadvantaged Community Engagement and Education Program
DACIP.....	Disadvantaged Community Involvement Program
DBCP.....	1,2-Dibromo-3-Chloropropane
DDW	Division of Drinking Water
DMON.....	Deficient Monitoring
DO	Dissolved Oxygen
DWR.....	California Department of Water Resources
DWSRF	Drinking Water State Revolving Fund
EC.....	Electric Conductivity
EDA.....	Economically Distressed Area
EDB.....	Ethylene Dibromide
EPA.....	U.S. Environmental Protection Agency
eWRIMS.....	Electronic Water Rights Information Management System
FCSA.....	Fresno County Service Area

FMFCD	Fresno Metropolitan Flood Control District
GAMA	Groundwater Ambient Monitoring and Assessment
GIS	Geographic Information System
GSA.....	Groundwater Sustainability Agency
GSP	Groundwater Sustainability Plan
HAA5.....	Haloacetic Acids
IRWM	Integrated Regional Water Management
IRWMA	Integrated Regional Water Management Agency
IRWMP.....	Integrated Regional Water Management Plan
KDWCD	Kaweah Delta Water Conservation District
LAFCo.....	Local Agency Formation Commission
LAMP	Local Agency Management Program
LREP	Later Report
MCL	Maximum Contaminant Level
mg/L.....	milligrams per liter
mgd.....	million gallons per day
MHI.....	Median Household Income
MHP.....	Mobile Home Park
MS4	Municipal Separate Storm Sewer System
MWC.....	Mutual Water Company
N	Nitrogen
NCWS.....	Non-Community Water System
NGO	Non-Governmental Organization
NPDES.....	National Pollutant Discharge Elimination System
NTNC.....	Non-Transient Non-Community Water System
OEV	Other Effluent Violations
OWTS.....	Onsite Wastewater Treatment Systems
PAC.....	Project Advisory Committee
PCE.....	Tetrachloroethene
ppb.....	Parts per Billion
ppm	Parts per Million
PUD	Public Utility District
PWS.....	Public Water System
PWSID.....	Public Water System Identification

RWMG	Regional Water Management Group
RWQCB	Central Valley Regional Water Quality Control Board
SDAC	Severely Disadvantaged Community
SDWIS	Safe Drinking Water Information System
SGMA	Sustainable Groundwater Management Act
SHE	Self-Help Enterprises
SSWS	State Small Water System
SWRCB	State Water Resources Control Board
SWS	Small Water System
SWTR	Surface Water Treatment Rule
TCE	Trichloroethene
TCP or 1,2,3-TCP	1,2,3-Trichloropropane
TDS	Total Dissolved Solids
TKFA	Tulare Kern Funding Area
TLB	Tulare Lake Basin
TMF	Technical, Managerial, and Financial
TNC	Transient Non-Community Water System
TSS	Total Suspended Solids
TTHM	Total Trihalomethanes
µg/L	micrograms per liter
URC	Underrepresented Community
USDA	United States Department of Agriculture
USFWS	United States Fish and Wildlife Services
WDR	Waste Discharge Requirements
WTP	Water Treatment Plant
WWTF	Wastewater Treatment Facility
WWTP	Wastewater Treatment Plant

Executive Summary

DAC Involvement Program Background

The California Department of Water Resources (DWR) prepared a Request for Proposals for the Disadvantaged Community Involvement Program (Program), which was authorized by the Water Quality, Supply, and Infrastructure Improvement Act (Proposition 1).

Water Code §79745 requires DWR to expend no less than 10 percent of the Proposition 1, Chapter 7 funds authorized for Integrated Regional Water Management (IRWM) Grant Program, for the purposes of ensuring involvement of disadvantaged communities (DACs), economically distressed areas (EDAs), or underrepresented communities (collectively referred to as DACs) in IRWM planning efforts. DWR is establishing the Program to support the following objectives:

- 1) *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.*
- 2) *Increase the understanding, and where necessary, identify the water management needs of DACs on a Funding Area basis.*
- 3) *Develop strategies and long-term solutions that appropriately address the identified DAC water management needs.*

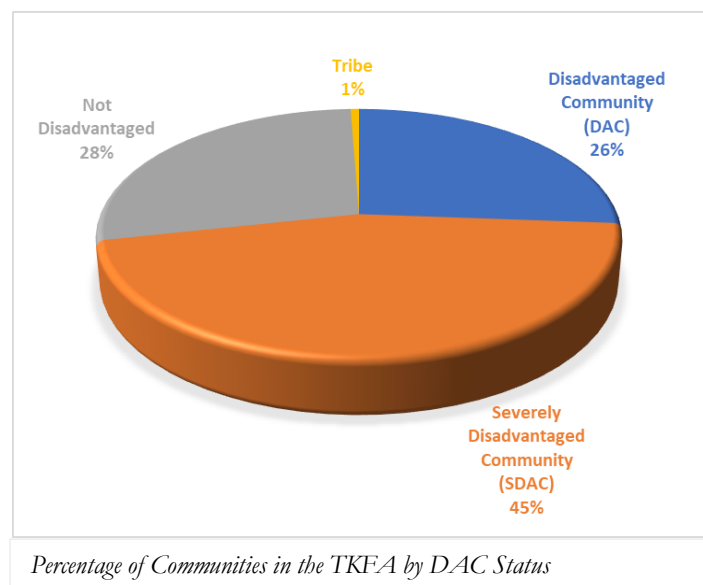
Funding Area Overview

The Tulare Kern Funding Area (TKFA) boundary is based on the Tulare Lake Hydrologic Region in the southern end of the San Joaquin Valley. It is bounded by the crest of the Sierra Nevada to the east, the crest of the Tehachapi Mountains to the south, and the crest of the Coast Range to the west.

The TKFA includes portions of four counties: Fresno, Kings, Tulare, and Kern (see Figure 2-1). The region is primarily known for its agricultural production, however urban areas are expanding as the population in the region continues to grow.

The Tulare Kern Funding Area DAC Involvement Program consists of four activities which include Grant Administration, DAC Engagement and Education Program (DACEEP), Needs Assessment, and Project Development. The program is intended to address the water-related needs of the Tulare Kern Funding Area which include water supply, water quality, affordability of water, and community engagement.

Based on the data collected for this program, there are 355 DACs identified within the TKFA, of which 226 are severely disadvantaged communities (SDACs). A DAC is a community with an annual median household income (MHI) that is less than 80 percent of the statewide MHI, and a SDAC is a community with an annual MHI that is less than



60 percent of the statewide MHI. Collectively, disadvantaged and severely disadvantaged communities are referred to as DACs. Of the 355 DACs identified, 30 are incorporated and 325 are unincorporated. There are also 3 Tribes identified.

Several communities have been consolidated in recent years. Those communities whose water systems have been consolidated into an adjacent city or community are still included in the list of communities.

Database/Mapping Tool Development

A database was developed of all disadvantaged communities in the TKFA. The project team coordinated with local, state, and federal agencies and data sources, as well as appropriate organizations to collect existing data to create the database. The project team utilized Geographic Information Systems (GIS) to map the location of disadvantaged communities in the TKFA and other available and relevant data in order to identify needs.

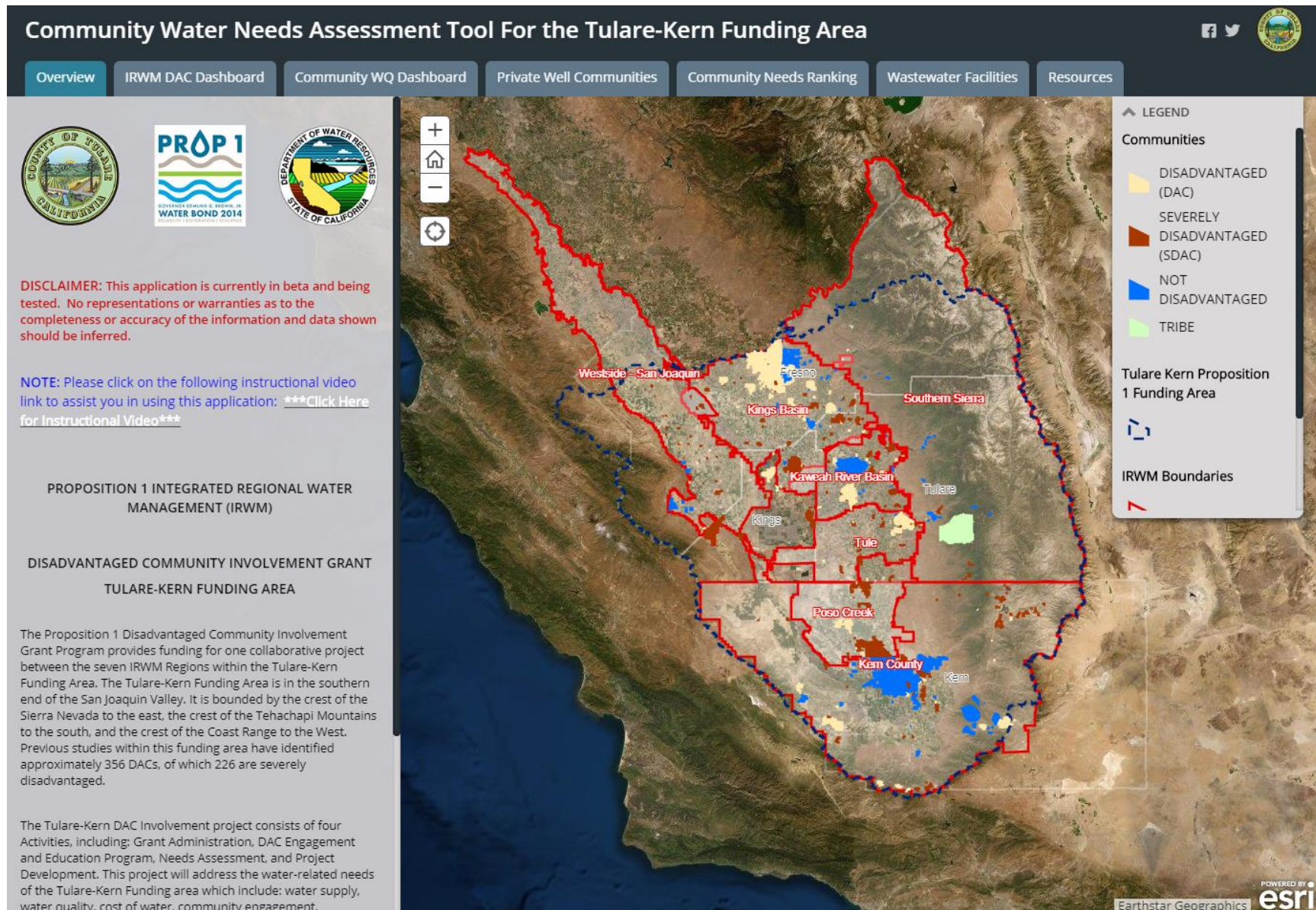
Disadvantaged community boundaries were developed based on County Local Agency Formation Commissions (LAFCo), the Tulare County database, the 2014 Tulare Lake Basin DAC Water Study, and local knowledge. Data was then gathered for the various datasets identified.

The Community Water Needs Assessment Tool for the Tulare Kern Funding Area (web mapping tool) was developed to provide a mapping interface for users to access the data collected through the TKFA DAC Needs Assessment. The web mapping tool is intended for use by Integrated Regional Water Management Agencies (IRWMAs), counties, DACs, as well as non-governmental organizations (NGOs) or consultants working with IRWMAs or DACs. The mapping tool provides various data sets in a single interface, has several tools available, and can generate reports to provide commonly needed information for users. The web mapping tool, which will be maintained by the County of Tulare, is available for public access [\(INSERT WEB LINK\)](#).

There are many potential uses for the web mapping tool. Some categories of potential uses include but may not be limited to the following:

- *IRWMAs that want to find out more information related to the DACs in their region and the respective needs*
- *Counties that want to find out more information related to the DACs within the county and the respective needs*
- *DACs that want to find out more about IRWM, funding programs, or search information regarding their own systems*
- *Counties, NGOs, or consultants that want to find out more information related to a specific community's water-related conditions and needs*
- *Advocacy groups or State representatives who want to better understand needs in this area to help drive legislation and/or funding programs*

The overview page below provides information on Proposition 1 funding, as well as a legend identifying community boundaries, the funding area, IRWM boundaries, and county boundaries. To learn more about DACs within the TKFA, there are six (6) additional tabs, which highlight DACs, Water Quality, Private Well Communities, Community Needs Ranking, Wastewater Facilities, and Resources.



Assessment of Needs

In order to assess the needs of DACs in the TKFA, several data sources were evaluated. Previous studies in the TKFA, such as the Tulare Lake Basin DAC Water Study and the Kings Basin DAC Pilot Study, identified needs of DACs in the region. Through these studies and Integrated Regional Management Plans (IRWMPs), there was an existing understanding of DACs. This needs assessment expands on the previous DAC efforts within the TKFA.

Disadvantaged community boundaries were developed based on County LAFCo, the Tulare County database, the 2014 Tulare Lake Basin DAC Water Study, and local knowledge. Data were then gathered for the various datasets identified.

Key data included in Needs Assessment include:

- DAC Status (DAC, SDAC, Tribe, or Non-DAC)
- Number of Service Connections
- Population
- Source(s) of Drinking Water Supply
- Estimated Number of Public Wells
- Drinking Water Quality
- Drinking Water Quality Compliance
- Private Well Communities
- Wastewater Treatment Facilities (WWTF)
- WWTF Enforcement Actions

The focus of the Needs Assessment was to explore vulnerabilities identified through the Project Advisory Committee and previous studies.

Needs Assessment Findings

Many communities throughout the TKFA are vulnerable due to limited water supply reliability. Communities that rely on a single water source are vulnerable to the failure of the one source. Similarly, communities where residents rely on individual, private wells are vulnerable. If the individual household well fails or goes dry, the residents relying on that well do not have backup supply. In total, 162 (45%) DACs in the funding area rely on either a single water source or private wells.

Water quality issues are prevalent throughout the funding area as well. While many communities are able to get new sources of water or treatment to remove contaminants, these projects often take several years to implement. For example, several communities are still trying to achieve compliance for contaminants such as arsenic, for which the maximum contaminant level was reduced from 50 micrograms per liter (µg/L) to 10 µg/L in 2008, causing many communities in the Central Valley to become out of compliance. Many of these same communities are now also having to deal with the newly regulated TCP. Currently, 64 (18%) DACs in the funding area have a compliance order for at least one regulated drinking water contaminant.

Approximately 106 Wastewater Treatment Facilities (WWTFs) were identified in the TKFA. This includes both DAC and non-DAC communities, cities, and county service areas. Of the active WWTFs, approximately 58 (55%) have had violations, and approximately 29 (27%) have had enforcement actions in the past five years. Many DACs are not served by a WWTF, and rely on individual septic systems, which are often old and failing.

In order to assess the needs of DACs within the TKFA, community needs ranking criteria were developed based on some of the vulnerabilities discussed in this report. The community needs assessment ranking provides scoring based on the level of need for each community.

Needs assessment scores for each community are based on four main criteria:

1. *DAC Status*
2. *Source of Supply (single source versus multiple sources)*
3. *Water Quality*
4. *Funding (projects already funded versus no funding)*

The community needs ranking is scored on a scale of 0-5, as follows:

Score	Assessment	Color Code
0	No Level of Need	Grey
1	Low Level of Need	Green
2	Moderate Level of Need	Yellow
3	Moderate-High Level of Need	Orange
4-5	High Level of Need	Red

Based on this evaluation, there are approximately 46 (13%) communities in the TKFA with a score of 4 or 5, indicating that they have a high level of need.

Figure 17-1 through Figure 17-9 illustrate the community needs throughout the TKFA. Individual community reports showing the scores for each criterion are available through the web mapping tool.

In addition to the water supply and quality vulnerabilities, many of communities have water and sewer rates that exceed the affordability threshold of 1.5% of the MHI, as used by the State Water Resources Control Board. The Needs Assessment survey also resulted in several comments about aging infrastructure. This is not easily definable and relies on specific knowledge of a water system.

Recommendations

The web mapping tool generated through this program should continue to be maintained and updated on a regular basis. This is a valuable tool to allow communities, counties, IRWMAs, and the State to track and understand the needs of DACs.

The State should continue to provide funding assistance opportunities for communities with water supply, water quality, water or sewer infrastructure, and wastewater treatment related needs. Communities and technical assistance providers should continue to seek these sources of funding assistance.

Initiatives at the state level should continue to encourage consolidations for both water and sewer services. As found in previous studies, the lack of economies of scale in some of these small communities makes it challenging to properly operate and maintain the water and sewer infrastructure. Consolidating with a neighboring larger community or city may help resolve some of these challenges.

IRWMAs should continue to engage DACs in the planning processes. In addition, DACs should become more involved as information and resources, as well as opportunities for funding assistance, can be shared.

1 Introduction

1.1 Proposition 1 Disadvantaged Community Involvement Program

The California Department of Water Resources (DWR) prepared a Request for Proposals for the Disadvantaged Community Involvement Program (Program), which was authorized by the Water Quality, Supply, and Infrastructure Improvement Act (Proposition 1).

Water Code §79745 requires DWR to expend no less than 10 percent of the Proposition 1, Chapter 7 funds authorized for Integrated Regional Water Management (IRWM) Grant Program, for the purposes of ensuring involvement of disadvantaged communities (DACs), economically distressed areas (EDAs), or underrepresented communities (collectively referred to as DACs) in IRWM planning efforts. DWR is establishing the Program to support the following objectives:

- 1) *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.*
- 2) *Increase the understanding, and where necessary, identify the water management needs of DACs on a Funding Area basis.*
- 3) *Develop strategies and long-term solutions that appropriately address the identified DAC water management needs.*

DWR requested a single Funding Area-wide proposal from each of the 12 Proposition 1 Funding Areas. The Tulare Kern Funding Area prepared a proposal, administered by the County of Tulare, for one collaborative project between the seven (7) Integrated Regional Water Management (IRWM) Regions within the Tulare Kern Funding Area (TKFA), which include: Kaweah River Basin, Kern, Kings Basin, Poso Creek, Southern Sierra, Tule River Basin, and Westside San Joaquin.

This project will address the water-related needs of the TKFA, which include water supply, water quality, cost of water, and community engagement.

1.2 Overview of the IRWM Program

Integrated Regional Water Management is a collaborative effort to identify and implement water management solutions on a regional scale that increase regional self-reliance, reduce conflict, and manage water to concurrently achieve social, environmental, and economic objectives. This approach delivers higher value for investments by considering all interests, providing multiple benefits, and working across jurisdictional boundaries. Examples of multiple benefits include improved water quality, better flood management, restored and enhanced ecosystems, and more reliable surface and groundwater supplies.

The IRWM program began in 2002 when the Regional Water Management Planning Act (Senate Bill 1672) was passed by the Legislature. Since then, various bond acts approved by California voters have provided over \$1.5 billion in State funding to support and advance integrated, multi-benefit regional projects. Cities, counties, water districts, community/environmental groups, Tribes, and others across the State have worked collaboratively to organize and establish 48 regional water management groups, covering over 87 percent of the State's area and 99 percent of its population.

Over the years, numerous IRWM planning grants have helped Regional Water Management Groups (RWMGs) develop, adopt and update IRWM plans to identify strategies and projects to address the unique needs and conditions of their regions. IRWM implementation grants awarded to date have resulted in implementation of more than 800 IRWM projects providing a wide range of benefits. More recently, grants have been awarded to increase involvement of disadvantaged communities and underrepresented communities (including Tribes) in the regional IRWM planning and decision-making processes.

1.3 Tulare Kern Funding Area DAC Involvement Program Activities

The Tulare Kern Funding Area DAC Involvement Program consists of four activities which include Grant Administration, DAC Engagement and Education Program (DACEEP), Needs Assessment, and Project Development. The program was intended to address the water-related needs of the Tulare Kern Funding Area which include water supply, water quality, cost of water, and community engagement.

1.3.1 Grant Administration

The Grant Administration activity includes coordinating with IRWM regions within the Tulare Kern Funding Area to develop draft and final DAC involvement grant proposals. Two subtasks are associated with the Grant Administration activity.

The first subtask, Project Administration, consists of coordinating the various project activities. It includes communicating with the project team, tracking activity progress and schedule, receiving deliverables associated with each task, and conducting project team coordination meetings.

The second task includes producing a final report that includes this funding-area wide needs assessment in addition to a summary of all other project activities.

California State University, Sacramento, Consensus and Collaboration Program (CCP) provides facilitation services for Project Advisory Committee (PAC) meetings.

1.3.2 DAC Engagement and Education Program

The DAC Engagement and Education Program (DACEEP) activity consists of developing a regional involvement program that will build understanding of DAC needs and the IRWM process and will encourage DAC participation and engagement in IRWM activities. An assessment of present circumstances was prepared as a first order of work, and additional activities are being conducted based on the results of that assessment.

The objectives of the DACEEP are to:

- *Develop a regional involvement program that builds understanding of community water needs and the IRWM process;* and
- *Encourage DAC participation and engagement in IRWM activities.*

Several tasks have been or are being conducted through the DACEEP, including the following:

- *Assessment of Past or Present DAC Engagement*
- *Community Water Needs Assessment Support*
- *Community and Tribal Outreach and Education*

- *Coordination with the Project Advisory Committee*
- *Develop Individual DAC Engagement and Outreach Recommendations for IRWM Regions*
- *Develop IRWM Participation Recommendations for DACs that are outside an IRWM Region*
- *Provide Technical Assistance / Assist DACs to Prepare Funding Applications*
- *Conduct Pre-Application and Grant Application Workshops or Trainings*

1.3.3 Needs Assessment

The Needs Assessment activity includes conducting a review of DACs throughout the funding area to provide a better understanding of the water management needs of the DACs. The results of the Preliminary Needs Assessment completed in January 2019 were used to direct resources for both the DACEEP and the Project Development activities.

The Needs Assessment activity expanded on and updated the database developed through the Tulare Lake Basin Disadvantaged Community Water Study (TLB Study) (completed in 2014). In addition, the activity included development of web portal for public access that includes mapping tools of DACs, including community characteristics, drinking water quality, wastewater facilities, private well communities, and additional resources.

1.3.4 Project Development

The Project Development activity included establishing guidelines for project applications and developing an application package that was distributed to DACs and IRWMs.

Each Integrated Regional Management Agency (IRWMA) selected the top projects in their region to be included in Project Development activities. The Project Advisory Committee (PAC) scored and ranked the remaining projects from each IRWM region against each other to recommend to the County of Tulare which projects would proceed to Project Development.

Twenty-five (25) projects are currently being conducted by eight (8) different consultants, as funded through this DAC Involvement Program Project Development activity.

1.4 Objectives of the Needs Assessment

This Needs Assessment was conducted as part of the DAC Involvement Program. The objectives of the Needs Assessment include:

- Provide a better understanding of the water management needs of DACs in the Funding Area; and
- Help direct resources and inform funding for both the Project Development Activities and the DAC Engagement and Education Program activities.

The purpose of the Needs Assessment is to provide a better understanding of the water management needs of DACs in the Funding Area. The Needs Assessment was presented in two phases: Preliminary Needs Assessment and Final Needs Assessment.

The Preliminary Needs Assessment (Phase I) included a compilation of the publicly available information throughout the TKFA and provided a preliminary assessment of the water supply, water quality, and wastewater related issues of DACs. The results of the Preliminary Needs Assessment were used to help direct resources and funding for both the Project Development Activities and the DAC Engagement and Education

Program activities. The TKFA determined that it would be important to have the Preliminary Needs Assessment completed early in the program, so that sufficient time could be dedicated to the Project Development activities. The Preliminary Needs Assessment was submitted to the Project Advisory Committee in January 2019.

Work continued on the Needs Assessment portion of the project to gather, compile and assess less readily available data, as recommended by the PAC. This Final Needs Assessment (Phase II) is intended to provide information related to DAC needs that would be used for future IRWM funding assistance efforts. A web portal was developed through the Needs Assessment activity. The web portal provides a consolidated source of information for use by communities, counties, IRWMAs, the State, and others.

1.4.1 Preliminary Needs Assessment

The Preliminary Needs Assessment (Phase I) included Tasks 1 and 2 as described in the proposal that the PAC recommended for approval (summarized below).

Task 1 – Develop Framework for Database and Web Portal

Task 1 activities establish the framework for the database and the web portal, including initial data gathering efforts.

1. Clearly define Disadvantaged Communities for the purpose of the IRWMAs and what will be shown in the database.
2. Identify DAC boundaries using respective County LAFCo boundaries and local knowledge when the community does not have “official” boundaries.
 - a. Default boundaries will be from the current Tulare County database or 2014 TLB Study.
 - b. Define criteria for identifying private well communities.
3. Collect Community Data (DWR DAC Mapping Tool, US Census ACS 2012-2016).
 - a. Community Name
 - b. County
 - c. IRWM Region
 - d. Population
 - e. Median Household Income (MHI)
4. Determine preliminary classification of DAC status (DAC, SDAC or not disadvantaged) based on DWR/American Community Survey data.
5. Clearly define key constituents to be included in community reports and preset evaluation tools.
6. Create preliminary community report framework for PAC input.
7. Develop demonstration product of web portal framework for PAC input.

Task 2 – Develop Database and Web Portal

This task will include development of the database and web portal by compiling data and developing a web-based map and data interface to view data.

1. Gather publicly available data.
 - a. Tulare Lake Basin DAC Water Study data
 - b. Number of Service Connections (Safe Drinking Water Information System [SDWIS])
 - c. Source(s) of Drinking Water Supply (SDWIS)
 - d. Estimated Number of Public Wells (SDWIS, Groundwater Ambient Monitoring and Assessment Program [GAMA])

- e. Drinking Water Quality (SDWIS)
 - f. Drinking Water Quality Compliance (Yes/No) (SDWIS)
 - g. Private Well Locations (as available from Counties/IRWMAs/GAMA)
 - h. Groundwater Levels (Regional DWR data, California Water Library)
 - i. Regional groundwater contours will be included in a map
 - i. Wastewater Treatment Facility (WWTF) (Yes/No) (California Integrated Water Quality System [CIWQS])
 - j. WWTF Capacity (CIWQS)
 - k. WWTF Compliance Issues (Yes/No) (CIWQS)
2. Conduct Remote/Private Community Research (map study).
 3. Collect MHI information based on Community Income Surveys (as available, provided by others).
 4. Update community reports.
 5. Create web-based map and data interface with themes of interest.

1.4.2 Final Needs Assessment

The Final Needs Assessment (Phase II) includes Tasks 3 and 6 as described in the proposal that the PAC recommended for approval (summarized below) and additional items that the PAC may recommend based on Phase I activities.

Task 3 – Additional Data Collection and Integration

This task includes additional data that were suggested at the May 2018 PAC meeting. The Needs Assessment may include the information listed below for select communities, where additional site assessments and community reviews are conducted as part of the DAC Engagement and Education Program (DACEEP). This information may also be requested as part of the applications for Project Development funding.

1. Gather Additional Data Sets and Integrate into Web Portal.
 - a. Capacity of Wells (as available from DACEEP Surveys)
 - b. Capacity of Surface Water Supplies (drinking water supply) (as available from DACEEP Surveys)
 - c. Systems with Metered Water Services (as available from DACEEP Surveys)
 - d. Well Construction Depth (as available from GSA efforts)
 - i. Include sanitary seal depth, if available
 - e. Water Rates (as available from Counties and DACEEP Surveys)
 - f. Sewer Rates (as available from Counties and DACEEP Surveys)
 - g. Private Well Locations (Domestic) (based on Well Completion Reports and/or GSA Efforts)
 - h. Private Well Depth and Water Quality (as available, provided by others)
 - i. No Confidential Data will be Collected or Included
 - i. WWTF Issues or Insufficiencies (Cause of Violations)
 - j. Type of Wastewater System (Central Valley Regional Water Quality Control Board [RWQCB])
 - k. Storm Water Facility Information (Yes/No, Responsible Entity) (as available from DACEEP Surveys and Counties)
 - l. Project Development and/or Funding Status (Funding Agencies; Local Knowledge)
 - i. Communities with successful solutions completed
 - ii. Communities with funding in process
 - iii. Provide link to Funding Fair website or potential funding sources
 - m. System Expenses and Revenues (as available from DACEEP Surveys)

Task 6 – Additional Needs Assessment Data Requests

1. Compile and Incorporate Surface Water Rights Information.
 - a. Obtain Water Rights Information Map System file
 - b. Incorporate Water Rights Data into Needs Assessment
 - c. Review Water Rights Data
 - d. Develop Story Map for the web portal showing Surface Water Users
2. Develop and Incorporate Septic Density Evaluation.
 - a. Request Septic Location Information from Counties
 - b. Incorporate County Septic Information, as available
 - c. Incorporate DACEEP Survey Information, as available
 - d. Using data sets such as Rural Residential land use classification or county address points (if available), identify probable septic communities
 - e. Evaluate septic density based on property size and/or housing density
 - f. Present septic density ranges (i.e., < 1 per acre; >1 per acre; >5 per acre)
 - g. Review septic density evaluation and compare with private well data and mapping tools

2 Project Area

2.1 Overview of Funding Area

The TKFA boundary is based on the Tulare Lake Hydrologic Region. The TKFA is primarily known for its agricultural production and its population is still growing rapidly.

Previous studies within this funding area had identified approximately 353 unincorporated DACs, of which 201 are severely disadvantaged. While previous studies focused on unincorporated communities, this Needs Assessment includes both incorporated and unincorporated communities. This needs assessment identifies 355 DACs, of which 225 are severely disadvantaged. There are also three (3) Tribes identified in the TKFA.

2.2 DAC Needs Overview

Previous studies in the TKFA, such as the Tulare Lake Basin DAC Water Study and the Kings Basin DAC Pilot Study, identified needs of DACs in the region. DAC needs they identified included lack of funding, poor water quality, and lack of engaged residents within DAC communities. The existing understanding of DAC needs is discussed further in Section 5 - Existing Understanding of DAC Needs.

The DAC needs identified in previous studies still apply to DACs currently. An updated review of water supply and water quality are provided in subsequent sections.

2.3 Geography

The TKFA is in the southern end of the San Joaquin Valley. It is bounded by the San Joaquin River to the north, the crest of the Sierra Nevada to the east, the crest of the Tehachapi Mountains to the south, and the crest of the Coast Range to the west.

The TKFA includes portions of four counties: Fresno, Kings, Tulare, and Kern (see Figure 2-1). The region includes the entirety of Kings and Tulare Counties and most of Fresno County and Kern County.

2.4 Hydrology

The Tulare Basin hydrologic unit includes valley floor alluvial fans of the Kings, Kaweah, Tule, and Kern Rivers; several lesser streams from the Sierra foothills; the historic lakebed of the great Tulare Lake and other historic lakes; and the southwestern uplands. While most Sierra Nevada rivers flow into the San Joaquin Valley and ultimately out to the Pacific Ocean, the four major southern Sierra rivers: the Kings, Kaweah, Tule, and Kern, as well as a number of lesser streams, including Deer Creek, White River, and Poso Creek, all flow west across the Central Valley into the Tulare Basin's terminal lakes.

The Tulare Basin receives water from five sources: precipitation, runoff from local rivers and streams, groundwater, State Water Project delivery, and Central Valley Project delivery. During much of the time, irrigation and other water supply requirements determine the quantity and movement of water in the Tulare Basin. In years of high winter rainfall and spring snowmelt runoff, flood control concerns influence water movement. In average and drier years, surface water moves throughout the Basin primarily by gravity flow in natural stream channels and constructed canals or ditches. In some locations, pumping distributes irrigation

water or drains water.

A variety of entities manage water in the Tulare Basin: public agencies (irrigation, water storage, drainage, and other districts), water banks, and private landowners. This requires careful planning and balance to provide water for diverse needs including wildlife habitat and wetlands, agriculture, groundwater banking and recharge, subsurface irrigation tailwater disposal, flood control, storage, conveyance, and other purposes.

2.5 Integrated Regional Water Management Agencies

There are seven (7) IRWMAs within the TKFA: Kaweah River Basin, Kern, Kings Basin, Poso Creek, Southern Sierra, Tule River Basin, and Westside San Joaquin (see Figure 2-2). An expanded discussion of each IRWMA is discussed in Section 5.2 - Integrated Regional Water Management Plans.

2.6 Disadvantaged Communities

Many of the communities in the TKFA are classified as DACs and severely disadvantaged communities (SDACs) (collectively DACs) because of lower income levels in the Central Valley compared to the rest of California. In many DACs and SDACs, there is a significant population of Spanish-speaking residents which can present additional challenges for DAC outreach and engagement.

This Needs Assessment identified 130 DACs and 225 SDACs, for a total of 355 DACs within the TKFA. DAC identification is discussed in Section 6 - Disadvantaged Communities.

2.7 Water Supply

The Kings, Kaweah, Tule, and Kern rivers are the main sources of surface water runoff in the TKFA. Surface water is also provided from the water conveyance facilities in the region including the California Aqueduct, the Friant-Kern Canal, and the Cross-Valley Canal.

Groundwater typically accounts for 33 percent of the region's annual water supply. Most of the communities in the region rely primarily on groundwater for drinking water supply.

2.8 Water Infrastructure

For many DACs, inadequate or aging water infrastructure is a challenge. The water systems for many DACs are either old or failing, are not properly maintained, or have a lack of water supply redundancy. Water conservation is also an issue in some DACs. Many of the communities in the TKFA are unmetered but are gradually installing water meters as funding allows.

2.9 Water Uses

The State Water Project provides surface water for agricultural and urban uses from the California Aqueduct. The Central Valley Project provides surface water primarily for agricultural use. Water districts within the TKFA typically manage water delivery and use for agricultural water usage. In general, most of the region's surface water is used for agricultural purposes while most communities rely on groundwater for municipal water supply.

2.10 Land Use


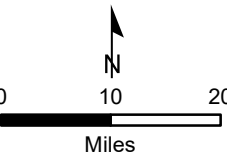



Land use within the TKFA is primarily used for agricultural purposes. More than 250 varieties of crops and farm commodities are produced in the region. The dairy industry is also prominent in the region, particularly in Tulare County. Urban development is mostly concentrated in the metropolitan areas of Bakersfield, Fresno, Porterville, Hanford, Tulare, and Visalia.

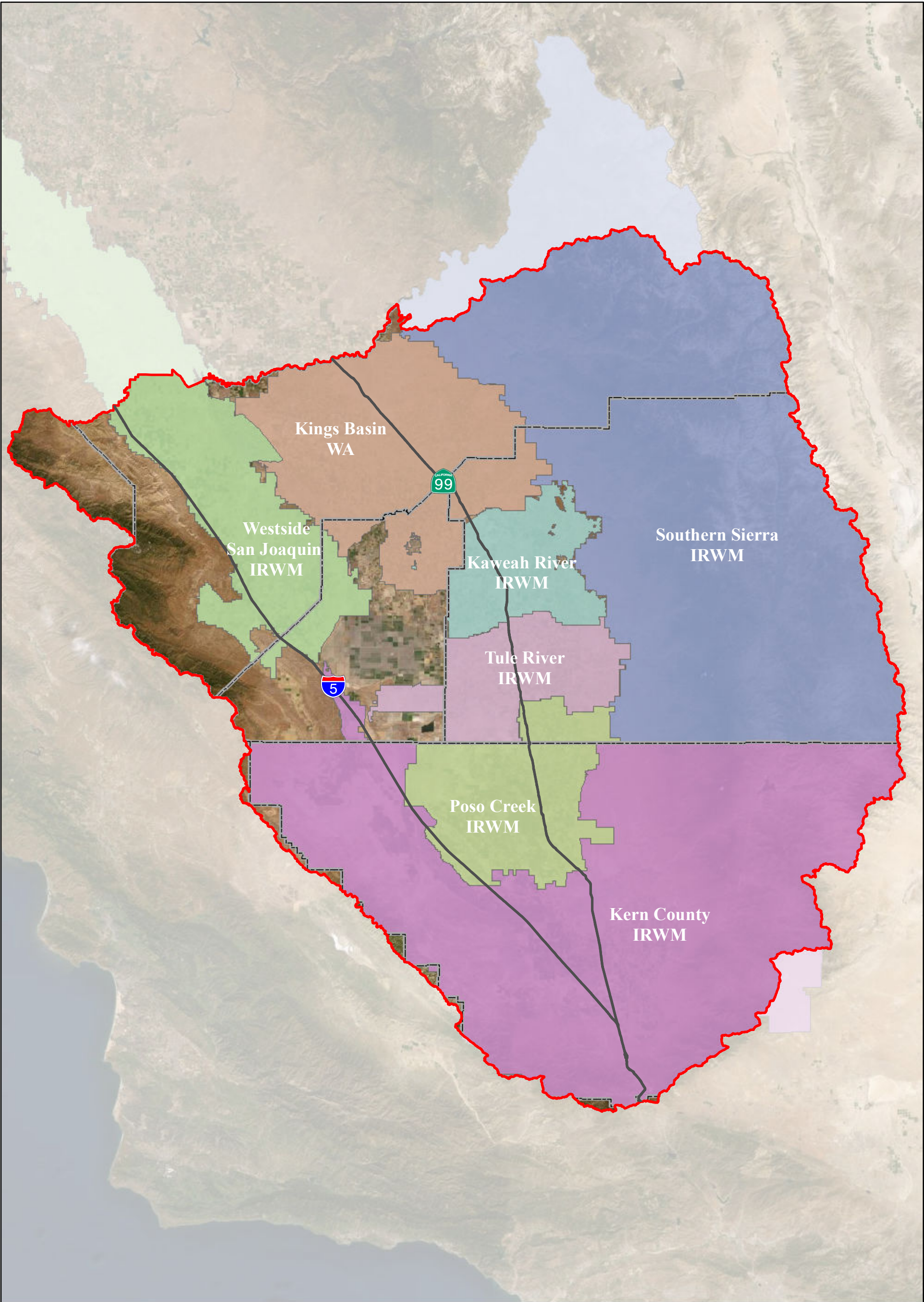
About 30 percent of the land in the region is owned by state and federal government agencies, which include parts of Sequoia National Park, Kings Canyon National Park, and the Sierra National Forest.


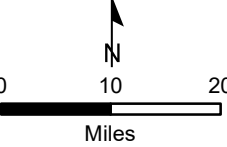



2.11 Water Quality

Many of the DACs within the TKFA are located in areas where the groundwater quality is poor. The main water quality contaminants in the TKFA are for 1,2,3-TCP, arsenic, and nitrate. Many communities are currently working towards remedying their water quality issues.



 <p>EST. 1968 PROVOST & PRITCHARD CONSULTING GROUP <i>An Employee Owned Company</i></p>  <p>0 10 20 Miles</p>	<ul style="list-style-type: none"> Tulare Kern Prop 1 Funding Area County Boundary State Transportation Routes	<p>Tulare Kern Funding Area Disadvantaged Community Needs Assessment</p> <p>Tulare Kern Funding Area Figure 2-1</p>
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 <p>EST. 1968 PROVOST & PRITCHARD CONSULTING GROUP <i>An Employee Owned Company</i></p>  <p>0 10 20 Miles</p>	<ul style="list-style-type: none"> Tulare Kern Prop 1 Funding Area County Boundary Interstate\Highway	<p>Tulare Kern Funding Area Disadvantaged Community Needs Assessment</p> <p>IRWM Agencies Figure 2-2</p>
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3 Definitions

Affordability: The ability to pay a water bill without affecting the ability to pay for other essential goods and services. California Legislature declared that the state's residents have a right to "safe, clean, affordable, and accessible water." The California State Water Resources Control Board general considers water to be affordable if water rates are less than 1.5% of the Median Household Income (MHI) for the community.

California Native American Tribe: All Indigenous Communities of California, which are on the contact list maintained by the Native American Heritage Commission, including those that are federally non-recognized and federally recognized, and those with allotment lands, regardless of whether they own those lands. Additionally, because some water bodies and Tribal boundaries cross State borders, this term may include Indigenous Communities in Oregon, Nevada, and Arizona that are impacted by water in California.

Community: A residential area that includes at least 15 housing units with adjoining parcels.

Community Water System (CWS): A public water system that serves at least 15 service connections used by yearlong residents or regularly serves at least 25 yearlong residents of the area served by the system.

Disadvantaged Community (DAC): A community with an annual median household income that is less than 80 percent of the statewide median household income. (California Water Code Section 79505.5) For the purposes of this study, the American Community Survey (ACS) for 2012-2016 will be used. The Statewide MHI for 2012-2016 is \$63,783. A community with an annual MHI less than \$51,026 is considered a DAC.

Economically Distressed Area (EDA): 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 20,000 persons or less, with an annual median household income that is less than 85 percent of the statewide median household income, and with one or more of the following conditions as determined by the department: (1) financial hardship, (2) unemployment rate at least 2 percent higher than the statewide average, or (3) low population density (Water Code Section 79702. (k)).

Federally Recognized American Tribe (Tribe): An American Indian tribal entity that is recognized as having a government-to-government relationship with the United States, with the responsibilities, powers, limitations, and obligations attached to that designation, and is eligible for funding and services from the Bureau of Indian Affairs. Furthermore, federally recognized tribes are recognized as possessing certain inherent rights of self-government (i.e., tribal sovereignty) and are entitled to receive certain federal benefits, services, and protections because of their special relationship with the United States.

Non-Community Water System (NCWS): A public water system that is not a community water system. A NCWS can serve either a transient or a non-transient population (see *Non-Transient Non-Community Water System* and *Transient Non-Community Water System*).

Non-Transient Non-Community Water System (NTNC): A public water system that is not a community water system and that regularly serves at least 25 of the same persons over 6 months per year. This may include local schools or hospitals with their own water system. (schools, factories, office buildings, hospitals).

Privately Owned: A CWS that is privately owned and is either operated for profit as a water business or as a non-profit. Privately owned systems are often operated as a necessary part of another business (e.g., mobile home parks).

Public Water System (PWS): A system for the provision of water for human consumption through pipes or other constructed conveyances that has 15 or more service connections or regularly serves at least 25 individuals daily at least 60 days out of the year.

Publicly Owned: A CWS that is owned and operated by a government or public agency or owned by a public agency and operated by a private contractor.

Severely Disadvantaged Community (SDAC): A community with a median household income less than 60 percent of the statewide average (Water Code Section 75005). A community with an annual MHI less than \$38,270 is considered a SDAC.

Small Water System (SWS): A community water system, except those serving 200 or more service connections, or any non-community or non-transient non-community water system.

**It is noted that the U.S. Environmental Protection Agency (EPA) uses a different definition for small public water systems as follows: Public water systems with fewer than 1,000 service connections and a population served of less than 3,300.*

State Small Water System (SSWS): A system for the provision of piped water to the public for human consumption that serves at least five, but not more than 14, service connections and does not regularly serve drinking water to more than an average of 25 individuals daily for more than 60 days out of the year.

Transient Non-Community Water System (TNC): A non-community water system that does not regularly serve at least 25 of the same persons over six months per year.

4 Project Approach

4.1 Database

4.1.1 Database Development and Data Gathering

A database was developed of all disadvantaged communities in the Tulare Kern Funding Area. The project team coordinated with local, state, and federal agencies and data sources, as well as appropriate organizations to collect existing data to create the database. The project team utilized Geographic Information Systems (GIS) to map the location of disadvantaged communities in the TKFA and other available and relevant data in order to identify needs.

The database is a collection of information from the County of Tulare, DWR, Safe Drinking Water Information System (SDWIS), California Integrated Water Quality System (CIWQS), Self-Help Enterprises, Provost & Pritchard GIS data resources, as well as other sources. The database includes an evaluation of water quality and supply source issues within the TKFA.

The database development began with establishing the definitions above. For the purposes of this program, the Project Advisory Committee (PAC) decided to include both incorporated and unincorporated communities in the dataset. DAC boundaries were developed based on County LAFCo's, the Tulare County database, the 2014 Tulare Lake Basin DAC Water Study, and local knowledge. Data were then gathered for the various datasets identified.

Key data included in Needs Assessment include:

- DAC Status (DAC, SDAC, Tribe, or Non-DAC)
- Number of Service Connections
- Population
- Source(s) of Drinking Water Supply
- Estimated Number of Public Wells
- Drinking Water Quality
- Drinking Water Quality Compliance
- Private Well Communities
- Wastewater Treatment Facilities (WWTF)
- WWTF Enforcement Actions

Additional data requests were solicited through the Needs Assessment Survey. This data, which was collected in coordination with the DACEEP, is summarized in **Appendix A**. Since the data is not comprehensive (responses not received for all communities), it was not able to be independently verified, and it is current only as of the date the survey was completed; without the ability to be dynamically updated, it has not been incorporated into the web mapping tool. Information requested through the Needs Assessment Surveys included the following:

- Capacity of Wells
- Capacity of Surface Water Supplies (drinking water supply)
- Systems with Metered Water Services
- Well Construction Depth
- Water Rates

- Sewer Rates
- Private Well Depth and Water Quality
- WWTF Issues or Insufficiencies
- Storm Water Facility Information
- System Expenses and Revenues
- Septic System Information

4.1.2 Database Limitations

The database includes the best available data, but it is not a complete and comprehensive database of all water supply systems in the TKFA 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 was limited or not available. Very small water systems (15 connections and less) are likely to have the most limited data available, and data for households with individual wells is mostly unavailable.

The data that has been collected and compiled are linked together using a unique ID number assigned to each community. The database used to evaluate DAC water quality issues contains limited numeric information about the water quality in the water systems listed. 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 not permitted by Division of Drinking Water (DDW), such as private individual wells, may not be fully represented in the database.

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 or to reliably determine the size of a treatment system that may be needed to address a system's water quality issues.

Due to the limitations discussed above, the primary value of the database search is to indicate the general occurrence of the challenges faced by DACs, to identify the magnitude of the problems and general location, and to identify the major contaminants.

Solutions for each water system must be developed with complete water system and water quality information. 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 contaminant issue. This database, therefore, provides general background information 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.

4.2 TKFA DAC Mapping Tool

The Community Water Needs Assessment Tool for the Tulare Kern Funding Area (mapping tool) was developed to provide a mapping interface for users to access the data collected through the TKFA DAC Needs Assessment. The mapping tool provides various data sets in a single interface, has several tools available, and can generate reports to provide commonly needed information for users.

Located on the overview page of the mapping tool, there is a link for an instructional video to assist with using the application. The overview page provides information on Proposition 1 funding, as well as a legend identifying community boundaries, the funding area, IRWM boundaries, and county boundaries.

To learn more about DACs within the TKFA, there are six (6) tabs or dashboards as follows: IRWM DAC Dashboard; Community Water Quality Dashboard; Private Well Communities; Community Needs Ranking; Wastewater Facilities; and Resources.

4.2.1 Mapping Tool Content

4.2.1.1 IRWM DAC Dashboard

The IRWM DAC Dashboard provides an overview of DACs within the TKFA. A screenshot of the IRWM DAC Dashboard is provided in Figure 4-1. A collection of widgets offers the ability to print the current view, measure distance or area, toggle visible layers within the map, and select from a collection of base maps. A “widget” is an application or component of an interface that enables a user to perform a function or access a service. Screenshots showing the widget options are provided in Figure 4-2.

The DAC Summary provides an overview of the communities located within either an IRWM boundary or County boundary, as selected by the user. The user can select the area of interest and then select “see results.”

The map will automatically zoom to the area of interest and a pie chart will display communities sorted by DAC Status, along with percent coverage and total population. Both the map and pie chart are interactive and will highlight DACs of interest and provide community attributes.

There are options below the pie chart to “generate formatted community report” and “generate consolidated systems report.” These selections prompt a pdf download of communities centric to the area of interest that was selected.

Figure 4-1. TKFA DAC Mapping Tool: IRWM DAC Dashboard Screenshot

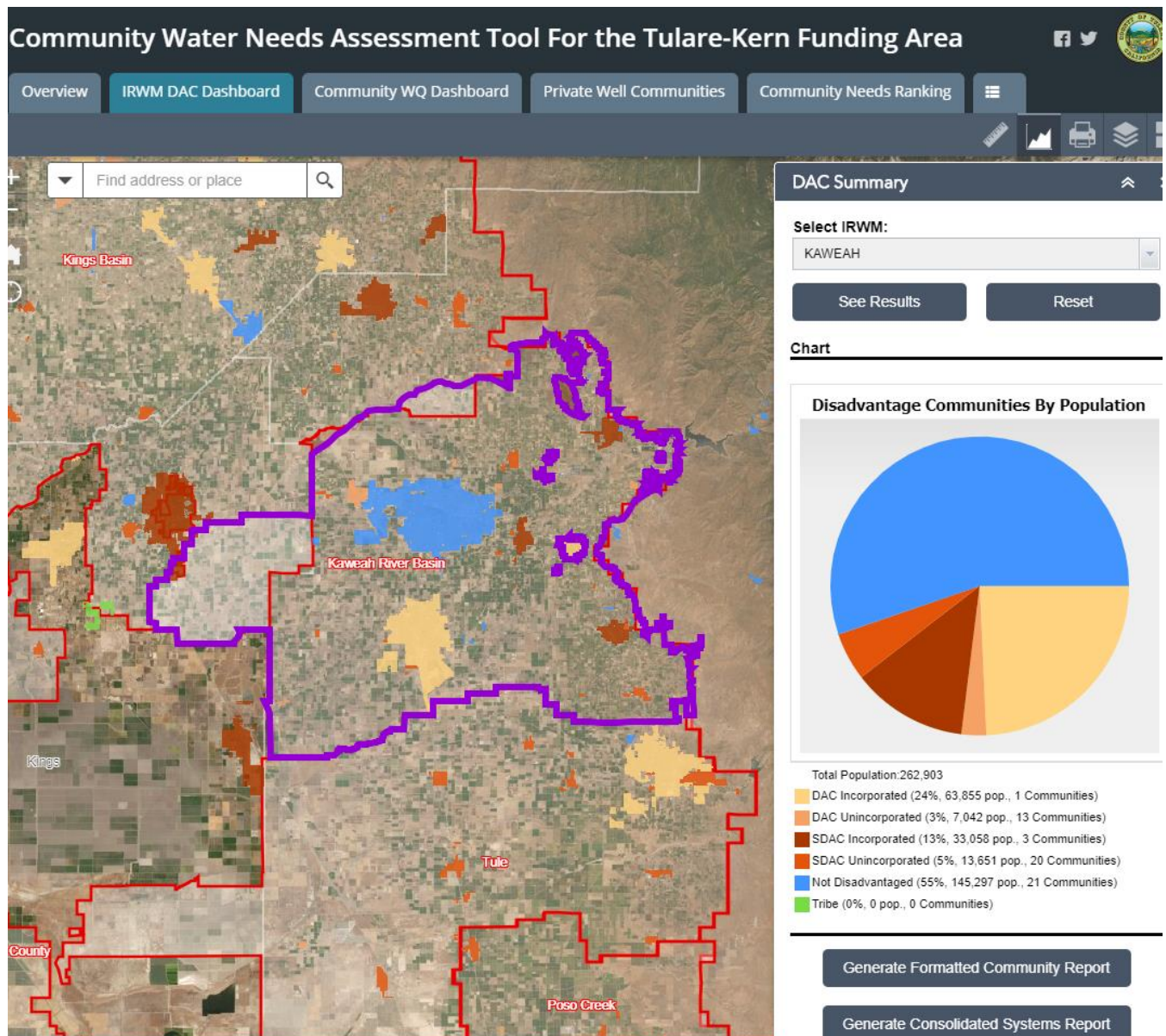
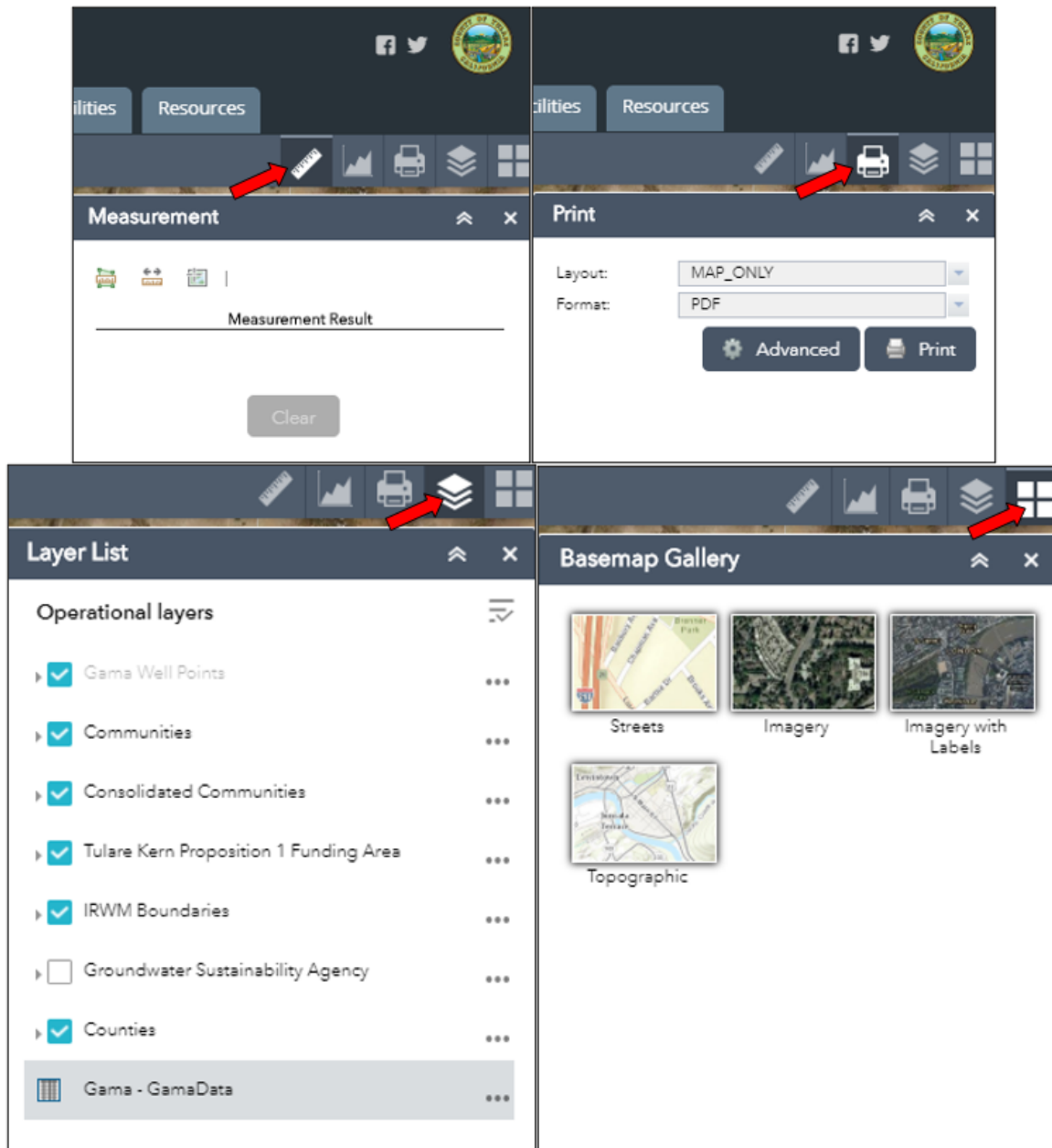


Figure 4-2. TKFA DAC Mapping Tool: IRWM DAC Dashboard Widgets



4.2.1.2 Community Water Quality Dashboard

The water quality dashboard is organized similarly to the DAC dashboard. By selecting either an IRWM or County boundary, the user can define an area of interest. The user can then select a constituent of interest and time frame (past 1 year, past 3 years, or past 10 years). The constituents available include 1,2,3-Trichloropropane (1,2,3-TCP or TCP), 1,2-Dibromo-3-chloropropane (DBCP), Arsenic, Hexavalent Chromium (Cr6), Nitrate as Nitrogen (N), Perchlorate, Tetrachloroethene (PCE), Total Dissolved Solids (TDS), Trichloroethene (TCE), and Uranium.

The data can be filtered to view: 1) all the water quality data points, 2) data points that exceed the maximum contaminant level (MCL), 3) data points that are above half of the MCL, or 4) data points that are below half of the MCL for the selected constituent.

A water quality report for the select area of interest can be downloaded, as well as reports for water systems out of compliance and those that have returned to compliance.

A direct link to the GAMA water quality data is also provided.

Again, both the pie chart and map are interactive, allowing the user to select a well point and view its associated water quality. When selecting a well point, an associated dialog box will display, which also includes the option to generate a graph from the past 10 years by selecting “view graph.” A screenshot of the Community Water Quality Dashboard is provided as Figure 4-3, and a sample water quality graph that is generated is provided as Figure 4-4.

Figure 4-3. TKFA DAC Mapping Tool: Community Water Quality Dashboard Screenshot

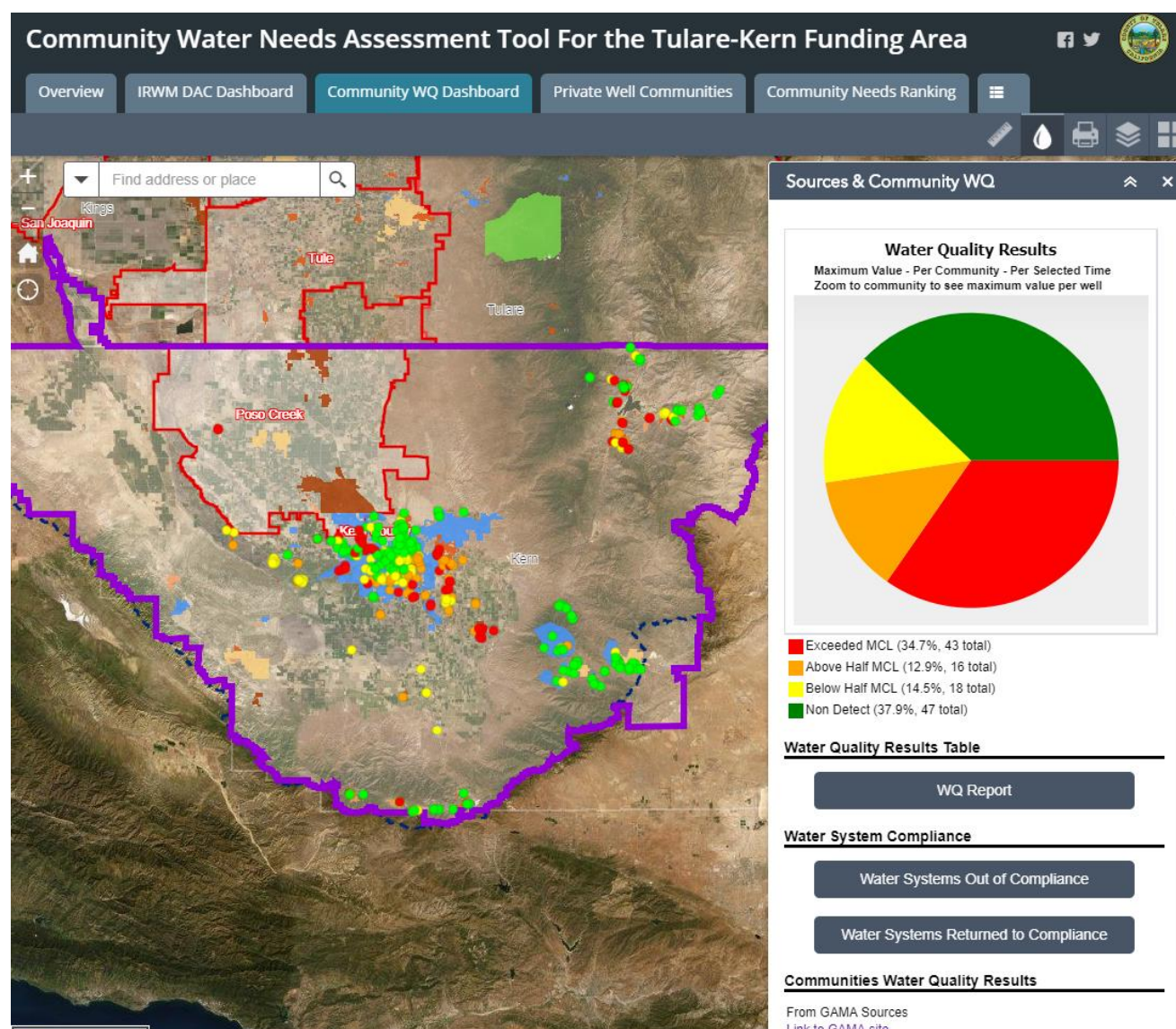
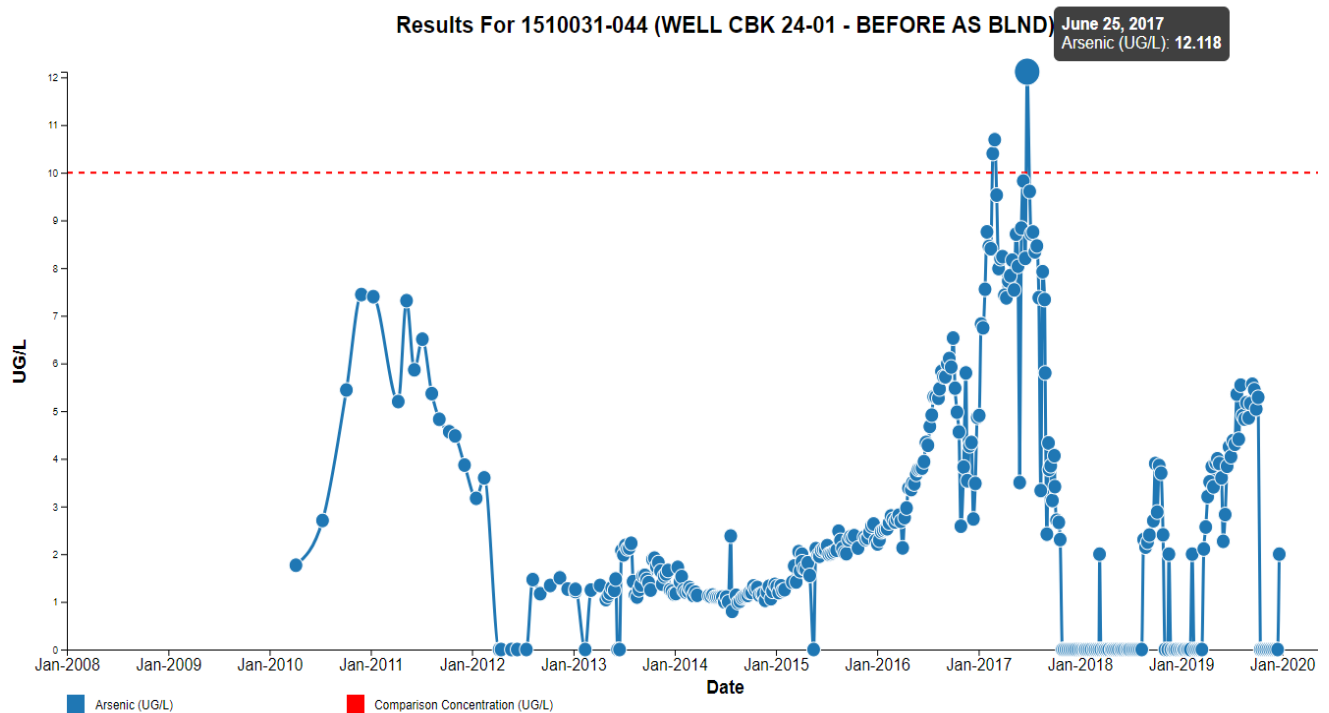


Figure 4-4. TKFA DAC Mapping Tool: Sample Water Quality Graph



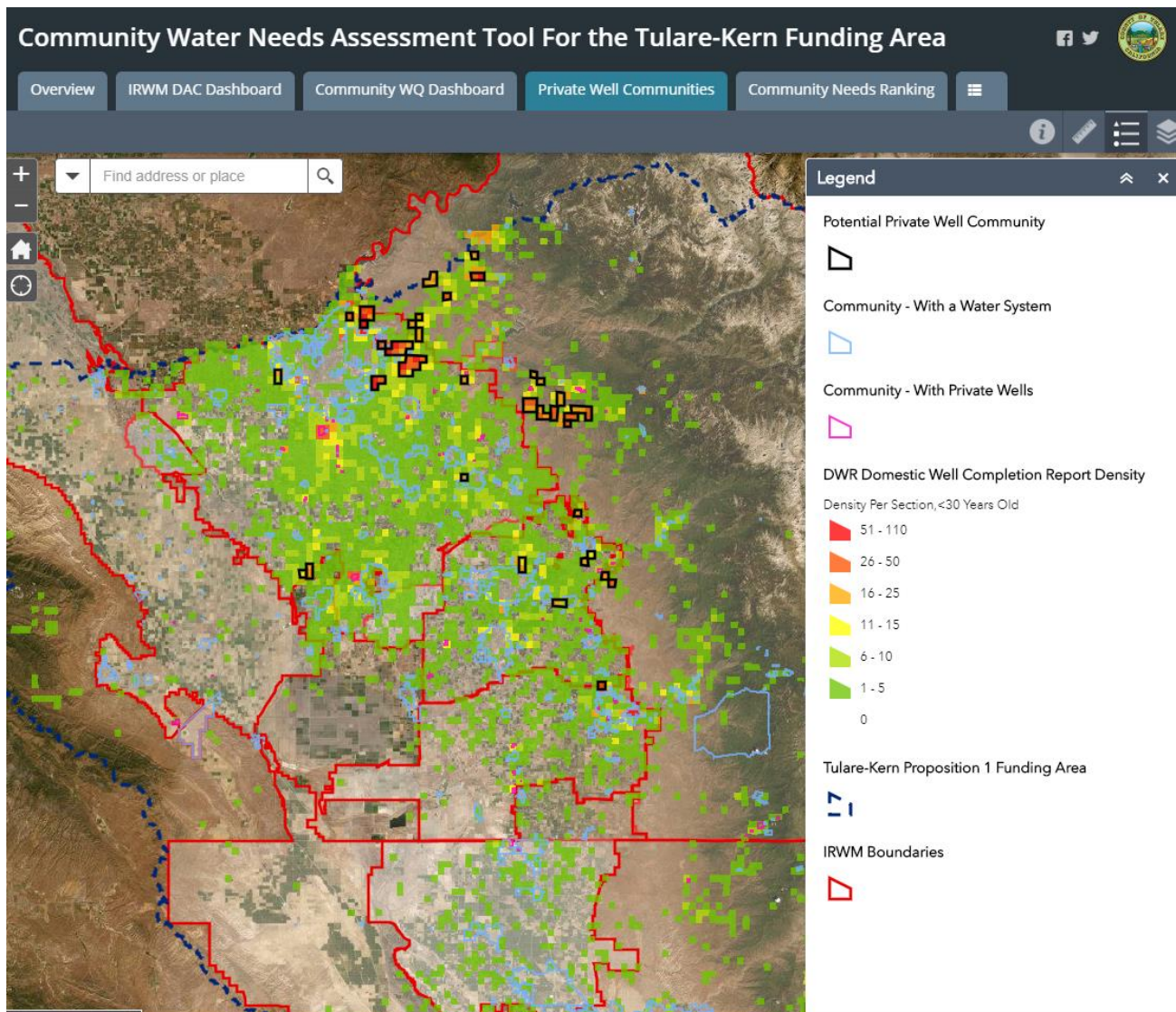
4.2.1.3 Private Well Communities

The Private Well Communities dashboard offers the viewer a visual representation of well densities based on well completion reports filed with DWR over the past 30 years (see Figure 4-5).

While many private well communities are known, the areas of high density well completion reports provide insight to other potential communities that rely on private wells.

The legend displays the potential private well communities, communities with water systems, communities lacking water systems that are reliant on private wells, and a color gradient of well completion reports based on the well density by section.

Figure 4-5. TKFA DAC Mapping Tool: Private Well Communities Screenshot



4.2.1.4 Community Needs Ranking

The Community Needs Ranking dashboard is designed to provide an assessment of a community's current water-related needs based on several criteria.

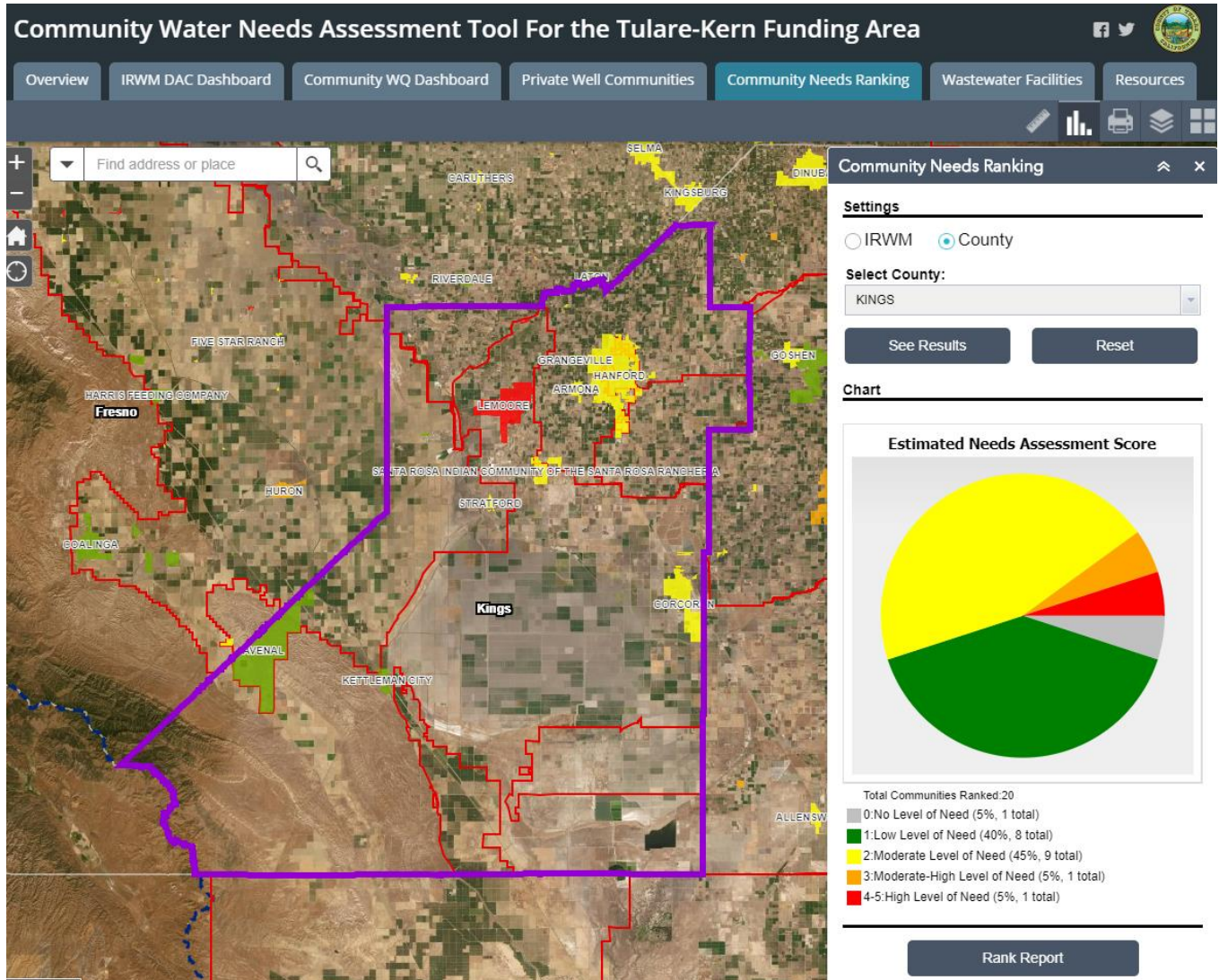
The summary, again, allows the user to select an area of interest (IRWM or County) and visually identify communities ranging from high levels of need to communities with no level of need identified. This is also shown through the interactive pie chart.

The level of need was evaluated based on four categories, including, DAC status, water quality, source of supply, and whether project funding is currently in progress.

A community ranking report for the selected area of interest can be generated which lists the communities and the needs ranking score for each community, along with a direct link to a separate report that provides

details into the ranking selection for an individual community. A screenshot of the Community Needs Ranking dashboard is provided in Figure 4-6.

Figure 4-6. TKFA DAC Mapping Tool: Community Needs Ranking Screenshot

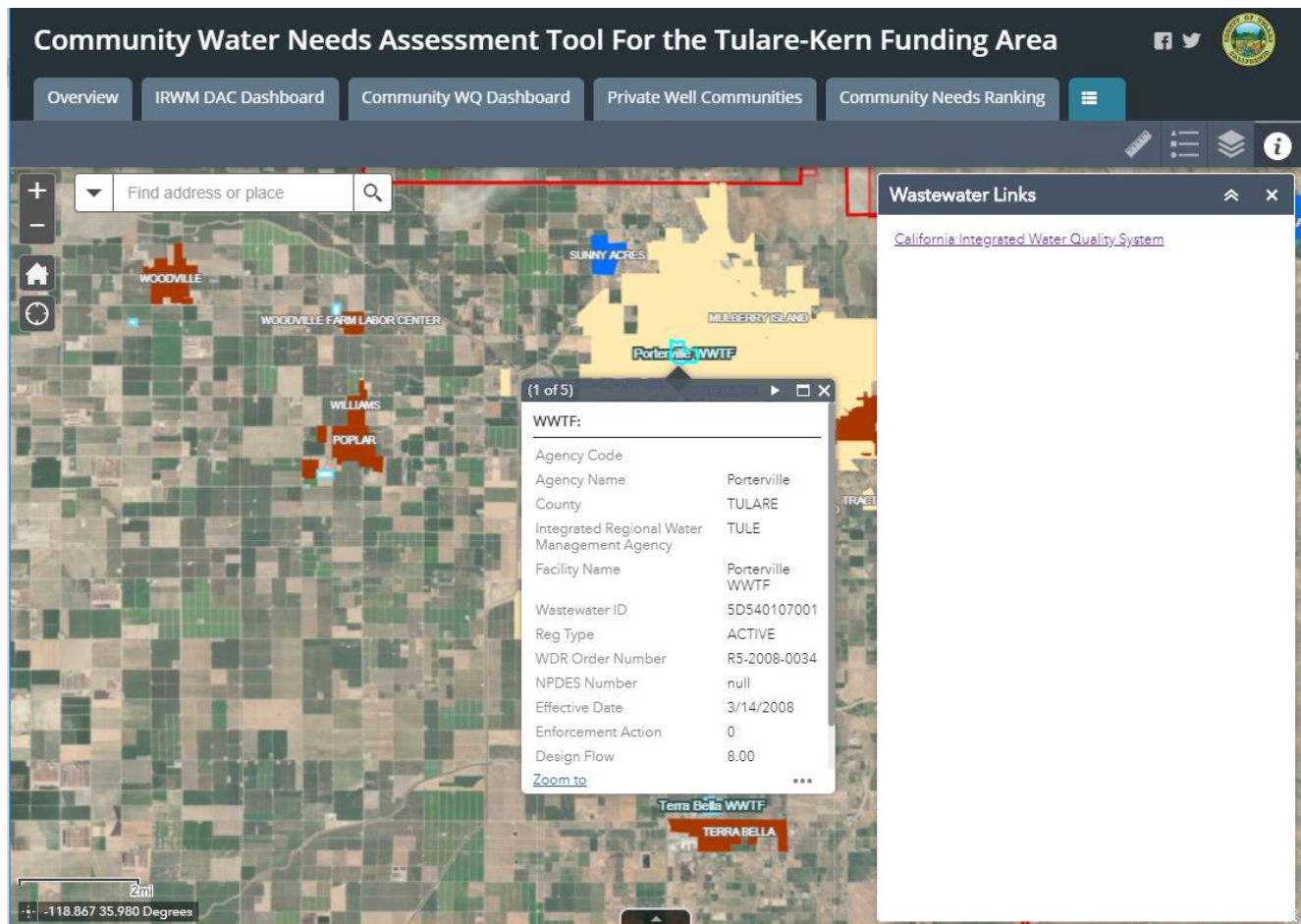


4.2.1.5 Wastewater Facilities

The wastewater facilities tab shows wastewater treatment facility (WWTF) locations throughout the funding area. Each WWTF shape can be selected to generate specific information such as WDR Order Number, NPDES Number (where relevant), number of enforcement actions, and design flow (see Figure 4-7).

A direct link to CIWQS is also provided in case additional information is needed.

Figure 4-7. TKFA DAC Mapping Tool: Wastewater Facilities Screenshot



4.2.1.6 Resources

The Resources page provides links to resources and background information used or referenced in the development of this Needs Assessment.

The Resources page provides links to the web page for each of the IRWMAs in the funding area. As the user scrolls through the each IRWMA, a description is displayed, and the map automatically zooms to the area of interest (see Figure 4-8).

Other resources that are linked include:

- *Self-Help Enterprises Community Development*
- *State Water Resource Control Board – Program Funding*
- *State Water Resources Control Board – Proposition 1 Project Summary*
- *Groundwater Ambient Monitoring and Assessment Program (GAMA)*
- *Division of Drinking Water – Safe Drinking Water Information System*
- *CalEPA/OEHHA Human Right to Water*
- *California State Water Resource Control Board – Electronic Water Rights Information Management System*
- *California Integrated Water Quality System*
- *Tulare Lake Basin Water Alliance*

Most of these resources provide direct access to and use of the website of interest within the TKFA web mapping tool, so the user never needs to leave the site (see Figure 4-9).

Figure 4-8. TKFA DAC Mapping Tool: Resources and Background Screenshot

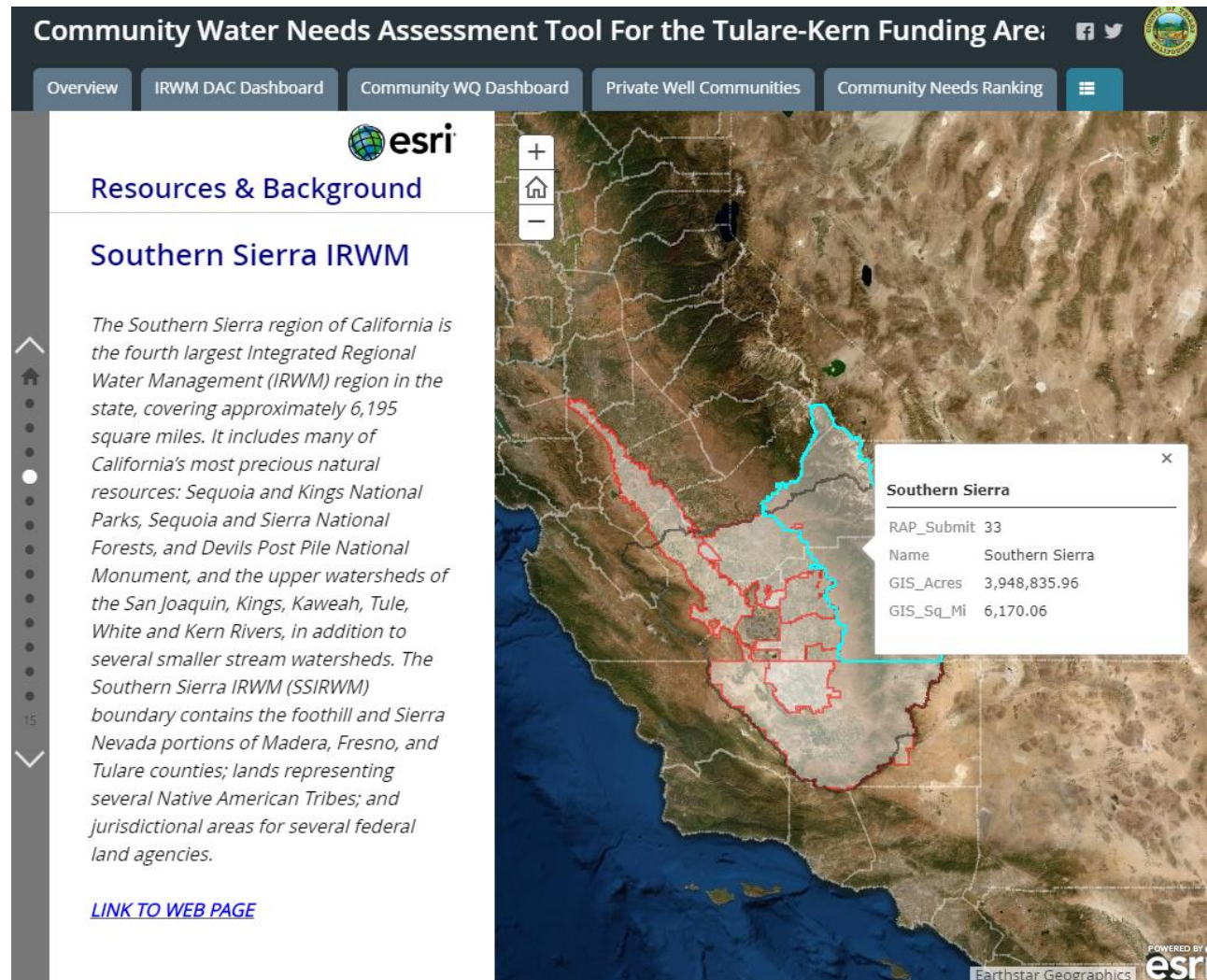


Figure 4-9. TKFA DAC Mapping Tool: Resources Direct Access Screenshot

Community Water Needs Assessment Tool For the Tulare-Kern Funding Area

Overview | IRWM DAC Dashboard | Community WQ Dashboard | Private Well Communities | Community Needs Ranking | Wastewater Facilities | Resources

Resources & Background

State Water Resource Control Board - Program Funding

The State Water Resource Control Board administers Proposition 1 funding for the following five programs: Drinking Water, Groundwater, Small Community Wastewater, Stormwater, and Water Recycling

[LINK TO WEB PAGE](#)

State Water Resource Control Board - Prop 1 Project Summary

The Water Quality, Supply, and Infrastructure Improvement Act of 2014 (Proposition 1) authorizes \$7.545 billion in general obligation bonds to fund ecosystems and watershed protection and restoration, water supply infrastructure projects, including surface and groundwater storage, and drinking water protection.

[LINK TO WEB PAGE](#)

Proposition 1 Drinking Water project locations

Note: The data visualization below is best viewed on a desktop computer monitor. In the near future data visualizations for tablet and mobile devices will be made available. We apologize for the inconvenience

Proposition 1: Drinking Water Projects
(Appropriation \$241,800,000, Allocated to 159 Projects \$241,271,119, Disbursed \$5,000,000)

Project # 1610001-007C
County: Kings
Party: Armona Community Services District
Initial Contract Date: 4/21/2016
Project Name: Arsenic Treatment
Project Type: Construction
Project Category: Primary Drinking Water Standard
Program: Drinking Water

Disbursed: \$5,000,000
Allocated to Projects: 36.310
Percentage Disbursed: 100.0%

Projects by Type

Project Category: Not Defined

[Link Here]

4.2.2 Potential Uses

There are many potential uses for the web mapping tool. Some categories of potential uses are described below, while other uses will also be likely:

- *IRWMAs that want to find out more information related to the DACs in their region and the respective needs.*
- *Counties that want to find out more information related to the DACs in within the county and the respective needs.*
- *DACs that want to find out more about IRWM, funding programs, or search information regarding their own systems.*
- *Counties, NGOs, or consultants that want to find out more information related to a specific community's water related conditions and needs.*
- *Advocacy groups or State representatives who want to better understand needs in this area to help drive legislation and/or funding programs.*

4.2.3 Ongoing Maintenance and Updates

Ongoing maintenance and updates to the web mapping tool were conducted throughout the project. As part of the project, recommendations for continued maintenance and updates of the tool were developed.

The project team is currently transitioning the web mapping tool to the County of Tulare to host and maintain. Guidelines for updating the source data for the web mapping tool are included in **Appendix D**.

4.3 Assessment of Needs

Regulations continue to evolve, and with new drinking water regulations, new regulations related to the Sustainable Groundwater Management Act (SGMA), Central Valley Salinity Alternatives for Long-Term Sustainability (CV-SALTS), and other activities, communities have a lot of information to follow and understand. Funding programs are available to assist DACs, but it may be overwhelming for the DACs, who often have limited staff, to understand and seek the appropriate funding for their specific needs.

The web mapping tool provides a community needs ranking report with a summary of estimated needs assessment score for each community by IRWM region. The community summary with estimated needs assessment scores for each IRWM region are provided in **Appendix B**.

4.4 Project Advisory Committee (PAC) Input

The Project Advisory Committee (PAC) has been involved throughout the course of the DAC Involvement Program. The PAC was involved in the initial vision and scoping of the Needs Assessment activity in 2018. In addition, the PAC received status updates at PAC meetings throughout the course of the program and had opportunities to review and provide input on intermediate deliverables, as well as final project deliverables.

A Preliminary Needs Assessment was submitted to the PAC in January 2019 for review and feedback. Written feedback was accepted, as well as comments at the January 2019 PAC meeting.

A trial link of the web mapping tool was provided to the PAC in September/October 2019 for review and feedback. Several comments were received and addressed.

The PAC meeting schedule and framework is provided in **Appendix C**.

4.5 DAC Engagement and Education Program

4.5.1 Needs Assessment Support

The DAC Engagement and Education Program provided support in the development of the Needs Assessment by assisting in the development and distribution of the Community Needs Assessment Surveys to community representatives, analyzing the Community Needs Assessment Survey responses, and preparing a summary report. The Needs Assessment Survey Data Analysis Summary Report is included in **Appendix A**.

Self-Help Enterprises compiled non-confidential information from private well sampling and sounding, which it had previously conducted. A summary table of the data provided is included in the web mapping tool and in Table 11-2.

Self-Help Enterprises compiled information from income surveys which it had previously conducted. These were filtered using only the past 5 years. The income survey results that were received for communities within the TKFA over the past 5 years were then compared with the DWR income data. For those communities, whose income survey information changed the DAC classification from the most recent DWR data, the income value from the income survey was used as the basis of the DAC classification (DAC, SDAC, or not disadvantaged).

The DAC Engagement and Education Program will also be collecting information on communities relying on individual septic systems. This task is not yet completed. Once completed, a report will be prepared through the DACEEP summarizing the findings of the septic surveys.

4.5.2 Tribal Engagement

The DACEEP is currently developing a Tribal engagement plan. The Tribal engagement plan will be similar to the DAC outreach plan to provide awareness and education regarding IRWM and the DAC Involvement Program. Initial outreach has been initiated. Next steps will be to Conduct Regional Community Meetings and Tribal Consultations to inform tribal representatives about IRWM planning, the DAC Involvement Program for the TKFA, and the findings of this Needs Assessment.

Documentation of the Tribal engagement process, findings, and recommendations will be provided through the DACEEP.

5 Existing Understanding of DAC Needs

The Tulare Kern Funding Area has a baseline understanding of DAC water management needs through previous studies and efforts related to DACs in this region. The Disadvantaged Community Water Study for the Tulare Lake Basin Region (TLB Study), funded through Proposition 84, assessed the needs of DACs within this region. The full report, which was completed in August 2014, can be found at the following location:

<https://tularelakebasin.com/alliance/index.cfm/disadvantaged-communities-dacs/reports/>

In addition, the Kings Basin Water Authority administered the Disadvantaged Community Pilot Project Study (Kings Basin Study) for their IRWM region. That report, which was completed in August 2013, can be found at the following location:

<https://www.kingsbasinauthority.org/projects-funding/completed-projects/dac-pilot-study/>

Both studies identified various challenges and needs for DACs within the region and set forth recommendations to help address those challenges. Several of those recommendations are identified as tasks within the current DAC Involvement Program for the Tulare Kern Funding Area.

5.1 Prior Studies and Reports

5.1.1 Tulare Lake Basin DAC Water Study

Previous studies within this region have evaluated the needs of DACs. An assessment of needs will be updated as part of the proposed DAC Involvement Program. A database of disadvantaged communities was developed through the TLB Study. The database was utilized to catalog common issues and to identify priority issues faced by disadvantaged communities in the Tulare Lake Basin region. From the list of common issues, five priority issues were identified, as listed below:

- Lack of funding to offset increasingly expensive operations and maintenance costs in large part due to lack of economies of scale;
- Lack of technical, managerial, and financial (TMF) capacity by water and wastewater providers;
- Poor water quality;
- Inadequate or unaffordable funding or funding constraints to make improvements; and
- Lack of informed, empowered, or engaged residents.

Through the course of the Study, several other common problems that were previously identified emerged as important issues to be addressed, including the following:

- Lack of vision and integrated planning to develop solutions;
- Inadequate existing infrastructure;
- Lack of information on DACs;

- A changing regulatory environment; and
- Insufficient quantity of water.

The TLB Study developed a list of potential solution sets to address each of the priority issues identified. The following four pilot studies were prepared:

- Management and Non-Infrastructure Solutions to Reduce Costs and Improve Efficiency;
- Technical Solutions to Improve Efficiency and Reduce Operation & Maintenance;
- New Source Development; and
- Individual Household Solutions.

Seven (7) main categories of recommendations were identified to address the priority issues, as follows:

1. Improve Local Technical, Managerial and Financial Capacity
2. Improve Operation and Maintenance Funding
3. Improve Water Supply Quality and Reliability
4. Improve Funding for Disadvantaged Communities
5. Improve Disadvantaged Community Awareness and Participation
6. Improve Land Use Planning to Minimize Creation of New Water/Wastewater Issues
7. Develop and Maintain Information on DAC Water/Wastewater Needs

5.1.2 Kings Basin DAC Pilot Study

The Kings Basin Study identified many limiting characteristics affecting DACs beyond income level, including:

- Inability to achieve economies of scale in smaller communities;
- Low revenues;
- Small or nonexistent reserve funds;
- Dependence on a single source of water (lack of redundancy);
- Limited pool of informed/educated individuals;
- Lack of equipment;
- Lack of access to technology in an increasingly technological world;
- Limited ability to hire paid staff or consultants;
- Limited understanding of regional or state dialogue concerning water policy; and
- Lack of office space and a secure location for board meetings, records storage, and computer equipment.

The Kings Basin Study provided recommendations of how to engage DACs in the IRWMP process. Some of those recommendations included:

- Staffing a Regional DAC Coordinator;
- Using Non-Governmental Organizations (NGOs) or Community Based Organizations (CBOs) for outreach and DAC contacts;
- Providing technical and/or financial support for DACs to prepare funding applications;
- Considering DAC characteristics when reviewing funding applications;
- Utilizing non-email forms of communication to DACs; and
- Conducting pre-application and grant application workshops or trainings.

5.2 Integrated Regional Water Management Plans

The IRWMAs prepare and provide updates to Integrated Regional Water Management Plans (IRWMPs) for their respective region, which include a DAC component. Existing DAC involvement in IRWM planning efforts varies between IRWMA. Where DAC involvement in IRWM planning efforts is lacking, it may be due to inability of DACs to pay fees to become a member agency, lack of resources or time to participate in IRWM meetings or engage in the IRWM process, limited outreach to DACs, lack of understanding of the IRWM planning process by DACs, or lack of understanding of DAC needs by IRWMs. Additional assessment of the barriers that may exist was conducted through the proposed DAC Engagement and Education Program.

5.2.1 Existing DAC Involvement

The DAC Engagement and Education Program (DACEEP), which is being conducted by Self-Help Enterprises (SHE), reviewed the current involvement of DACs in IRWM. As part of the DACEEP activity, SHE prepared several documents related to DAC involvement in IRWM, and related recommendations. The following documents are included in **Appendix E**:

- *Disadvantaged Community Engagement in Integrated Regional Water Management, Disadvantaged Community Outreach and Engagement Recommendations, October 2018*
- *Assessment Findings: DAC Involvement, Meeting Attendance, and Grant Funding for the Tulare Kern Funding Area IRWM Groups, March 2020*
- *DAC Engagement & Outreach Recommendations, Kaweah River Basin IRWM Group*
- *DAC Engagement & Outreach Recommendations, Kern IRWM Group*
- *DAC Engagement & Outreach Recommendations, Kings Basin Water Authority IRWM Group*
- *DAC Engagement & Outreach Recommendations, Poso Creek IRWM Group*
- *DAC Engagement & Outreach Recommendations, Southern Sierra IRWM Group*
- *DAC Engagement & Outreach Recommendations, Tule River Basin IRWM Group*
- *DAC Engagement & Outreach Recommendations, Westside-San Joaquin IRWM Group*

5.2.2 Individual IRWM Plans

5.2.2.1 Kaweah River Basin IRWMA

The Kaweah River Basin IRWMA is located in Tulare County and is bounded by the Kings Basin IRWM to the north, the Southern Sierra IRWM to the east, and the Tule River IRWM to the south. Kaweah Delta Water Conservation District (KDWCD) was the lead agency for the preparation of the Kaweah River Basin

IRWMP, and the IRWM boundary is based on the KDWCD boundary that has been augmented by additions over time. The land in the area is primarily agricultural in nature, and groundwater is used as the principle supply source.

5.2.2.2 Kern IRWMA

The Kern IRWM region encompasses approximately 5,690 square miles (3,641,600 acres) and includes approximately 70 percent of Kern County and a small portion of southern Kings County. It is adjacent to nine other IRWM regions including the Poso Creek, Southern Sierra, Inyo-Mono, Antelope Valley, Fremont Basin, Upper Santa Clara River, Ventura, Santa Barbara, and San Luis Obispo IRWMs. Inside the Tulare Kern Funding Area, the Kern IRWM boundary overlaps the Poso Creek IRWM boundary with the Poso Creek IRWM boundary falling almost entirely within the Kern IRWMA.

Most of the land in the region is devoted to agricultural or oil and gas production. The region utilizes a combination of surface water and groundwater. The largest local surface water source is the Kern River. Some of the problems the region (and its DACs) face include aging or substandard infrastructure and groundwater overdraft.

5.2.2.3 Kings Basin Water Authority

The Kings Basin Water Authority includes nearly all of the Kings sub-basin and small portions of the Delta-Mendota, Kaweah, and Tulare Lake sub-basins. Its region covers 953 square miles (610,000 acres) and includes parts of Fresno, Kings, and Tulare Counties. It is bounded to the north by the Madera IRWMA, to the west by the Westside San Joaquin IRWMA, to the south by the Kaweah River IRWMA, and to the east by the Southern Sierra IRWMA. The Kings Basin IRWM boundary overlaps slightly with the Westside San Joaquin IRWM boundary.

The region is primarily an agricultural area and it uses surface water and groundwater for irrigation. The Kings River is the main source of surface water. When surface water supplies are insufficient, the region relies exclusively on groundwater. Because of surface water shortages, the Kings Basin Water Authority has been operating in overdraft for many years. One of the main goals of the IRWM is the stop and eventually reversal the groundwater overdraft.

Most of the DACs in the region are small farmworker communities. One of the main issues DACs in the area face is water supply contamination. At times, DACs in the area are issued “unsafe to drink” or “boil water” notices and have to rely exclusively on bottled water for consumption. Another main issue facing DACs in the region is the small population size of many of the communities, which causes the water systems serving the area to often be unable to spread costs of maintenance, permitting, and staffing to their consumer bases effectively.

5.2.2.4 Poso Creek IRWMA

The Poso Creek IRWM region covers nearly 600,00 acres and consists of land that primarily consists of irrigated agriculture. Generally, the region relies on both groundwater and surface water. The region lies mostly in northern Kern County and a small portion of southern Tulare County. It is bounded to the north by the Tule River Basin IRWMA and to the east, west, and south by the Kern IRWMA. There is an overlap between the Poso Creek and Kern IRWM areas, but the two groups work cooperatively to address interregional water management issues. DACs in the overlap areas have maintained a “dual” participation in both IRWMs to increase their water-related opportunities. Similar to many of the DACs in other IRWM areas, the DACs in the Poso Creek IRWM face many issues including the lack of financial resources, aging or substandard water and wastewater infrastructure, and geographical isolation.

5.2.2.5 Southern Sierra IRWMA

The Southern Sierra IRWM region consists of foothill and mountain headwater regions in parts of Fresno, Tulare, and Madera counties. It covers 6,195 square miles (3,964,800 acres) and is the fourth largest IRWM region in California. The northern boundary of the Southern Sierra IRWM region is defined by the upper San Joaquin watershed; the eastern boundary is the Sierra Nevada crest; the western boundary is the borders of the Kings Basin, Kaweah River, Tule River, and Poso Creek IRWMs; and the southern boundary is the Tulare/Kern county line.

The region is defined by its low population density and the large percent of land managed by federal agencies. There are approximately 34,000 residents in the IRWM region, and none of the communities within the region are incorporated. However, over two million tourists visit the area each year which puts huge demands on water supplies. Federal agencies own 76 percent of the land in the region, 50 percent of which are National Forests. Generally, the western foothill region is privately owned, while the interior is primarily owned by the Federal Government.

The IRWM region has an abundant supply of surface water. However, much of the region's population relies on groundwater for domestic use because most of the surface water rights are held by agencies in the San Joaquin Valley. Most of the groundwater from the region is drawn from fractured bedrock aquifers, which are poorly understood. As a result, little is known about the long-term reliability of groundwater resources in the region. Also, there are not many wastewater systems in the region. A majority of the areas use septic systems, and the wastewater is only partially treated and disposed in septic tank/leach field systems with many near vital surface water bodies.

Part of the northern portion of Southern Sierra IRWM region lies outside the TKFA as shown in Figure 2-2. This portion of the IRWMA is in the Mountain Counties Funding Area. Also, the Southern Sierra IRWMA group does not have overlapping boundaries with any of the IRWMs within the funding region. However, it does have an overlapping boundary with the Madera IRWM, which occurs in the Mountain Counties Funding Area. The overlap area is the portion of the Southern Sierra IRWM that lies within Madera County.

The DACs within the Southern Sierra IRWM region face different challenges compared to most of the other IRWM regions inside the funding area. Since the population is scattered throughout the large and remote foothill and mountain regions, the DACs in the area are difficult to serve. As a result, DACs in the Southern Sierra IRWM region have received less aid than other easier to serve DACs in the Central Valley's agricultural region. Additionally, the large area of the Southern Sierra IRWM region makes DAC outreach difficult. The region also has many problems shared by other IRWM areas in the funding area which include pollutants in drinking water, lack of planning and integration, affordability of municipal and private water, and substandard water systems. Chemicals of concern typically found in the groundwater of fractured rock wells include arsenic, uranium, gross-alpha, and nitrate. DACs are unable to provide the capital resources necessary to drill new wells or treat polluted water.

5.2.2.6 Tule River Basin IRWMA

The Tule River Basin IRWM region covers approximately 673 square miles (430,457 acres) and includes parts of Tulare and Kings Counties. It is bounded to the north by the Kaweah IRWMA, to the east by the Southern Sierra IRWMA, and to the south by the Poso Creek IRWMA. There are no overlaps between the Tule IRWM and any of its neighbors. Much of the land use within the IRWM region is agricultural in nature, and groundwater is the main source for meeting all water needs in the IRWM area. Surface water is used to augment the water supply when groundwater is insufficient for water demands.

5.2.2.7 Westside San Joaquin IRWMA

The Westside San Joaquin IRWM region consists of portions of San Joaquin, Stanislaus, Merced, Madera, Fresno, and Kings counties. It stretches from the city of Tracy in the north to Highway 41 and Kettleman City in the south. The region covers approximately 2,000 square miles (1,280,000 acres) and is split between the San Joaquin River and Tulare Kern funding regions where the boundaries of the Delta-Mendota sub-basin and the Westside sub-basin meet. To the east, the Westside San Joaquin IRWM is bounded by the East Stanislaus, Merced, Madera, and Kings Basin IRWMAs. There is a slight overlap between the Westside San Joaquin IRWMA and the Kings Basin Water Authority, which includes the community of Tranquillity and the City of San Joaquin.

The problems the region face include water supply reliability, water quality issues, groundwater overdraft, and DAC-related water needs. Most of the DACs in the region are farmworker communities who depend on agriculture for employment. Because much of the region is agricultural, improving the water supply reliability and quality will improve DAC employment opportunities.

5.2.3 Areas Outside of an IRWM Region

Some areas within the TKFA are not within an existing IRWMA boundary. Particularly, the area of Kings County that is bounded to the north by the Kings Basin Water Authority, to the east by the Kaweah River Basin and Tule River Basin IRWMAs, to the west by the Westside San Joaquin IRWMA, and to the south by the Poso Creek and Kern IRWMAs.

The areas that are not within an IRWMA are commonly called “white areas.” Through the DACEEP, a “white areas” working group was convened to discuss participation approaches for DACs that are located in white areas. Meeting summaries and recommendations from the working group are provided in **Appendix F**.

6 Disadvantaged Communities and Tribes

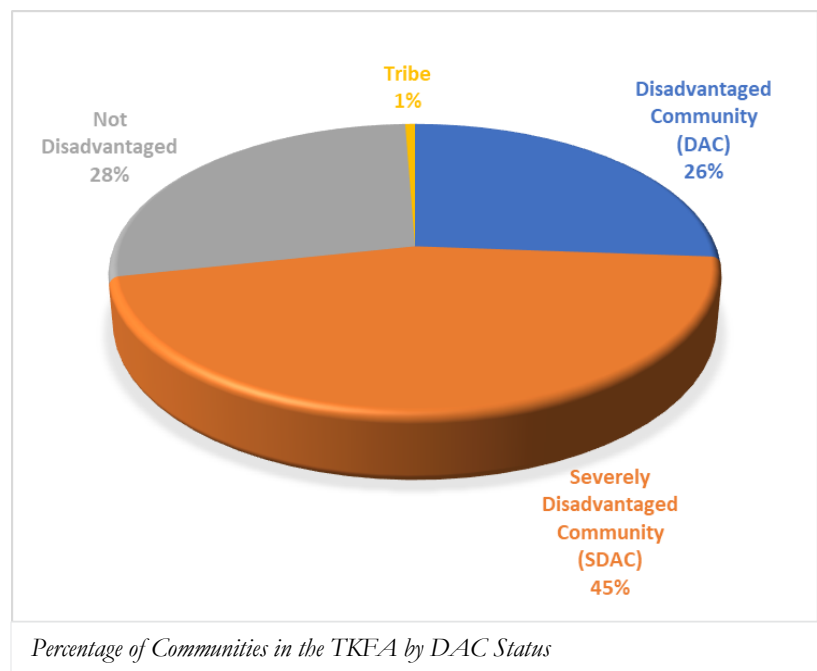
Disadvantaged Communities and Economically Distressed Areas (EDAs) are defined in the California Water Code, as indicated in the “Definitions” section of this report. The focus of this Needs Assessment is on DACs and SDACs (collectively DACs) and Tribes. Most EDAs are also a DAC.

6.1 Identification of DACs and Tribes

Based on the data collected for this program, there are 355 DACs identified within the TKFA of which 226 are SDACs. A DAC is a community with an annual median household income that is less than 80 percent of the statewide median household income, and a SDAC is a community with an annual median household income that is less than 60 percent of the statewide median household income.

Collectively, disadvantaged and severely disadvantaged communities are referred to as DACs. Of the 355 DACs identified, 30 are incorporated and 325 are unincorporated.

There are also several tribal groups living in the region including: Mono, Yokuts, Tubatulabal, Shoshone, and Northern Paiute. Many of these tribal groups are enrolled in the three (3) federally recognized Indian Tribes identified within the TKFA: 1) Tule River Indian Tribe of the Tule River Reservation (includes Mono, Tubatulabal, and Yokut members), 2) Santa Rosa Indian Community of the Santa Rosa Rancheria (Tachi Yokuts Tribe), and 3) Cold Springs Rancheria of Mono Indians.



A summary count of communities by type is provided in Table 6-1. Disadvantaged communities within the TKFA are shown by IRWM region in Figure 6-1 through Figure 6-9. The DACs are also summarized by IRWM in Table 6-2.

Several communities have been consolidated in recent years. Those communities that have been consolidated into an adjacent city or community are still included in the list of communities since they still may exist as a community and may or may not have consolidated sewer services. Consolidated systems are discussed further in Section 10.

Section Six: Disadvantaged Communities
Tulare Kern DACIP Needs Assessment

Table 6-1. Summary of Communities

	Count	Incorporated	Unincorporated	Population	Connections
Disadvantaged Community (DAC)	130	13	117	902,924	359,589
Severely Disadvantaged Community (SDAC)	225	17	208	531,885	126,447
Not Disadvantaged	138	5	133	517,826	275,954
Tribe	3	N/A	N/A	2,260	678
Total	496	35	458	1,954,895	762,668

Table 6-2. Disadvantaged Communities by IRWM

COMMUNITY NAME	DAC STATUS	POPULATION	CONNECTIONS	COUNTY	IRWM
CAMERON CREEK COLONY	DAC	350	100	TULARE	KAWEAH
COMMUNITY 290	SDAC	69	21	TULARE	KAWEAH
COMMUNITY 321	SDAC	33	10	TULARE	KAWEAH
COMMUNITY 415	SDAC	50	15	TULARE	KAWEAH
EILERS RANCH	DAC	30	9	TULARE	KAWEAH
FARMERSVILLE	SDAC	10908	2587	TULARE	KAWEAH
GOSHEN	DAC	2794	697	TULARE	KAWEAH
HYPERICUM - DOG TOWN	SDAC	132	40	TULARE	KAWEAH
IVANHOE	SDAC	4495	1116	TULARE	KAWEAH
LEMON COVE	SDAC	109	60	TULARE	KAWEAH
LINDCOVE	DAC	500	100	TULARE	KAWEAH
LINDSAY	SDAC	14200	2959	TULARE	KAWEAH
LINNELL FARM LABOR CENTER	SDAC	772	195	TULARE	KAWEAH
LONE OAK TRACT	SDAC	186	50	TULARE	KAWEAH
MATHENY TRACT	SDAC	1980	325	TULARE	KAWEAH
NORTH OF VISALIA TRACT	DAC	70	27	TULARE	KAWEAH
OAK RANCH	DAC	675	270	TULARE	KAWEAH
OKIEVILLE	SDAC	231	70	TULARE	KAWEAH
PAIGE-MOORE TRACT	SDAC	954	289	TULARE	KAWEAH
PATTERSON TRACT	DAC	550	153	TULARE	KAWEAH
PLAINVIEW	SDAC	617	187	TULARE	KAWEAH
PLAINVIEW MWC CENTRAL WATER	SDAC	138	42	TULARE	KAWEAH
SIERRA SHADOWS MOBILE MANOR	SDAC	75	30	TULARE	KAWEAH
SOULTS TRACT	SDAC	120	36	TULARE	KAWEAH
SOUTH LEMON COVE	DAC	243	105	TULARE	KAWEAH
STRATHMORE	SDAC	2150	471	TULARE	KAWEAH

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COMMUNITY NAME	DAC STATUS	POPULATION	CONNECTIONS	COUNTY	IRWM
STRATHMORE EAST	SDAC	500	158	TULARE	KAWEAH
SUNRISE MUTUAL WATER CO.	DAC	80	39	TULARE	KAWEAH
TONYVILLE	DAC	500	50	TULARE	KAWEAH
TRACT 92	SDAC	500	93	TULARE	KAWEAH
TULARE	DAC	63855	18540	TULARE	KAWEAH
TULARE COUNTY WC TRACT NO. 381	DAC	366	111	TULARE	KAWEAH
TULARE COUNTY WC TRACTS 344 & 380	DAC	785	238	TULARE	KAWEAH
WAUKENA	DAC	99	30	TULARE	KAWEAH
WEST GOSHEN	SDAC	200	69	TULARE	KAWEAH
WOODLAKE	SDAC	7950	1799	TULARE	KAWEAH
TOOLEVILLE	SDAC	340	76	TULARE	KAWEAH/ SOUTHERN SIERRA
ALTA SIERRA	SDAC	80	224	KERN	KERN
ARDEN	SDAC	2778	1263	KERN	KERN
ARVIN	SDAC	20499	3776	KERN	KERN
ARVIN LABOR CENTER	SDAC	720	136	KERN	KERN
ATHAL	SDAC	150	64	KERN	KERN
BELLA VISTA	SDAC	150	46	KERN	KERN
BLACKWELLS CORNER	SDAC	148	45	KERN	KERN
BONANZA FARMS	SDAC	80	17	KERN	KERN
BOULDER CANYON	SDAC	30	19	KERN	KERN
BURLANDO HEIGHTS	SDAC	45	42	KERN	KERN
BUTTONWILLOW	SDAC	1508	435	KERN	KERN
CANYON MEADOWS	SDAC	394	141	KERN	KERN
CASA LOMA WATER CO, INC.	SDAC	900	248	KERN	KERN
CLARK STREET COMMUNITY WELL	SDAC	25	16	KERN	KERN
COMMUNITY 2751	SDAC	165	50	KERN	KERN
COMMUNITY 362	SDAC	36	11	KERN	KERN
COMMUNITY 392	SDAC	594	180	KERN	KERN
COMMUNITY 421	DAC	33	10	KERN	KERN
COUNTRY ESTATES	DAC	350	88	KERN	KERN
COUNTRYWOOD	SDAC	238	68	KERN	KERN
CYPRESS CANYON	SDAC	50	29	KERN	KERN
EAST NILES	SDAC	31772	7846	KERN	KERN
EAST WILSON ROAD	SDAC	35	14	KERN	KERN
EDMUNDSON ACRES	DAC	279	84	KERN	KERN

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COMMUNITY NAME	DAC STATUS	POPULATION	CONNECTIONS	COUNTY	IRWM
EL ADOBE POA, INC	SDAC	200	80	KERN	KERN
ERSKINE CREEK WC	SDAC	2500	1031	KERN	KERN
FORD CITY	SDAC	4278	1510	KERN	KERN
FOURTH STREET	SDAC	54	28	KERN	KERN
FRAZIER PARK	SDAC	2691	1290	KERN	KERN
FULLER ACRES	SDAC	545	165	KERN	KERN
GLENNVILLE	SDAC	198	60	KERN	KERN
GREENFIELD COUNTY WD	DAC	9900	3021	KERN	KERN
HAVILAH	DAC	79	24	KERN	KERN
HILLVIEW ACRES	SDAC	40	47	KERN	KERN
HUNGRY GULCH	SDAC	36	38	KERN	KERN
JUNIPER HILLS	SDAC	177	58	KERN	KERN
KERN VALLEY MUTUAL WATER	SDAC	47	47	KERN	KERN
KERNSVALE	SDAC	75	31	KERN	KERN
KERNVILLE	SDAC	2491	1796	KERN	KERN
KRISTA MUTUAL WATER COMPANY	SDAC	462	170	KERN	KERN
LAKE ISABELLA	SDAC	500	129	KERN	KERN
LAKE OF THE WOODS	DAC	1053	389	KERN	KERN
LAKE OF THE WOODS MHP	DAC	82	86	KERN	KERN
LAKELAND	SDAC	268	205	KERN	KERN
LAKEVIEW RANCHOS	SDAC	120	71	KERN	KERN
LAMONT	SDAC	19057	3300	KERN	KERN
LEBEC	SDAC	1468	299	KERN	KERN
LONG CANYON	SDAC	120	65	KERN	KERN
LOST HILLS	SDAC	2412	424	KERN	KERN
LOWER BODFISH	SDAC	344	520	KERN	KERN
MARICOPA	SDAC	1115	393	KERN	KERN
MCKITTRICK	DAC	146	57	KERN	KERN
METTLER	SDAC	157	43	KERN	KERN
MIRASOL COMPANY WATER SYSTEM	SDAC	29	12	KERN	KERN
MITCHELLS CORNER	DAC	32	16	KERN	KERN
MOUNTAIN MESA	SDAC	777	404	KERN	KERN
OAK KNOLLS MUTUAL WATER COMPANY	SDAC	123	47	KERN	KERN
OASIS PROPERTY OWNERS ASSOCIATION	DAC	100	39	KERN	KERN

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COMMUNITY NAME	DAC STATUS	POPULATION	CONNECTIONS	COUNTY	IRWM
OILDALE	SDAC	34133	9863	KERN	KERN
ONYX	SDAC	266	192	KERN	KERN
OPAL FRY AND SON	SDAC	40	13	KERN	KERN
PANAMA ROAD PROPERTY OWNERS ASSOCIATION	SDAC	50	16	KERN	KERN
PINE MOUNTAIN CLUB	DAC	1600	2325	KERN	KERN
PINEBROOK	SDAC	84	42	KERN	KERN
PINON HILL WATER COMPANY	DAC	109	38	KERN	KERN
PINON PINES MWC	DAC	644	273	KERN	KERN
PONDEROSA PINE	SDAC	93	29	KERN	KERN
R.S. MUTUAL WATER COMPANY	SDAC	67	24	KERN	KERN
RAINBIRD VALLEY	SDAC	238	85	KERN	KERN
REEDER TRACT	SDAC	500	300	KERN	KERN
REXLAND ACRES	SDAC	4029	1221	KERN	KERN
RIVERDALE VILLAGE	SDAC	750	290	KERN	KERN
RIVERNOOK MHP	SDAC	535	290	KERN	KERN
SAN JOAQUIN ESTATES	DAC	165	61	KERN	KERN
SHADY LANE MOBILE PARK	SDAC	30	28	KERN	KERN
SIERRA BELLA	SDAC	60	180	KERN	KERN
SIERRA MEADOWS	SDAC	68	51	KERN	KERN
SOUTH FORK GRAMMAR SCHOOL	SDAC	150	1	KERN	KERN
SOUTH FORK MIDDLE SCHOOL	SDAC	205	1	KERN	KERN
SOUTH LAKE	SDAC	1379	1076	KERN	KERN
SOUTH TAFT	DAC	2169	602	KERN	KERN
SPLIT MOUNTAIN	SDAC	209	162	KERN	KERN
SQUIRREL MOUNTAIN VALLEY	DAC	1379	1076	KERN	KERN
TAFT	DAC	9425	2428	KERN	KERN
TAFT HEIGHTS	DAC	1802	793	KERN	KERN
TEHACHAPI	DAC	8839	41	KERN	KERN
TRADEWINDS	SDAC	632	234	KERN	KERN
TUPMAN	SDAC	153	74	KERN	KERN
UPPER BODFISH	SDAC	414	209	KERN	KERN
V.R. S TRAILER PARK	SDAC	30	27	KERN	KERN
VALLEY ACRES	DAC	336	140	KERN	KERN
VALLEY ESTATES	SDAC	302	113	KERN	KERN

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COMMUNITY NAME	DAC STATUS	POPULATION	CONNECTIONS	COUNTY	IRWM
VICTORY MWC	DAC	740	173	KERN	KERN
WEEDPATCH	SDAC	2658	422	KERN	KERN
WEST MARICOPA	DAC	80	34	KERN	KERN
WEST TEHACHAPI	DAC	150	36	KERN	KERN
WILSON ROAD	DAC	72	20	KERN	KERN
WINI MUTUAL WATER COMPANY	DAC	29	12	KERN	KERN
WOODY	SDAC	116	35	KERN	KERN
RIVERKERN	SDAC	336	114	KERN	KERN/SOUTHERN SIERRA
ALICE MANOR	DAC	46	1	FRESNO	KINGS BASIN
ALKALI FLATS	SDAC	100	100	FRESNO	KINGS BASIN
ARMONA	SDAC	4143	1345	KINGS	KINGS BASIN
BAR 20 PARTNER	SDAC	60	15	FRESNO	KINGS BASIN
BERAN WAY	DAC	100	41	FRESNO	KINGS BASIN
BIOLA	SDAC	1623	300	FRESNO	KINGS BASIN
BRITTEN	DAC	89	27	FRESNO	KINGS BASIN
BURREL	DAC	16	16	FRESNO	KINGS BASIN
CALWA	SDAC	227	227	FRESNO	KINGS BASIN
CAMDEN TRAILER PARK	DAC	75	25	FRESNO	KINGS BASIN
CARUTHERS	SDAC	2503	672	FRESNO	KINGS BASIN
COMMUNITY 152	SDAC	877	266	FRESNO	KINGS BASIN
COMMUNITY 168	SDAC	69	21	FRESNO	KINGS BASIN
COMMUNITY 173	DAC	49	13	FRESNO	KINGS BASIN
COMMUNITY 178	DAC	148	45	FRESNO	KINGS BASIN
COMMUNITY 180	DAC	59	18	FRESNO	KINGS BASIN
COMMUNITY 186	SDAC	59	18	FRESNO	KINGS BASIN
COMMUNITY 192	SDAC	33	10	FRESNO	KINGS BASIN
COMMUNITY 197	SDAC	49	15	FRESNO	KINGS BASIN
COMMUNITY 204	SDAC	66	20	FRESNO	KINGS BASIN
COMMUNITY 214	SDAC	42	13	FRESNO	KINGS BASIN
COMMUNITY 215	SDAC	53	16	FRESNO	KINGS BASIN
COMMUNITY 216	SDAC	63	19	FRESNO	KINGS BASIN
COMMUNITY 219	DAC	49	15	FRESNO	KINGS BASIN
COMMUNITY 227	SDAC	35	11	FRESNO	KINGS BASIN
COMMUNITY 235	SDAC	72	22	FRESNO	KINGS BASIN
COMMUNITY 236	DAC	35	10	FRESNO	KINGS BASIN
COMMUNITY 2512	DAC	16	5	TULARE	KINGS BASIN
CUTLER	SDAC	6200	1218	TULARE	KINGS BASIN
DALEVILLE	SDAC	138	42	FRESNO	KINGS BASIN

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COMMUNITY NAME	DAC STATUS	POPULATION	CONNECTIONS	COUNTY	IRWM
DATE STREET	SDAC	22	22	FRESNO	KINGS BASIN
DEL REY	SDAC	1500	240	FRESNO	KINGS BASIN
DELFT COLONY	DAC	400	99	TULARE	KINGS BASIN
DINUBA	SDAC	24657	5905	TULARE	KINGS BASIN
DOUBLE L MOBILE RANCH PARK	SDAC	80	37	FRESNO	KINGS BASIN
DOUBLE L NEIGHBORHOOD	SDAC	70	35	FRESNO	KINGS BASIN
EAST OROSI	SDAC	700	106	TULARE	KINGS BASIN
EASTON	DAC	1966	623	FRESNO	KINGS BASIN
EASTON ESTATES WATER COMPANY	DAC	302	106	FRESNO	KINGS BASIN
EL MONTE VILLAGE M.H.P.	DAC	100	49	TULARE	KINGS BASIN
ELM COURT	DAC	64	14	FRESNO	KINGS BASIN
FOWLER	DAC	5801	1784	FRESNO	KINGS BASIN
FRED RAU DAIRY	DAC	85	24	FRESNO	KINGS BASIN
FRESNO	DAC	527438	132981	FRESNO	KINGS BASIN
GARDEN APARTMENTS	SDAC	35	10	FRESNO	KINGS BASIN
GEORGE COX WATER SYSTEM	SDAC	40	20	FRESNO	KINGS BASIN
GLEANINGS FOR THE HUNGRY	SDAC	31	12	TULARE	KINGS BASIN
GREEN ACRES MOBILE HOME ESTATE	DAC	350	112	FRESNO	KINGS BASIN
HAMBLIN	DAC	240	75	KINGS	KINGS BASIN
HARDWICK	SDAC	40	16	KINGS	KINGS BASIN
HOME GARDEN	SDAC	1750	502	KINGS	KINGS BASIN
KAMM RANCH COMPANY	DAC	20	3	FRESNO	KINGS BASIN
KERMAN	DAC	14068	234	FRESNO	KINGS BASIN
KINGS PARK APARTMENTS	DAC	120	40	FRESNO	KINGS BASIN
LACEY COURT'S MHP	DAC	50	21	KINGS	KINGS BASIN
LANARE	SDAC	660	1	FRESNO	KINGS BASIN
LATON	SDAC	1824	331	FRESNO	KINGS BASIN
LINDA VISTA FARMS	SDAC	63	17	FRESNO	KINGS BASIN
LONDON	SDAC	2138	439	TULARE	KINGS BASIN
LOPEZ LABOR CAMP	SDAC	50	25	TULARE	KINGS BASIN
MADDOX DAIRY	SDAC	50	15	FRESNO	KINGS BASIN
MALAGA	DAC	947	509	FRESNO	KINGS BASIN
MAYFAIR	DAC	4589	132981	FRESNO	KINGS BASIN
MONMOUTH	SDAC	120	37	FRESNO	KINGS BASIN

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COMMUNITY NAME	DAC STATUS	POPULATION	CONNECTIONS	COUNTY	IRWM
MONSON	DAC	140	34	TULARE	KINGS BASIN
NEW HORIZONS MOBILE/RV PARK	SDAC	70	66	FRESNO	KINGS BASIN
ORANGE COVE	SDAC	9780	1485	FRESNO	KINGS BASIN
OROSI	SDAC	8770	1631	TULARE	KINGS BASIN
PARLIER	SDAC	12058	2505	FRESNO	KINGS BASIN
PERRY COLONY	DAC	50	50	FRESNO	KINGS BASIN
PINEDALE	DAC	16735	3541	FRESNO	KINGS BASIN
RAISIN CITY	SDAC	190	64	FRESNO	KINGS BASIN
REEDLEY	DAC	24842	5964	FRESNO	KINGS BASIN
RIVERDALE	SDAC	3145	930	FRESNO	KINGS BASIN
ROLINDA	SDAC	20	20	FRESNO	KINGS BASIN
RUBYS VALLEY CARE HOME	SDAC	75	1	FRESNO	KINGS BASIN
SANGER	DAC	25664	6210	FRESNO	KINGS BASIN
SELMA	DAC	25329	6282	FRESNO	KINGS BASIN
SEVILLE	SDAC	400	77	TULARE	KINGS BASIN
SHADY ACRE TRAILER PARK	SDAC	50	1	FRESNO	KINGS BASIN
SHADY LAKES MOBILE HOME PARK	SDAC	160	60	FRESNO	KINGS BASIN
SIERRA MOBILE HOME PARK	DAC	250	128	FRESNO	KINGS BASIN
SULTANA	SDAC	775	249	TULARE	KINGS BASIN
SUNNYSIDE CONVALESCENT HOSP	DAC	198	3	FRESNO	KINGS BASIN
SUNSET WEST MOBILE HOME PARK	DAC	350	159	FRESNO	KINGS BASIN
TAFOYA WATER SYSTEM	DAC	350	64	TULARE	KINGS BASIN
THREE PALMS MOBILEHOME PARK	DAC	300	105	FRESNO	KINGS BASIN
TODD'S TRAILER COURT	SDAC	50	1	FRESNO	KINGS BASIN
TRACT 1199 WATER SYSTEM	SDAC	25	10	FRESNO	KINGS BASIN
TRAVER	SDAC	634	187	TULARE	KINGS BASIN
WATERTEK-METROPOLITAN	SDAC	99	29	FRESNO	KINGS BASIN
WEST MCKINLEY WATER SYSTEM	DAC	40	12	FRESNO	KINGS BASIN
WEST PARK	DAC	250	100	FRESNO	KINGS BASIN
WESTBROOK MOBILE HOME PARK	SDAC	50	1	FRESNO	KINGS BASIN
WOODWARD BLUFFS MHP	DAC	300	172	FRESNO	KINGS BASIN

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COMMUNITY NAME	DAC STATUS	POPULATION	CONNECTIONS	COUNTY	IRWM
YETTEM	DAC	350	64	TULARE	KINGS BASIN
ZONNEVELD DAIRY	SDAC	70	19	FRESNO	KINGS BASIN
DOYAL'S MOBILE HOME PARK	DAC	24	15	FRESNO	KINGS BASIN/SOUTHERN SIERRA
RIO VISTA MOBILE HOME PARK	DAC	20	15	FRESNO	KINGS BASIN/SOUTHERN SIERRA
SAN JOAQUIN	SDAC	4060	701	FRESNO	KINGS BASIN/WESTSIDE SJ
TRANQUILLITY	SDAC	897	326	FRESNO	KINGS BASIN/WESTSIDE SJ
AGBAYANI VILLAGE	DAC	26	2	KERN	POSO CREEK
BISHOP ACRES	SDAC	60	28	KERN	POSO CREEK
CHEROKEE STRIP	SDAC	132	40	KERN	POSO CREEK
COMMUNITY 477	DAC	132	40	KERN	POSO CREEK
COMMUNITY 478	DAC	792	240	KERN	POSO CREEK
DELANO	SDAC	53138	11046	KERN	POSO CREEK
EARLIMART	SDAC	8800	1591	TULARE	POSO CREEK
MADONNA	DAC	70	22	TULARE	POSO CREEK
MAPLE SCHOOL	SDAC	250	1	KERN	POSO CREEK
MCFARLAND	SDAC	14658	2804	KERN	POSO CREEK
MEXICAN COLONY	SDAC	320	97	KERN	POSO CREEK
POND	DAC	48	18	KERN	POSO CREEK
POND SCHOOL	SDAC	250	2	KERN	POSO CREEK
POPLAR AVE COMMUNITY	DAC	30	9	KERN	POSO CREEK
RICHGROVE	SDAC	2700	600	TULARE	POSO CREEK
RODRIGUEZ LABOR CAMP	DAC	110	35	TULARE	POSO CREEK
SEMITROPIC SCHOOL	SDAC	263	6	KERN	POSO CREEK
SHAFTER	SDAC	19100	4720	KERN	POSO CREEK
SHAFTER FARM LABOR CENTER	SDAC	300	112	KERN	POSO CREEK
SIERRA VISTA ASSOCIATION	DAC	44	13	TULARE	POSO CREEK
SMITH'S CORNER	SDAC	544	165	KERN	POSO CREEK
SOUTHWEST SHAFTER	SDAC	53	15	KERN	POSO CREEK
SUPERIOR	DAC	61	49	KERN	POSO CREEK
THOMAS LANE	SDAC	132	40	KERN	POSO CREEK
WASCO	DAC	22690	4872	KERN	POSO CREEK
WEST SHAFTER	SDAC	37	11	KERN	POSO CREEK

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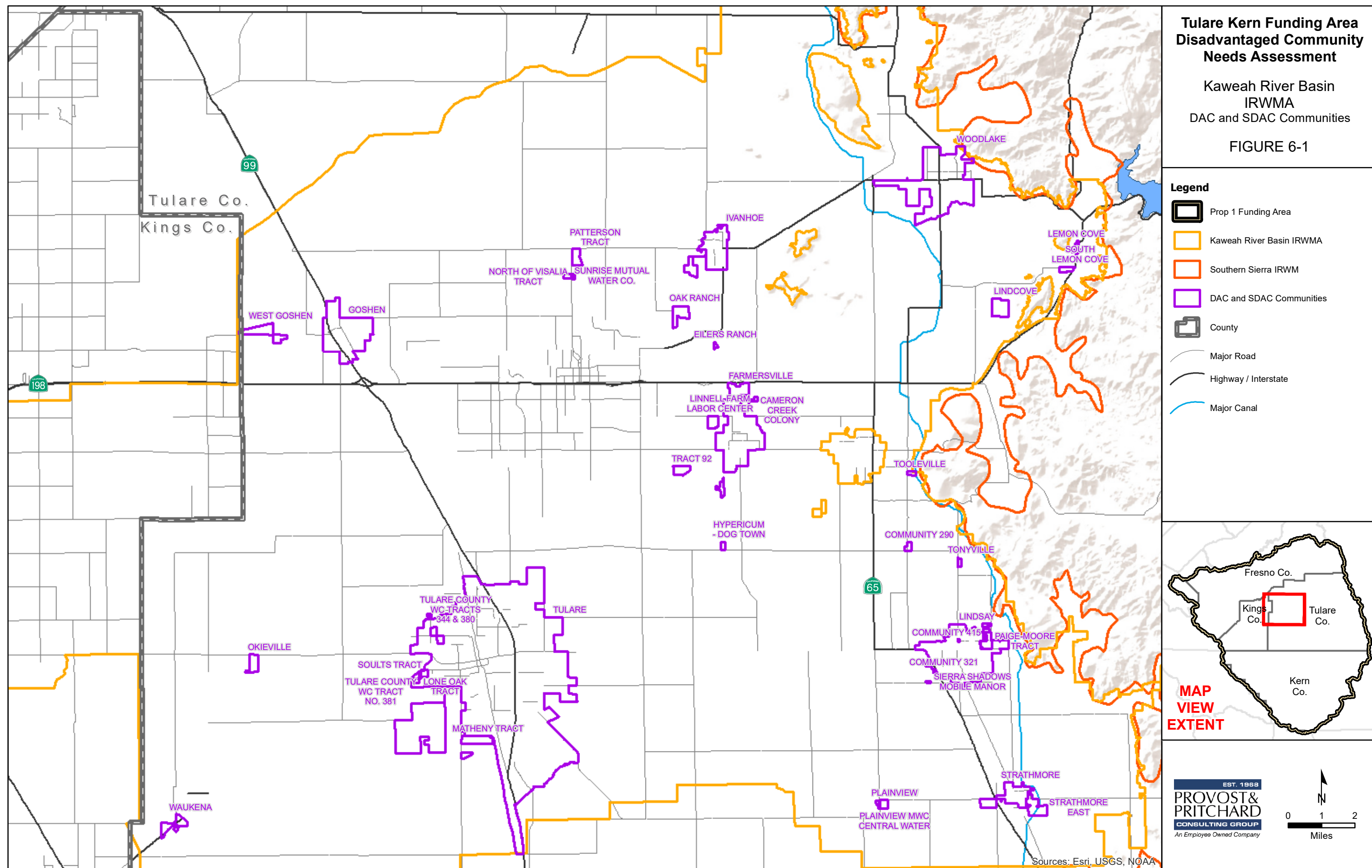
COMMUNITY NAME	DAC STATUS	POPULATION	CONNECTIONS	COUNTY	IRWM
BIGGER S PONDEROSA TRLR PRK	DAC	40	18	FRESNO	SOUTHERN SIERRA
COLD SPRINGS RANCHERIA OF MONO INDIANS	TRIBE	193	58	FRESNO	SOUTHERN SIERRA
IDLEWILD	SDAC	55	24	TULARE	SOUTHERN SIERRA
LAKE SUCCESS MOBILE LODGE	DAC	40	18	TULARE	SOUTHERN SIERRA
MCCLENNEY TRACT	SDAC	10	10	TULARE	SOUTHERN SIERRA
MIRAMONTE	DAC	66	20	FRESNO	SOUTHERN SIERRA
OAK KNOLLS TRAILER PARK	DAC	60	60	FRESNO	SOUTHERN SIERRA
PINE FLAT	SDAC	1033	277	TULARE	SOUTHERN SIERRA
POSEY	SDAC	79	24	TULARE	SOUTHERN SIERRA
SPRINGVILLE	SDAC	1500	369	TULARE	SOUTHERN SIERRA
TRACT 327 MUTUAL WATER CO.	SDAC	24	15	TULARE	SOUTHERN SIERRA
TULE RIVER INDIAN TRIBE RESERVATION	TRIBE	1290	387	TULARE	SOUTHERN SIERRA
A & A MHP	DAC	200	62	TULARE	TULE
AKIN WATER CO.	DAC	86	26	TULARE	TULE
ALLENSWORTH	SDAC	521	156	TULARE	TULE
ALPAUGH	DAC	1026	391	TULARE	TULE
BEVERLY-GRAND MUTUAL WATER	DAC	108	28	TULARE	TULE
CENTRAL MUTUAL WATER CO	DAC	112	41	TULARE	TULE
COMMUNITY 330	SDAC	63	19	TULARE	TULE
COMMUNITY 332	SDAC	59	18	TULARE	TULE
COMMUNITY 340	SDAC	116	35	TULARE	TULE
COMMUNITY 342	SDAC	36	11	TULARE	TULE
DUCOR	SDAC	558	166	TULARE	TULE
E PLANO	DAC	46	14	TULARE	TULE
EAST PORTERVILLE	SDAC	5528	1675	TULARE	TULE
GOLDEN KEY APARTMENTS	DAC	48	16	TULARE	TULE
GRANDVIEW GARDENS	DAC	347	104	TULARE	TULE
JONES CORNER	DAC	339	112	TULARE	TULE
LAKE SIDE TRAILER PARK	DAC	500	91	TULARE	TULE
MOUNTAIN VIEW DUPLEXES	SDAC	150	14	TULARE	TULE
MULBERRY ISLAND	DAC	455	138	TULARE	TULE
PIXLEY	SDAC	3310	825	TULARE	TULE

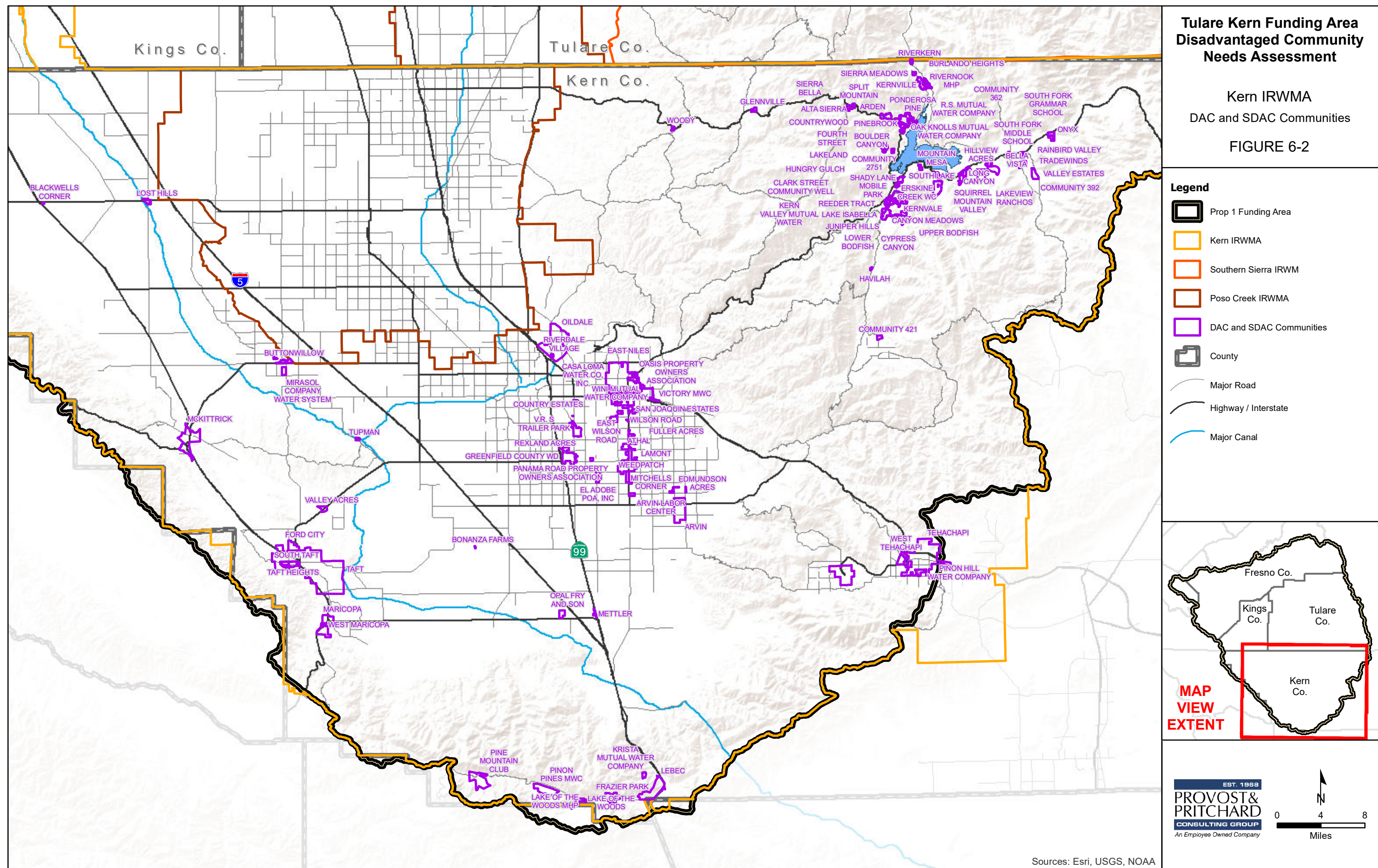
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COMMUNITY NAME	DAC STATUS	POPULATION	CONNECTIONS	COUNTY	IRWM
PLANO	DAC	241	73	TULARE	TULE
POPLAR	SDAC	2200	582	TULARE	TULE
PORTERVILLE	DAC	62021	15535	TULARE	TULE
SHADY GROVE MHP	DAC	95	40	TULARE	TULE
SHILOH WATER CO.	DAC	75	20	TULARE	TULE
SPIEGELBERG	SDAC	25	1	TULARE	TULE
TERRA BELLA	SDAC	2340	714	TULARE	TULE
TEVISTON	SDAC	343	104	TULARE	TULE
TIPTON	SDAC	1792	601	TULARE	TULE
TIPTON BURNETT ROAD	DAC	50	11	TULARE	TULE
TRACT 288	DAC	138	42	TULARE	TULE
TRACTS 24 - 41	SDAC	393	119	TULARE	TULE
TRACTS 45 - 68 - 157 - 199 - 201 - 319	SDAC	736	223	TULARE	TULE
TRACTS 66 - 90 - 127 - 557	DAC	412	125	TULARE	TULE
TRICO OIL ACRES COLONIA	SDAC	89	27	TULARE	TULE
WILLIAMS	SDAC	180	50	TULARE	TULE
WOODVILLE	SDAC	1673	467	TULARE	TULE
WOODVILLE FARM LABOR CENTER	SDAC	734	177	TULARE	TULE
AVENAL	SDAC	14154	1953	KINGS	WESTSIDE SJ
BRITZ/COLUSA	SDAC	85	29	FRESNO	WESTSIDE SJ
BRITZ/FIVE POINTS SYSTEM	SDAC	76	33	FRESNO	WESTSIDE SJ
CANTUA CREEK	SDAC	210	78	FRESNO	WESTSIDE SJ
CINCO FARMS	SDAC	30	9	FRESNO	WESTSIDE SJ
COIT GINNING COMPANY	SDAC	90	31	FRESNO	WESTSIDE SJ
DWS PARTNERS	DAC	16	5	FRESNO	WESTSIDE SJ
EL PORVENIR	SDAC	143	50	FRESNO	WESTSIDE SJ
FARM 1	SDAC	50	15	FRESNO	WESTSIDE SJ
FARM 2	DAC	20	8	FRESNO	WESTSIDE SJ
FARM 3	DAC	20	8	FRESNO	WESTSIDE SJ
FARMING D	SDAC	110	38	FRESNO	WESTSIDE SJ
FCSA #49	DAC	134	46	FRESNO	WESTSIDE SJ
FELGER FARMS	SDAC	40	12	FRESNO	WESTSIDE SJ
FIVE POINTS RANCH	SDAC	100	37	FRESNO	WESTSIDE SJ
FIVE STAR RANCH	SDAC	40	22	FRESNO	WESTSIDE SJ
HARNISH FIVE POINTS INC	DAC	26	8	FRESNO	WESTSIDE SJ

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COMMUNITY NAME	DAC STATUS	POPULATION	CONNECTIONS	COUNTY	IRWM
HARRIS FARMS CAMP C #501-523	DAC	300	77	FRESNO	WESTSIDE SJ
HARRIS FARMS SOUTH #101-144	SDAC	160	41	FRESNO	WESTSIDE SJ
HOULDING FARMS	SDAC	50	15	FRESNO	WESTSIDE SJ
HURON	SDAC	7306	7	FRESNO	WESTSIDE SJ
LA JOLLA FARMS	DAC	30	10	FRESNO	WESTSIDE SJ
LEMOORE NAVAL AIR STATION	DAC	12000	1797	KINGS	WESTSIDE SJ
MENDOTA	SDAC	11104	1911	FRESNO	WESTSIDE SJ
MURRIETA/WASHOE	SDAC	25	10	FRESNO	WESTSIDE SJ
PAPPAS & CO (FARM HOUSING)	DAC	25	13	FRESNO	WESTSIDE SJ
PAPPAS & COMPANY (FARM HOUSING)	DAC	25	12	FRESNO	WESTSIDE SJ
PILIBOS BROTHERS RANCH	SDAC	35	15	FRESNO	WESTSIDE SJ
SAN ANDREAS FARMS	SDAC	40	5	FRESNO	WESTSIDE SJ
SHAMROCK FARMING	DAC	40	12	KINGS	WESTSIDE SJ
STEVE MARKS CATTLE COMPANY	SDAC	25	24	FRESNO	WESTSIDE SJ
STRATFORD	SDAC	1301	364	KINGS	WESTSIDE SJ
SUMNER PECK RANCH	SDAC	42	19	FRESNO	WESTSIDE SJ
TERRA LINDA FARMS	SDAC	40	11	FRESNO	WESTSIDE SJ
VAQUERO FARMS	DAC	70	17	FRESNO	WESTSIDE SJ
WESTRIDGE	SDAC	30	9	FRESNO	WESTSIDE SJ
COMMUNITY 241	DAC	165	50	FRESNO	Outside of IRWM
COMMUNITY 259	SDAC	177	38	KINGS	Outside of IRWM
CORCORAN	SDAC	24813	3388	KINGS	Outside of IRWM
EXETER	DAC	10548	3298	TULARE	Outside of IRWM
HANFORD	SDAC	59338	16742	KINGS	Outside of IRWM
KETTLEMAN CITY	SDAC	1450	354	KINGS	Outside of IRWM
LEMOORE	DAC	26093	6819	KINGS	Outside of IRWM
SANTA ROSA INDIAN COMMUNITY OF THE SANTA ROSA RANCHERIA	TRIBE	777	233	KINGS	Outside of IRWM

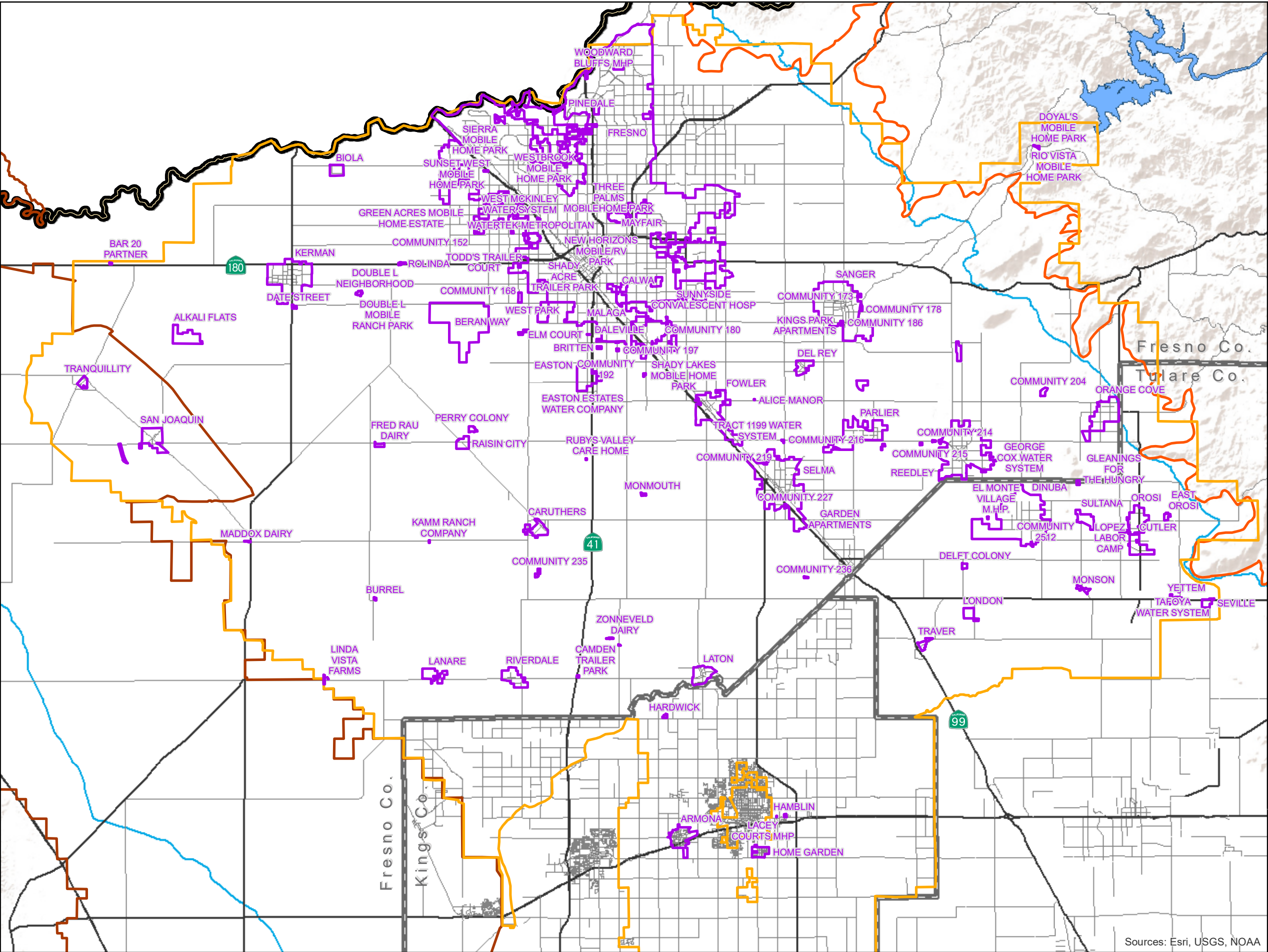




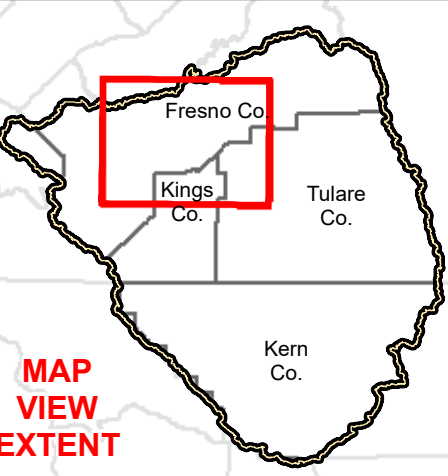
Tulare Kern Funding Area
Disadvantaged Community
Needs Assessment

Kings Basin Water Authority
DAC and SDAC Communities

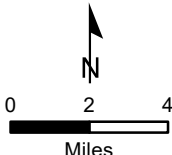
FIGURE 6-3



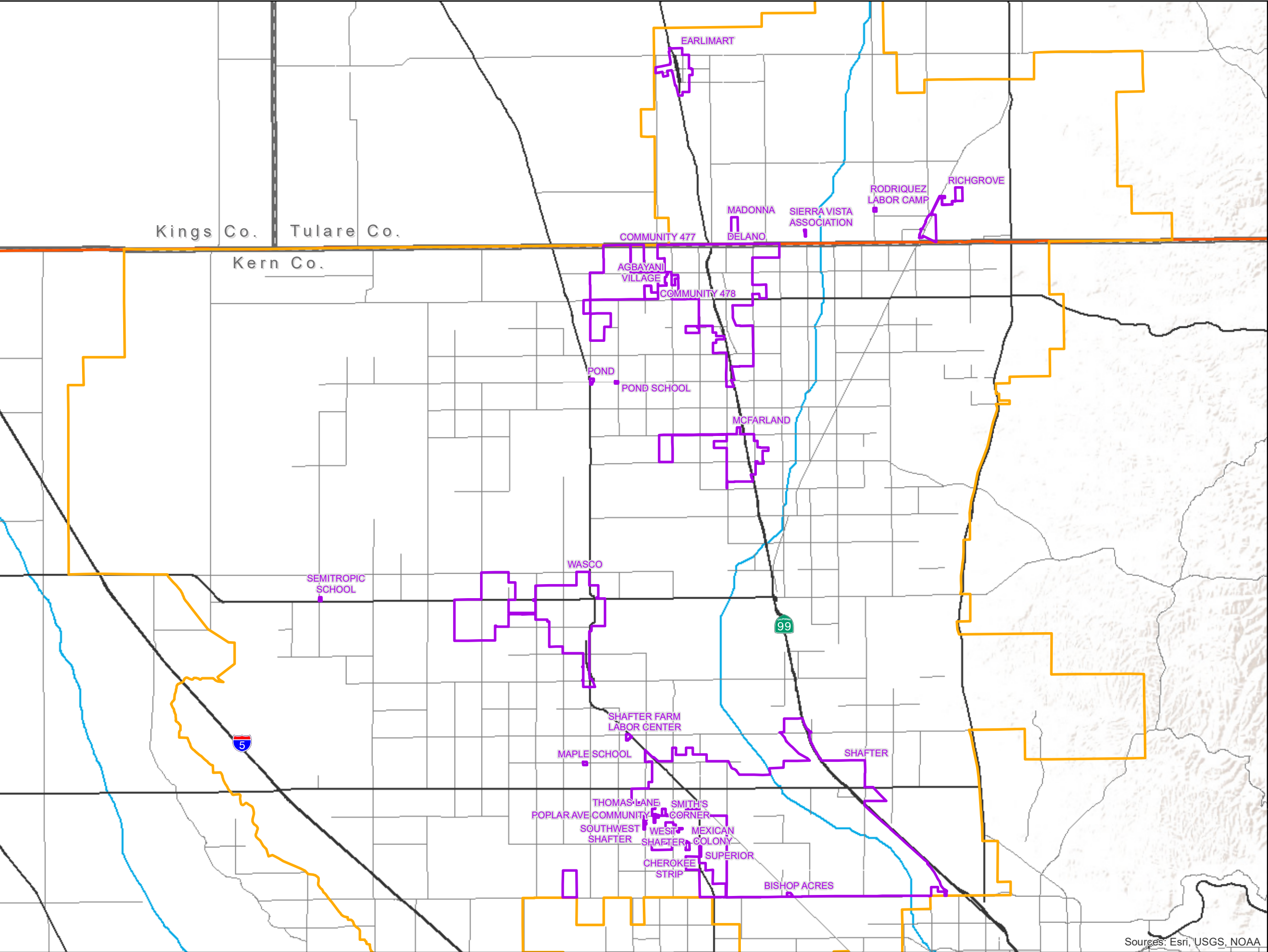
- Legend**
- Prop 1 Funding Area
 - Kings Basin Water Authority
 - Southern Sierra IRWM
 - Westside San Joaquin IRWM
 - DAC and SDAC Communities
 - County
 - Major Road
 - Highway / Interstate
 - Major Canal



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Sources: Esri, USGS, NOAA

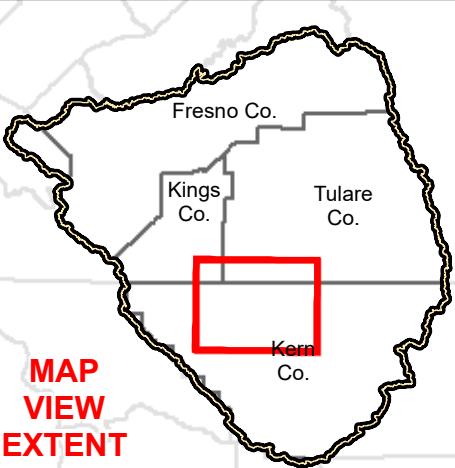


**Tulare Kern Funding Area
Disadvantaged Community
Needs Assessment**

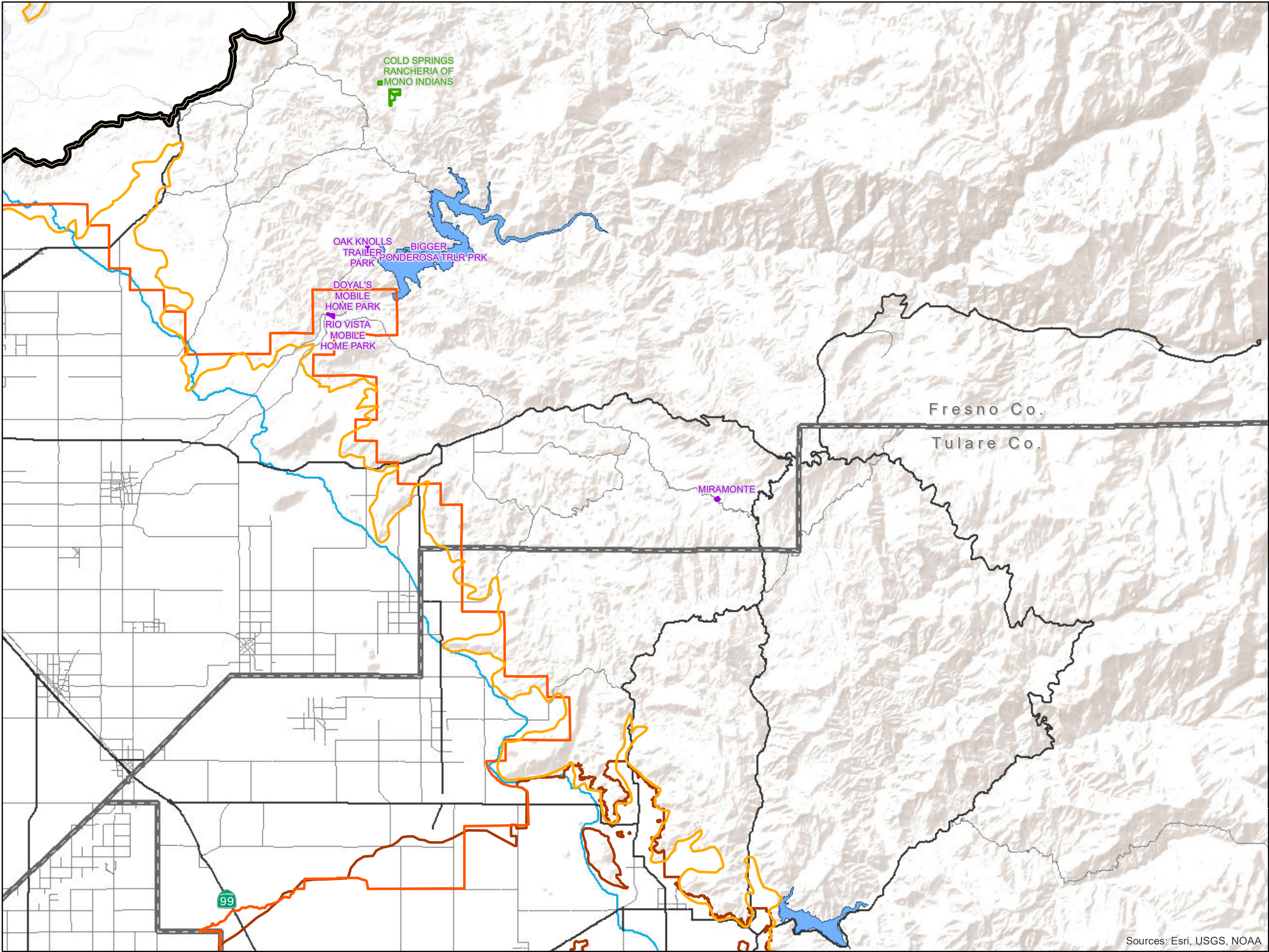
Poso Creek IRWMA
DAC and SDAC Communities

FIGURE 6-4

- Legend**
- Prop 1 Funding Area
 - Poso Creek IRWMA
 - Kern IRWMA
 - DAC and SDAC Communities
 - County
 - Major Road
 - Highway / Interstate
 - Major Canal



Sources: Esri, USGS, NOAA



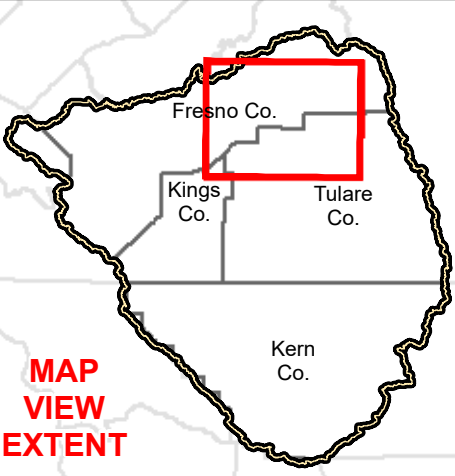
**Tulare Kern Funding Area
Disadvantaged Community
Needs Assessment**

Southern Sierra IRWMA
(North)

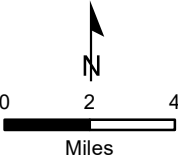
DAC and SDAC Communities

FIGURE 6-5

- Legend**
- Prop 1 Funding Area
 - Southern Sierra IRWMA
 - Kings Basin Water Authority
 - Kaweah IRWM
 - DAC and SDAC Communities
 - Tribe
 - County
 - Major Road
 - Highway / Interstate
 - Major Canal



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Sources: Esri, USGS, NOAA

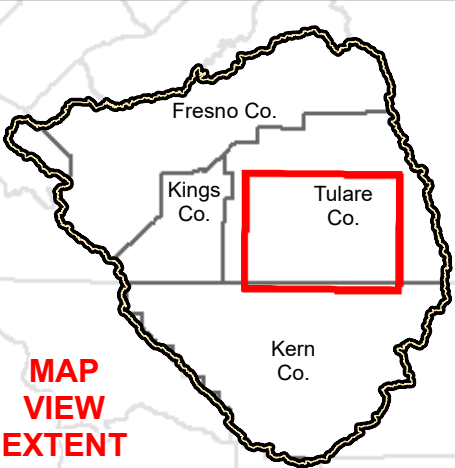
Tulare Kern Funding Area
Disadvantaged Community
Needs Assessment

Southern Sierra IRWMA
(South)

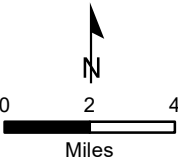
DAC and SDAC Communities

FIGURE 6-6

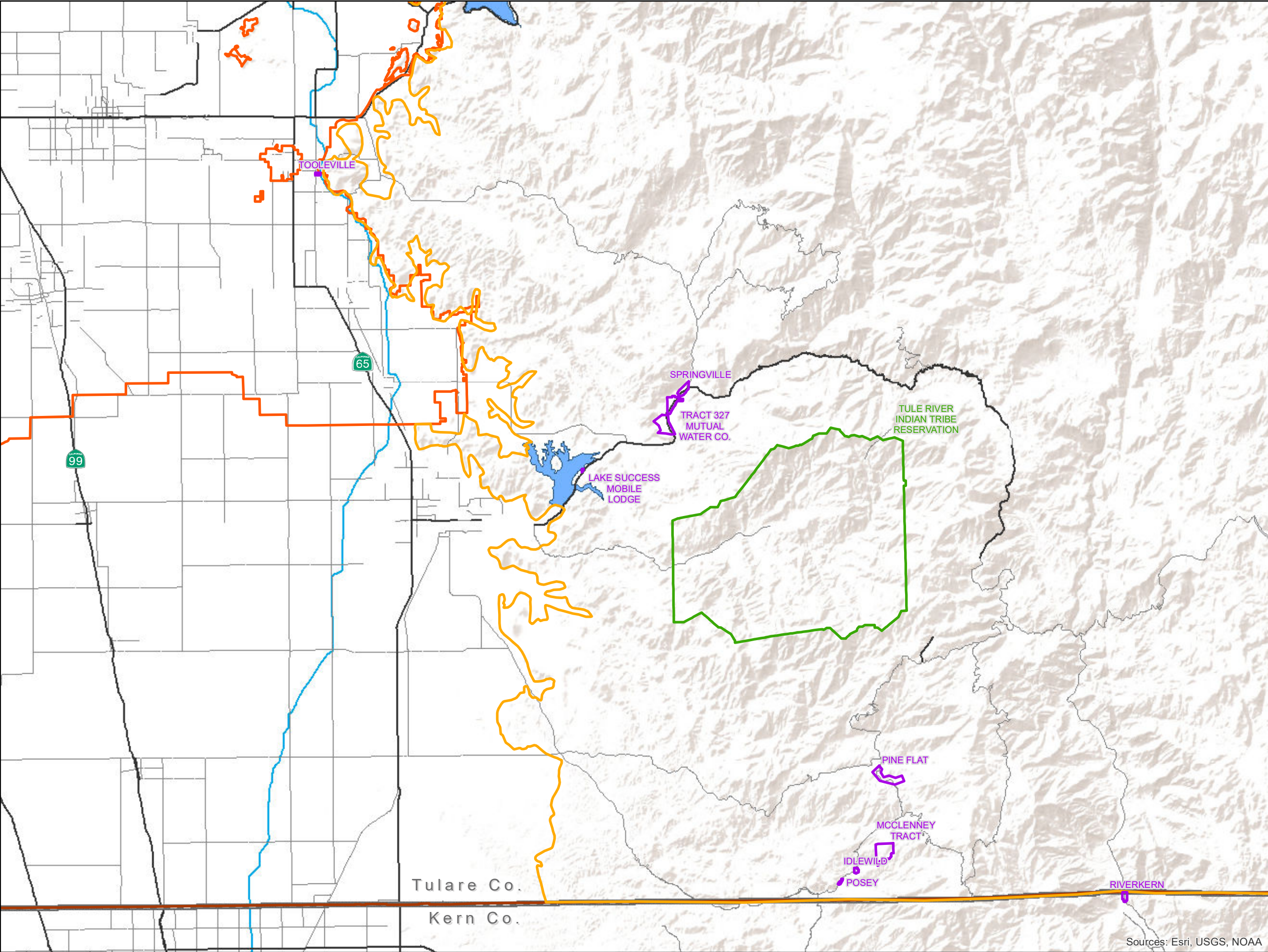
- Legend**
- Prop 1 Funding Area
 - Southern Sierra IRWMA
 - Kaweah IRWM
 - Kern IRWM
 - DAC and SDAC Communities
 - Tribe
 - County
 - Major Road
 - Highway / Interstate
 - Major Canal



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Sources: Esri, USGS, NOAA










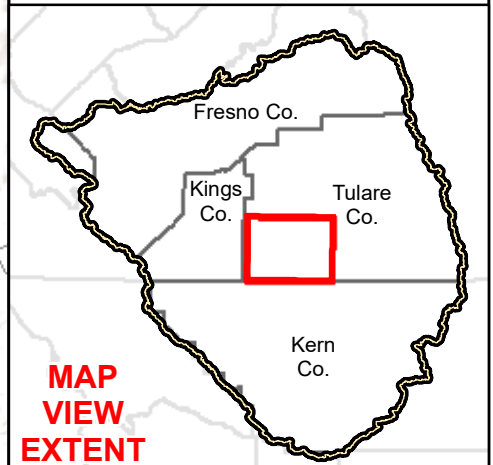
Tulare Kern Funding Area Disadvantaged Community Needs Assessment

Tule River Basin
IRWMA
DAC and SDAC Communities

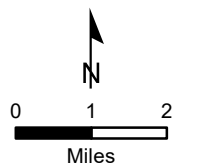
FIGURE 6-7

Legend

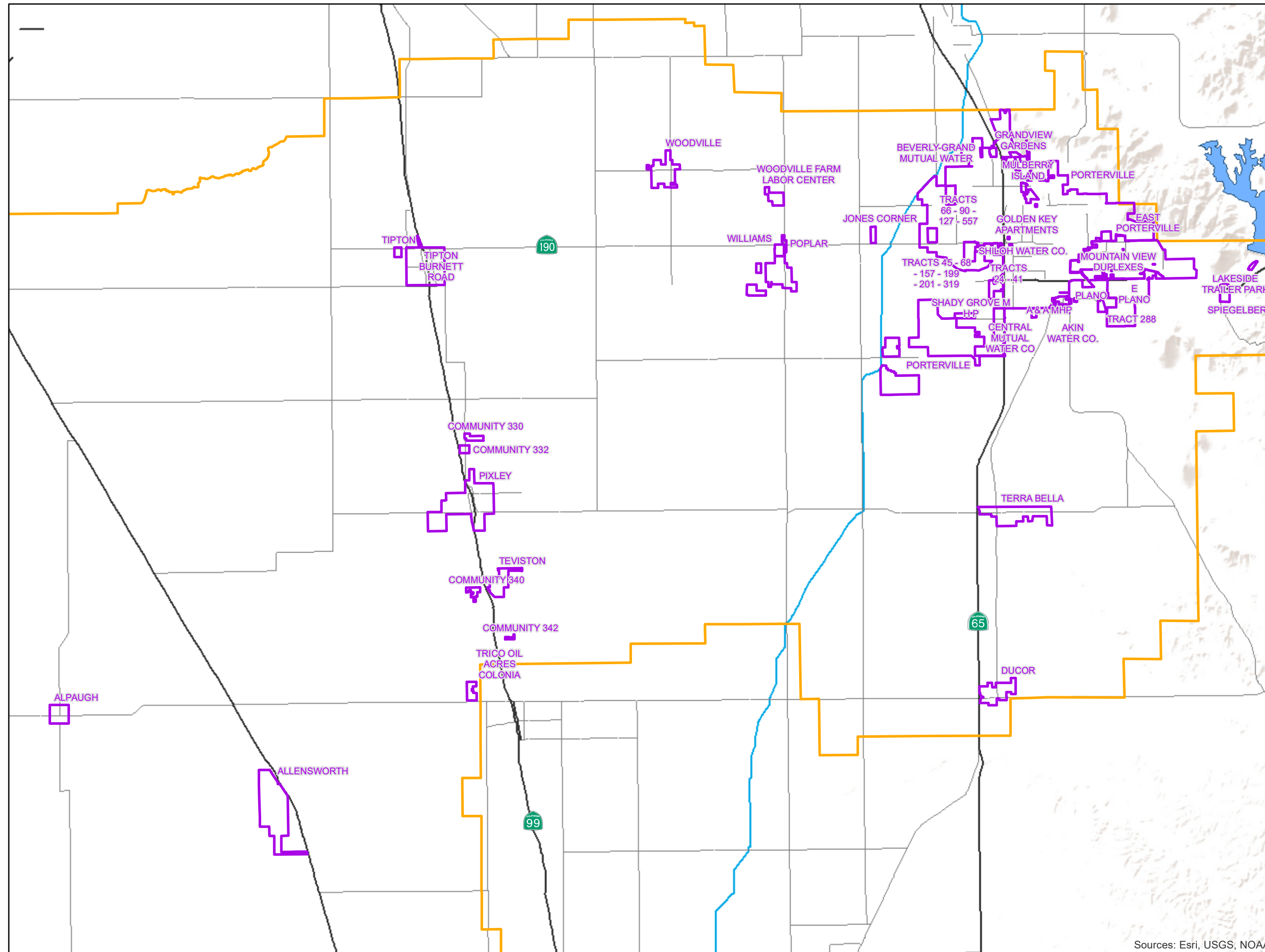
-  Prop 1 Funding Area
-  Tule River Basin IRWMA
-  DAC and SDAC Communities
-  County
-  Major Road
-  Highway / Interstate
-  Major Canal

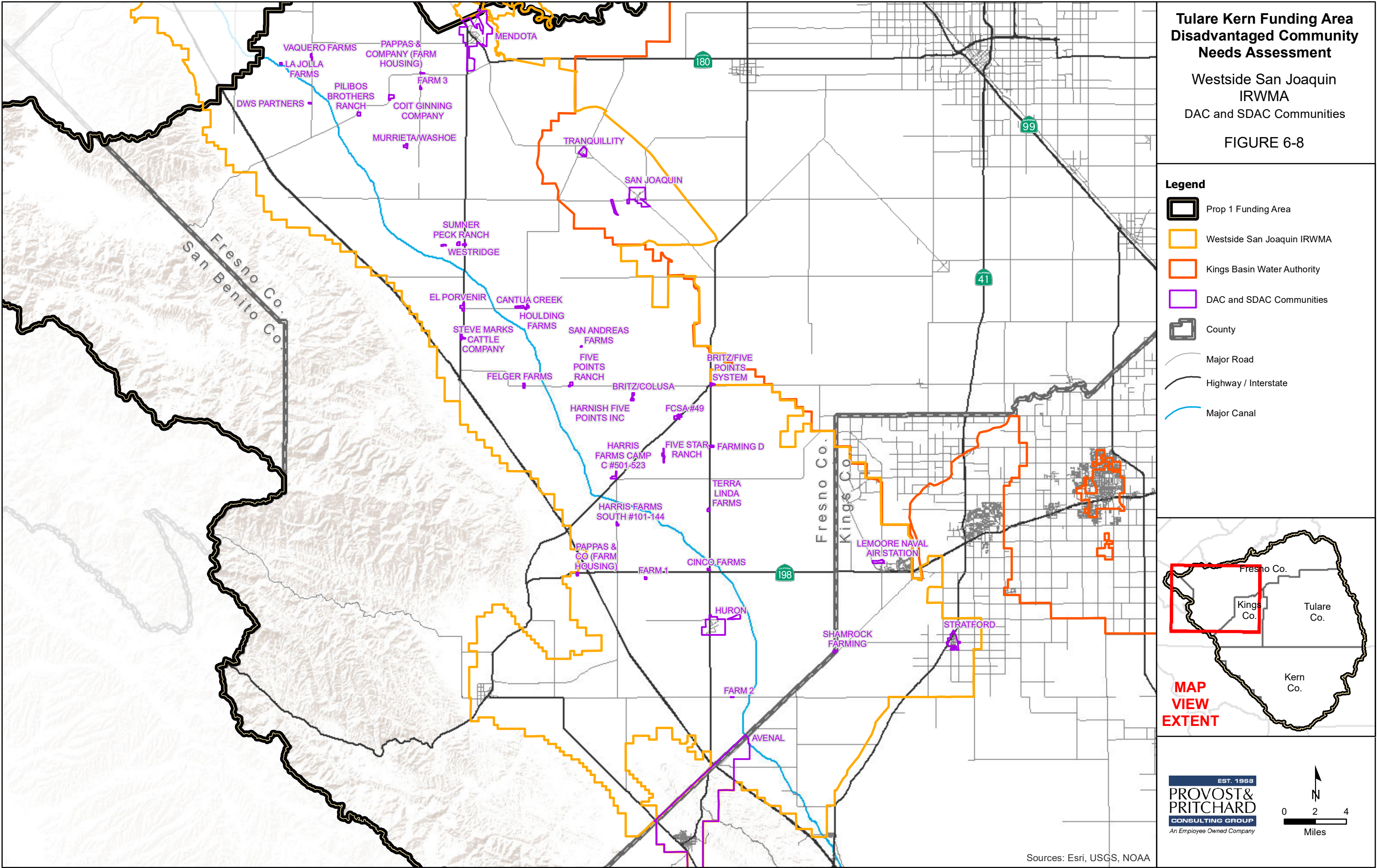


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Sources: Esri, USGS, NOAA












Tulare Kern Funding Area Disadvantaged Community Needs Assessment








DAC and SDAC Communities
Outside of IRWMA Boundaries

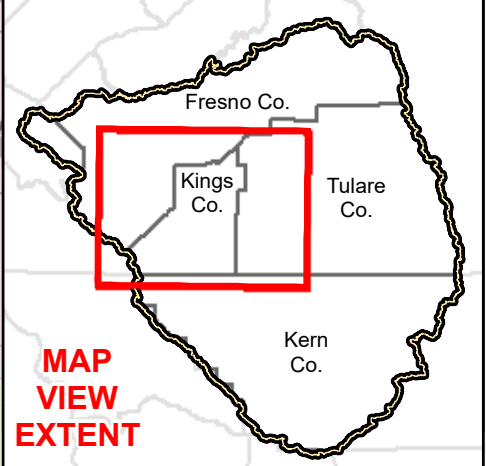
FIGURE 6-9

Legend

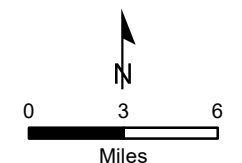
-  Prop 1 Funding Area
-  DAC and SDAC Communities
-  Tribe
-  County
-  Major Road
-  Highway / Interstate
-  Major Canal

IRWMA

-  Kaweah River Basin
-  Kern County
-  Kings Basin
-  Poso Creek
-  Southern Sierra
-  Tule
-  Westside - San Joaquin



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Sources: Esri, USGS, NOAA

7 Water Sources

7.1 Groundwater

The majority of drinking water supply in the TKFA is from groundwater. Water supply and quality issues are discussed in subsequent sections.

Groundwater is critical to California's water supply. It provides drinking water, is a source for agricultural use, and helps sustain the natural environment. For years, some regions have pumped more groundwater than can be replenished, causing historically low groundwater levels.

On September 16, 2014, then Governor Jerry Brown signed into law a three-bill legislative package, known as the Sustainable Groundwater Management Act (SGMA). SGMA provides a framework for sustainable groundwater management in California, requiring the "management and use of groundwater in a manner that can be maintained during the planning and implementation horizon without causing undesirable results." SGMA requires governments and water agencies of high and medium priority basins to halt overdraft and bring groundwater basins into balanced levels of pumping and recharge. Under SGMA, these basins should reach sustainability within 20 years of implementing their sustainability plans. For critically over-drafted basins, that will be 2040. For the remaining high and medium priority basins, 2042 is the deadline. Many of the basins in the TKFA are considered critically over-drafted.

In his signing statement, the governor emphasized that "groundwater management in California is best accomplished locally." SGMA empowers local agencies to form Groundwater Sustainability Agencies (GSAs) to manage basins sustainably and requires those GSAs to adopt Groundwater Sustainability Plans (GSPs). Over 260 GSAs in over 140 basins were formed by SGMA's initial planning milestone. However, as SGMA continues to be implemented and the priorities and boundaries of some basins change, new GSAs will be formed, and existing GSAs may want to reorganize, consolidate, or withdraw from managing in all or part of a basin. GSAs that have been formed within the TKFA include the following:

- *Alpaugh GSA*
- *Buena Vista Water Storage District GSA*
- *Castac Basin GSA*
- *Cawelo Water District GSA*
- *Central Delta-Mendota Region Multi-Agency GSA*
- *Central Kings GSA*
- *City of Coalinga GSA*
- *City of Mendota GSA*
- *County of Fresno GSA – Westside*
- *County of Tulare GSA – Kings*
- *County of Tulare GSA – Kaweah*
- *County of Tulare GSA – Tule*
- *Delano-Earlimart Irrigation District GSA*
- *East Kaweah GSA*
- *Eastern Tule GSA*
- *El Rico GSA*

- *Greater Kaweah GSA*
- *Greenfield County Water District GSA*
- *Henry Miller Water District GSA*
- *James GSA*
- *Kern Groundwater Authority GSA*
- *Kern River GSA*
- *Kings River East GSA*
- *Lower Tule River Irrigation District GSA*
- *McFarland GSA*
- *McMullin Area GSA*
- *Mid-Kaweah GSA*
- *Mid-Kings River GSA*
- *North Fork Kings GSA*
- *North Kings GSA*
- *Olcese Water District GSA*
- *Pioneer GSA*
- *Pixley Irrigation District GSA*
- *Pleasant Valley GSA*
- *Semitropic Water Storage District GSA*
- *South Fork Kings GSA*
- *South Kings GSA*
- *Southwest Kings GSA*
- *Tri-County Water Authority GSA*
- *West Kern Water District GSA*
- *Westlands Water District GSA*
- *White Wolf GSA*

7.2 Surface Water Rights

California Water Code §5101 requires each person or organization that uses diverted surface water or pumped groundwater from a known subterranean stream after December 31, 1965, to file with the State Water Board a Statement of Water Diversion and Use prior to July 1 of the following year.

The California State Water Resources Control Board maintains the Electronic Water Rights Information Management System (eWRIMS), which is a database to track information on water rights in California. eWRIMS contains information on Statements of Water Diversion and Use that have been filed by water diverters, as well as registrations, certificates, and water right permits and licenses that have been issued by the State Water Resources Control Board and its predecessors.

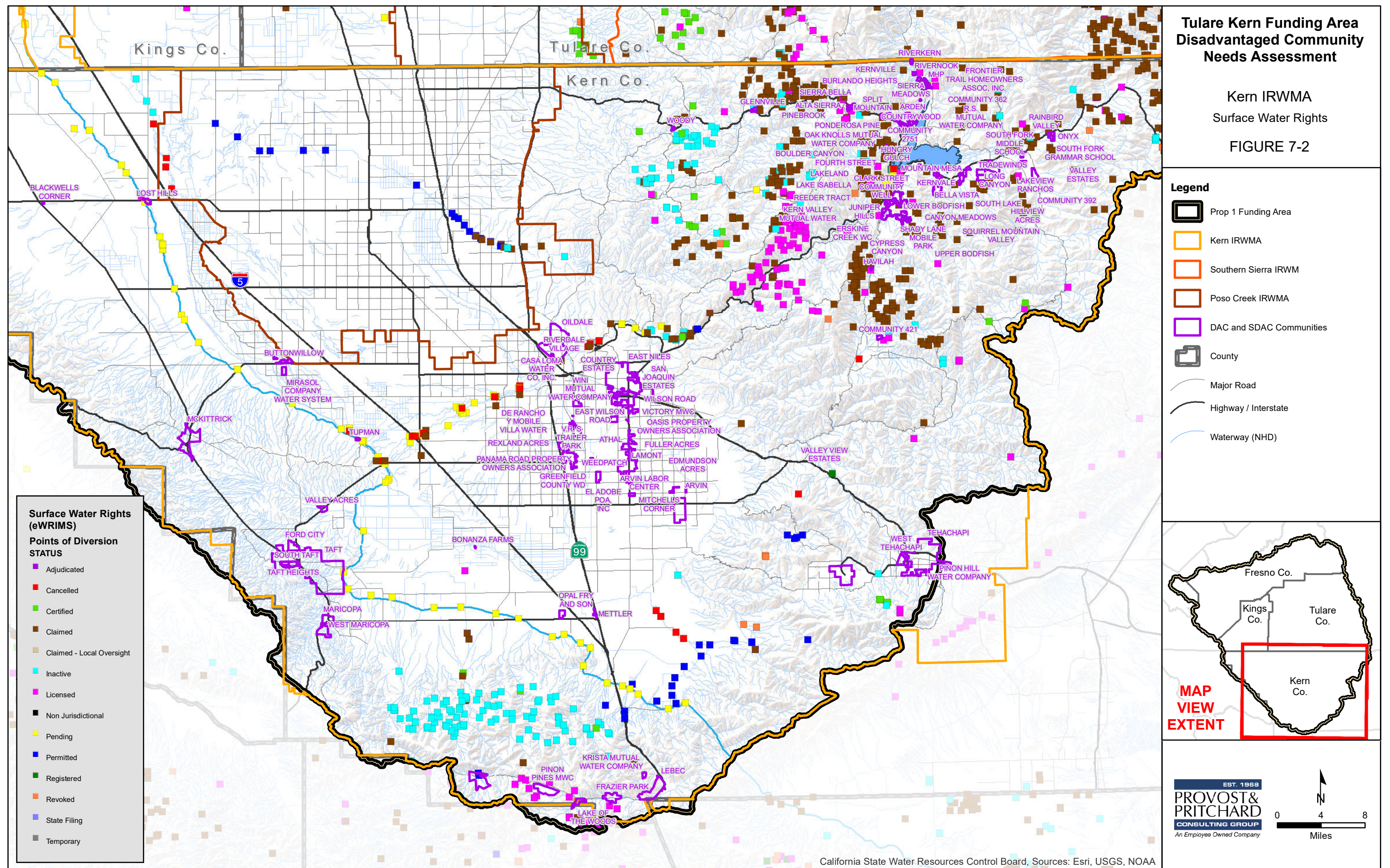
The State Water Resources Control Board regulates temporary and long-term water transfers of post-1914 appropriative water rights from individuals, water districts, and water agencies to purchasers and transfers among parties within local watersheds.

Water transfers between willing sellers and willing buyers can help stretch California's water supplies in dry times and move water to places of critical need. Each year hundreds of water transfers occur in California.

The majority of these transfers are between agricultural water users in the same basin. Water transfers can be one of the water management tools to enhance flexibility in the allocation and use of water in California. Transfers are particularly useful for meeting critical needs during drought periods.

Water transfers are voluntary actions proposed by willing buyers and sellers; they are not initiated by State agencies. DWR is one of several public agencies involved in approval and management of proposed water transfers in California, and its involvement is due to the management of the SWP export and conveyance facilities in the Delta. Others include the State Water Resources Control Board (SWRCB), the California Department of Fish and Wildlife (CDFW), US Bureau of Reclamation (Reclamation), US Fish and Wildlife Service (USFWS), National Marines Fisheries Service, county governments, and local/regional water districts. In coordination with other agencies and the buyers and sellers, DWR's primary role is to provide guidance, to review, to approve and to facilitate transfers that will use the available SWP facilities' capacity.

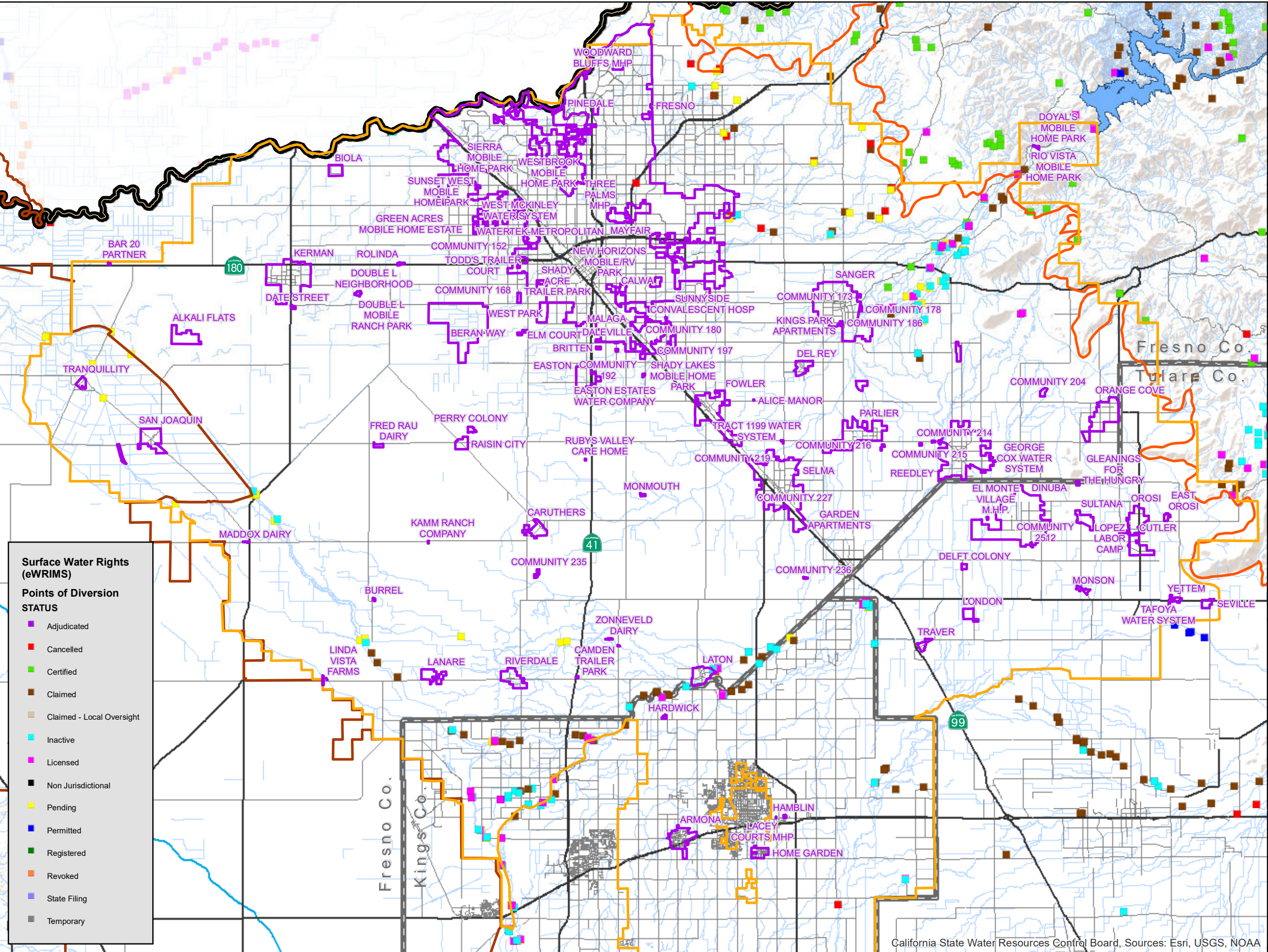
Water transfers that require the use of State, regional, or a local public agency's conveyance facilities require the owner of the conveyance facilities to determine that the transfers will not harm any other legal user of water, will not unreasonably affect fish and wildlife, and will not unreasonably affect the overall economy of the county from which the water is transferred (see: Water Code Section 1810). Water transfers that involve changes in point of diversion, place of use, or purpose of use to a post-1914 water right most often require the approval of the State Water Resources Control Board (SWRCB).



Tulare Kern Funding Area
Disadvantaged Community
Needs Assessment

Kings Basin Water Authority
Surface Water Rights

FIGURE 7-3



Surface Water Rights (eWRIMS)

Points of Diversion STATUS

- Adjudicated
- Cancelled
- Certified
- Claimed
- Claimed - Local Oversight
- Inactive
- Licensed
- Non Jurisdictional
- Pending
- Permitted
- Registered
- Revoked
- State Filing
- Temporary

Legend

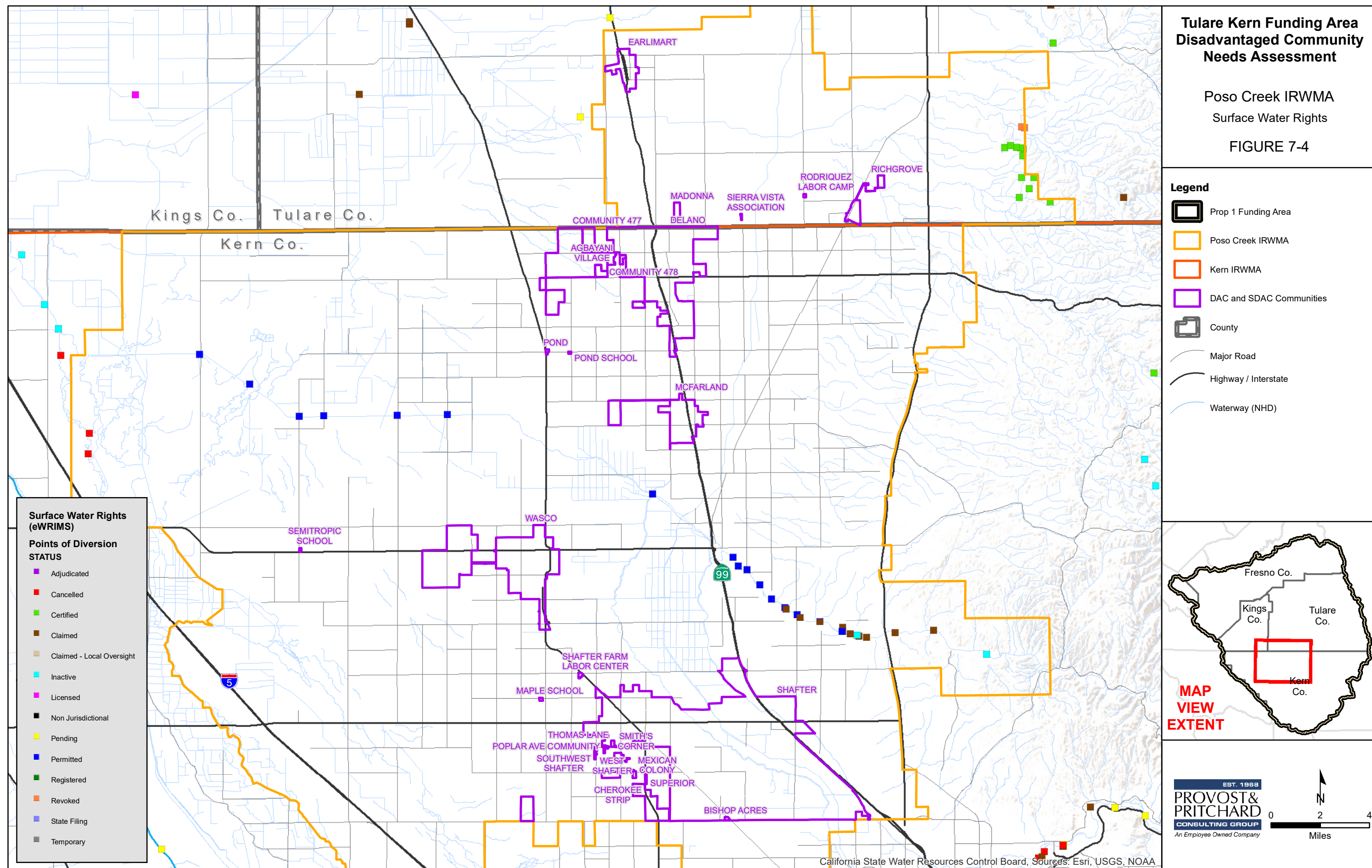
- Prop 1 Funding Area
- Kings Basin Water Authority
- Southern Sierra IRWM
- Westside San Joaquin IRWM
- DAC and SDAC Communities
- County
- Major Road
- Highway / Interstate
- Waterway (NHD)

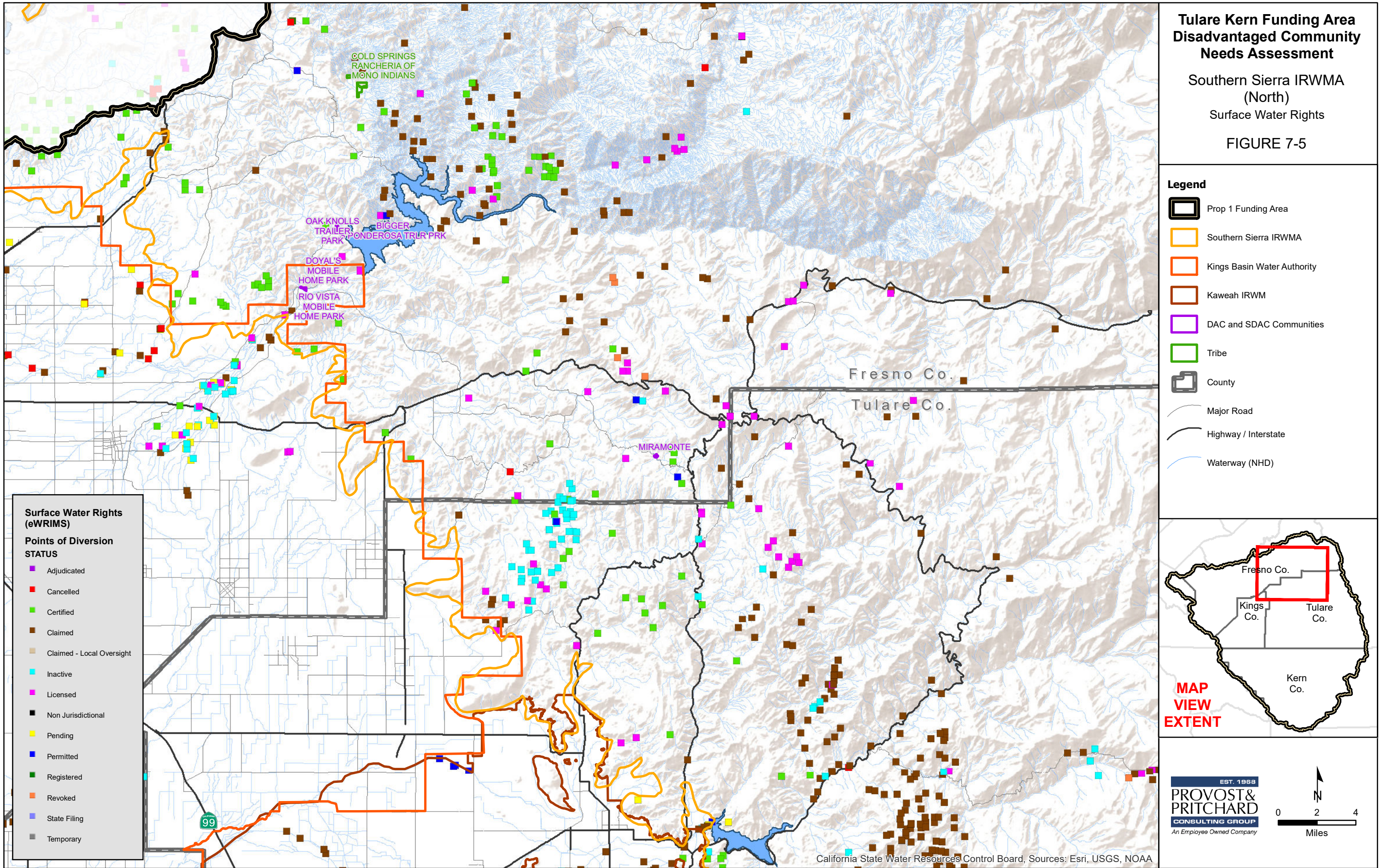


MAP VIEW EXTENT

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Tulare Kern Funding Area Disadvantaged Community Needs Assessment

Southern Sierra IRWMA
(South)
Surface Water Rights















FIGURE 7-6

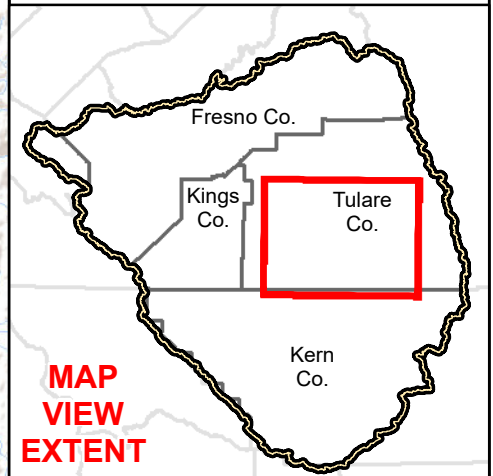
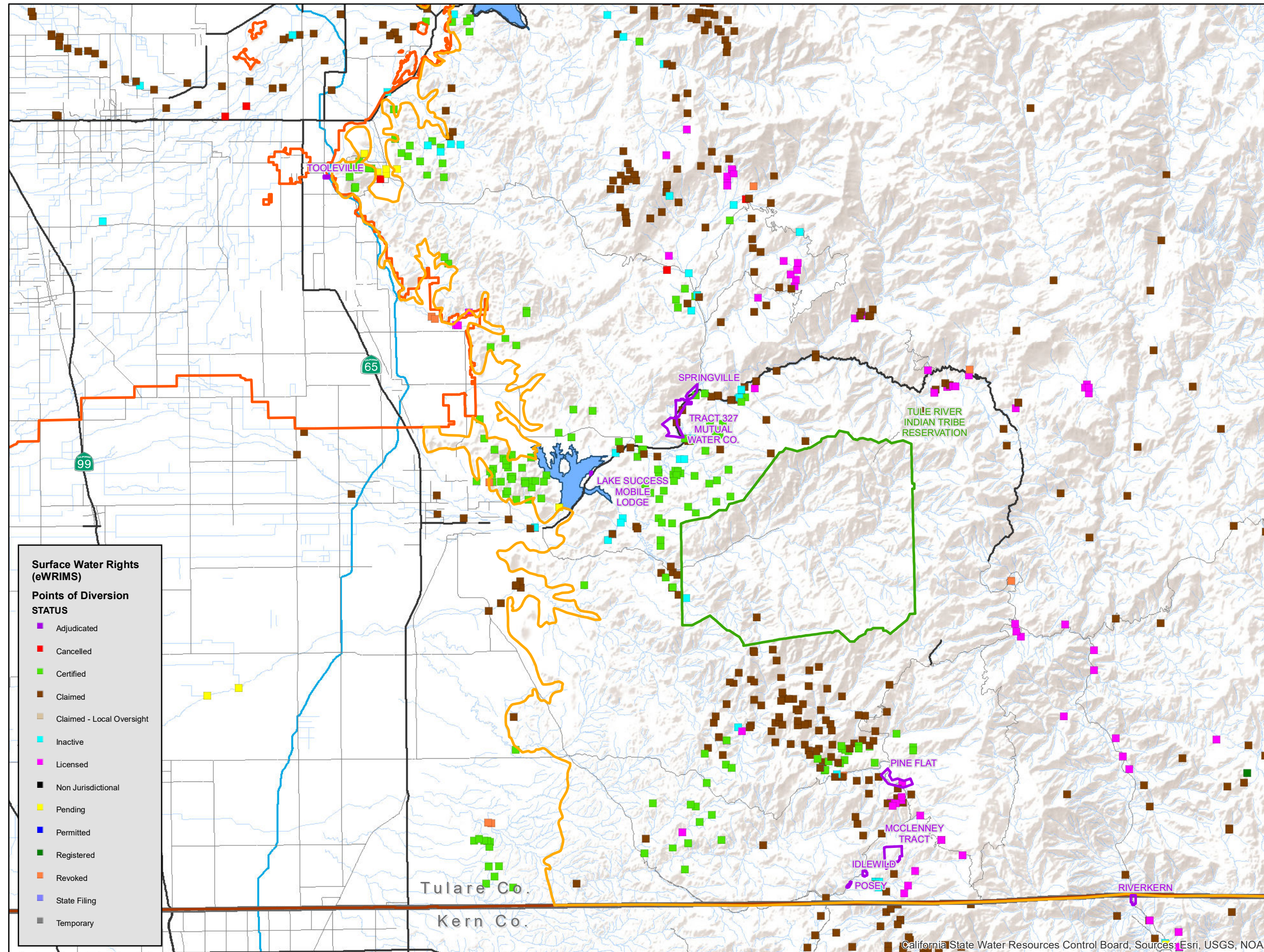
Legend

-  Prop 1 Funding Area
-  Southern Sierra IRWMA
-  Kaweah IRWM
-  Kern IRWM
-  DAC and SDAC Communities
-  Tribe
-  County
-  Major Road
-  Highway / Interstate
-  Waterway (NHD)

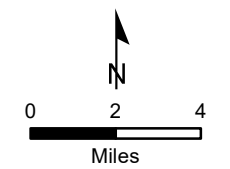
Surface Water Rights (eWRIMS)

Points of Diversion STATUS

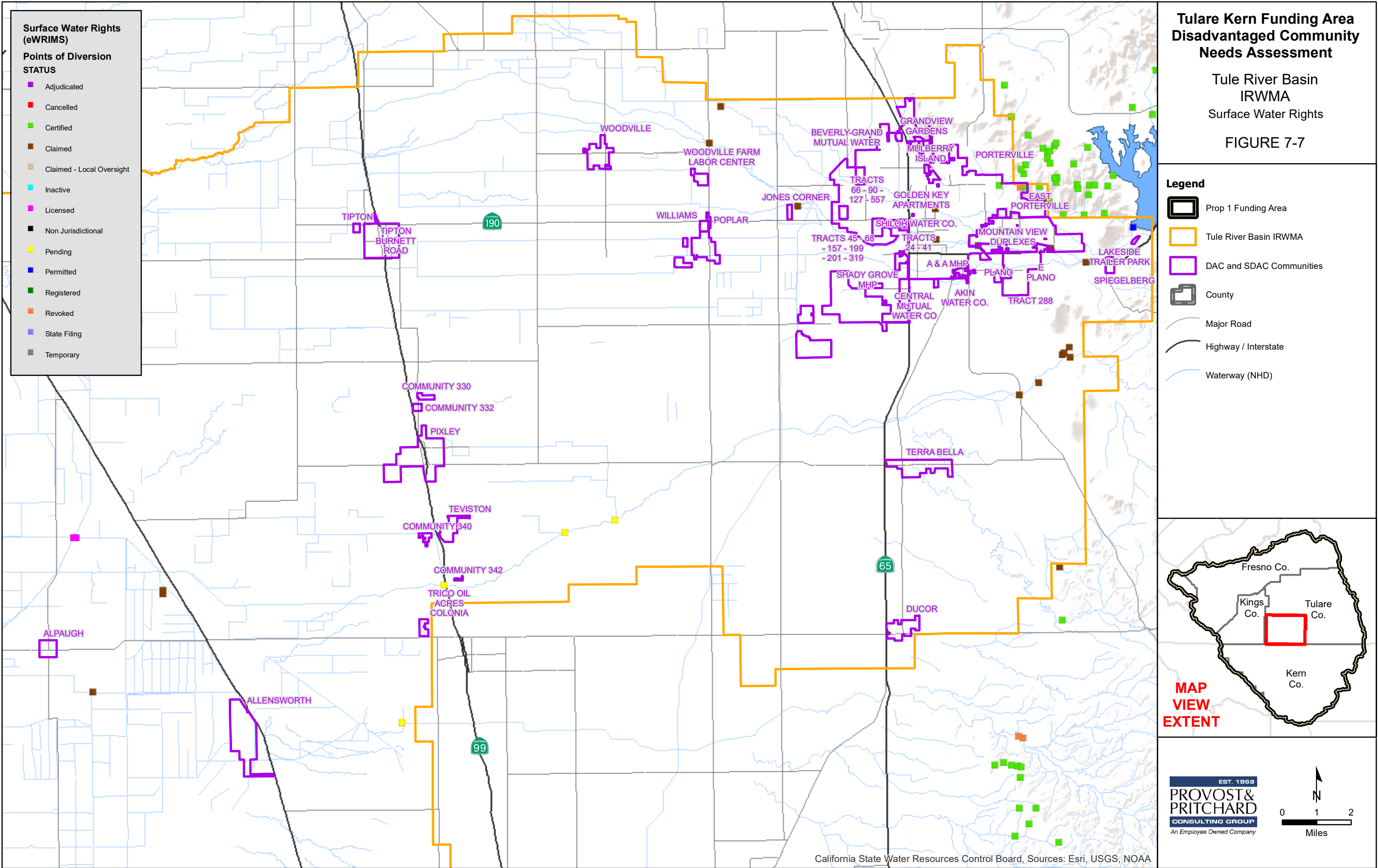
-  Adjudicated
-  Cancelled
-  Certified
-  Claimed
-  Claimed - Local Oversight
-  Inactive
-  Licensed
-  Non Jurisdictional
-  Pending
-  Permitted
-  Registered
-  Revoked
-  State Filing
-  Temporary

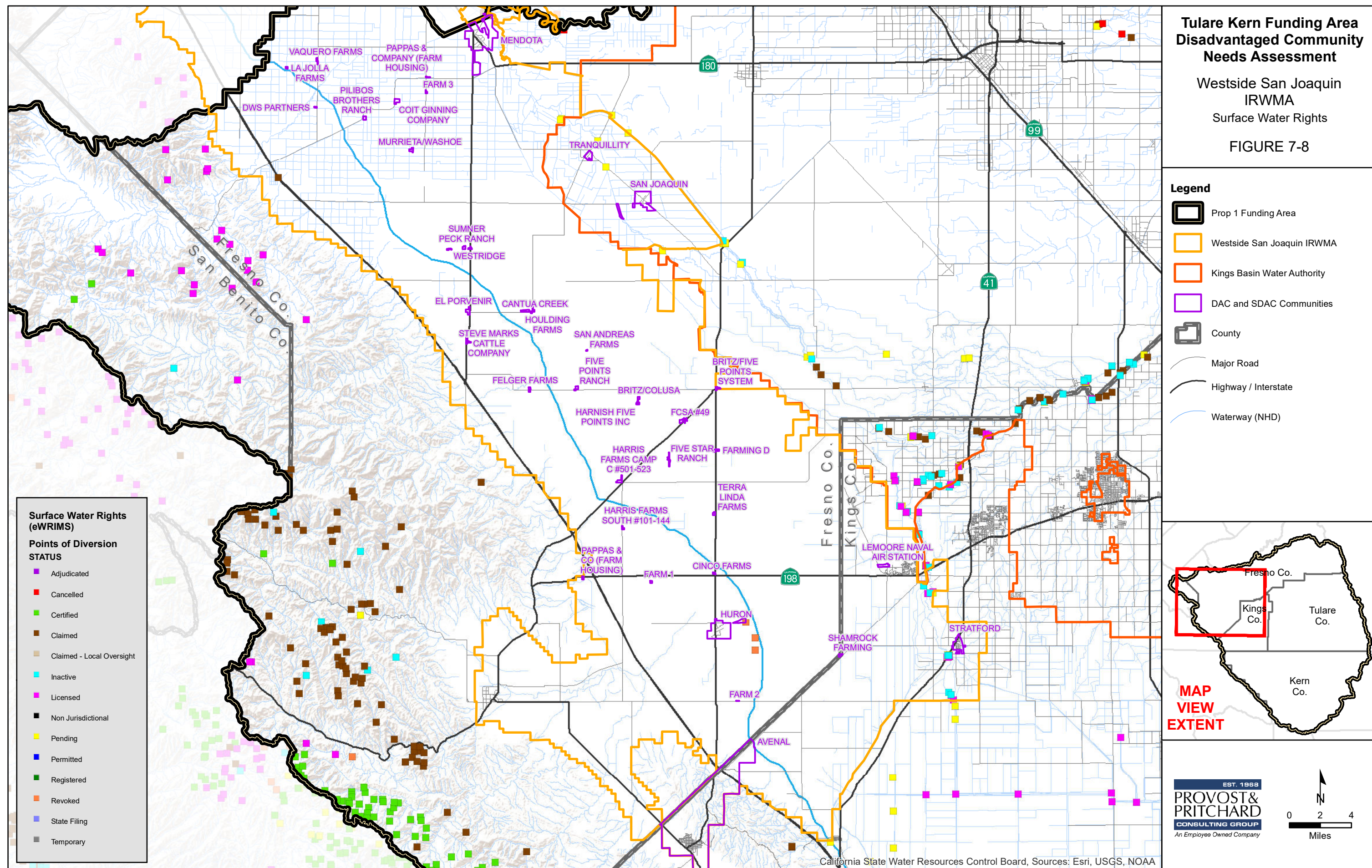


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California State Water Resources Control Board, Sources: Esri, USGS, NOAA





**Tulare Kern Funding Area
Disadvantaged Community
Needs Assessment**

Surface Water Rights
Outside of IRWMA Boundaries

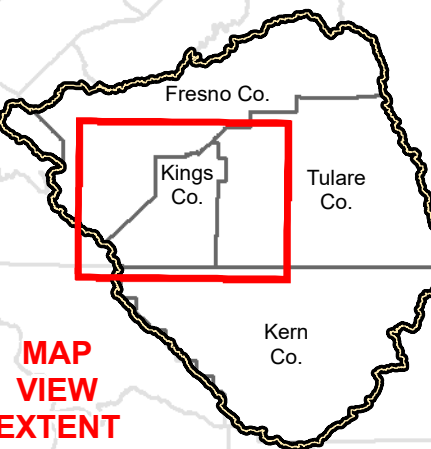
FIGURE 7-9

Legend

- Prop 1 Funding Area
- DAC and SDAC Communities
- Tribe
- County
- Major Road
- Highway / Interstate
- Waterway (NHD)

IRWMA

- Kaweah River Basin
- Kern County
- Kings Basin
- Poso Creek
- Southern Sierra
- Tule
- Westside - San Joaquin



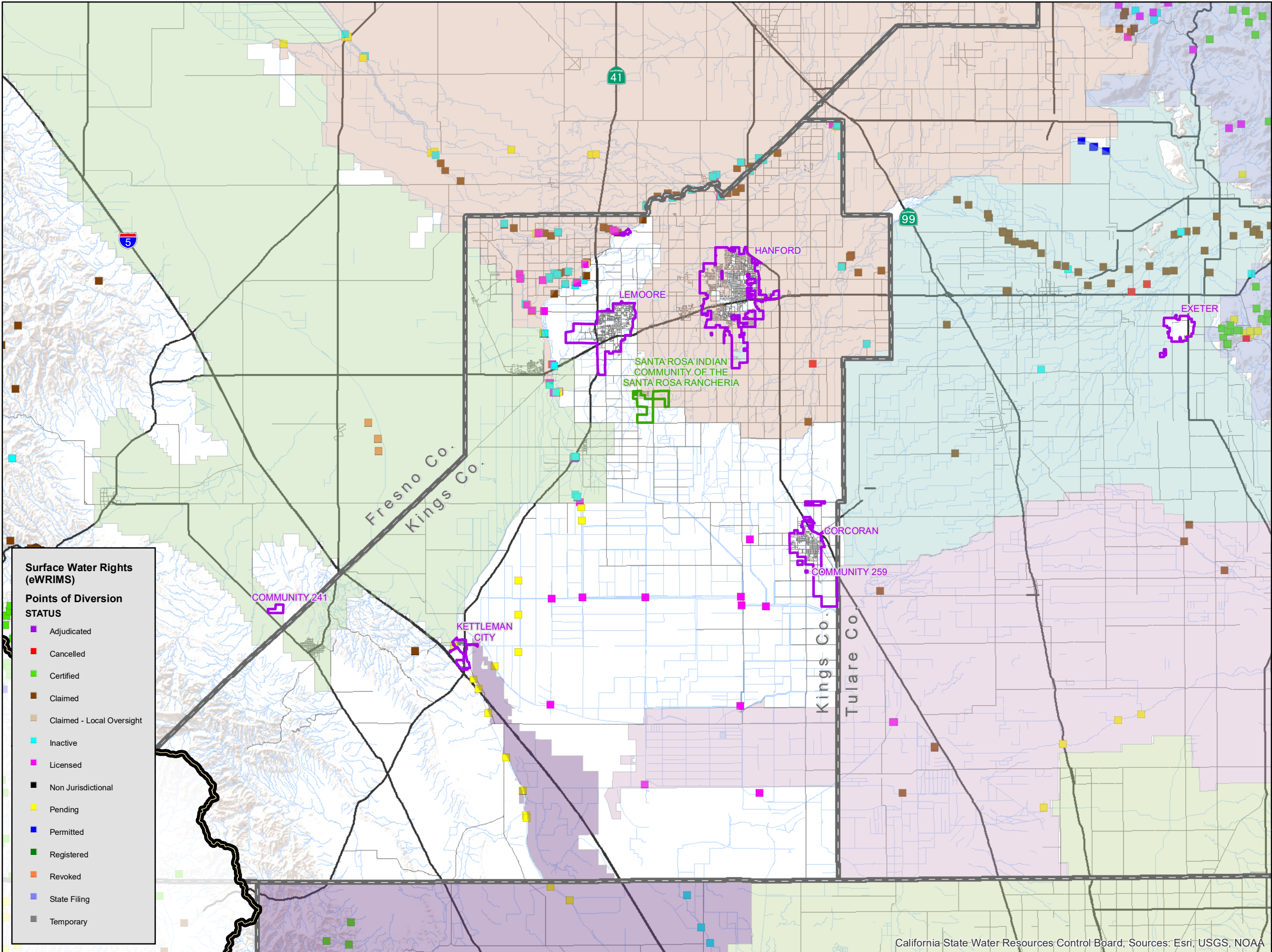
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California State Water Resources Control Board, Sources: Esri, USGS, NOAA

**Surface Water Rights
(eWRIMS)**

**Points of Diversion
STATUS**

- Adjudicated
- Cancelled
- Certified
- Claimed
- Claimed - Local Oversight
- Inactive
- Licensed
- Non Jurisdictional
- Pending
- Permitted
- Registered
- Revoked
- State Filing
- Temporary



8 Water Supply

The majority of communities within the Tulare Kern Funding Area rely on groundwater for their drinking water supply. Of the 355 DACs and 3 Tribes within the TKFA, approximately 86% rely on groundwater, while approximately 14% have a surface water supply.

One of the challenges identified in previous studies is insufficient quantity of water or a lack of redundancy or reliability of water supply. Systems that rely on a single source of supply are considered to be most vulnerable. Approximately 26% of the DACs and Tribes rely on a water system with only one source of water. Table 8-2 shows the DACs and Tribes that rely on only one source for their water supply. Those communities that rely on a single source of supply are also shown in Figure 8-1 through Figure 8-9.

Table 8-1. Summary of DACs with a Single Source

Source	DACs	DACs with 1 Source	SDACs	SDACs with 1 Source	Tribes	Tribes with 1 Source	Total DACs & Tribes	Total with 1 Source
Groundwater	114	33	192	40	2	0	308	73
Groundwater and Surface Water	1	-	1	-	0	-	2	0
Surface Water	15	6	32	15	1	0	48	21
Total	130	39	225	55	3	0	358	94

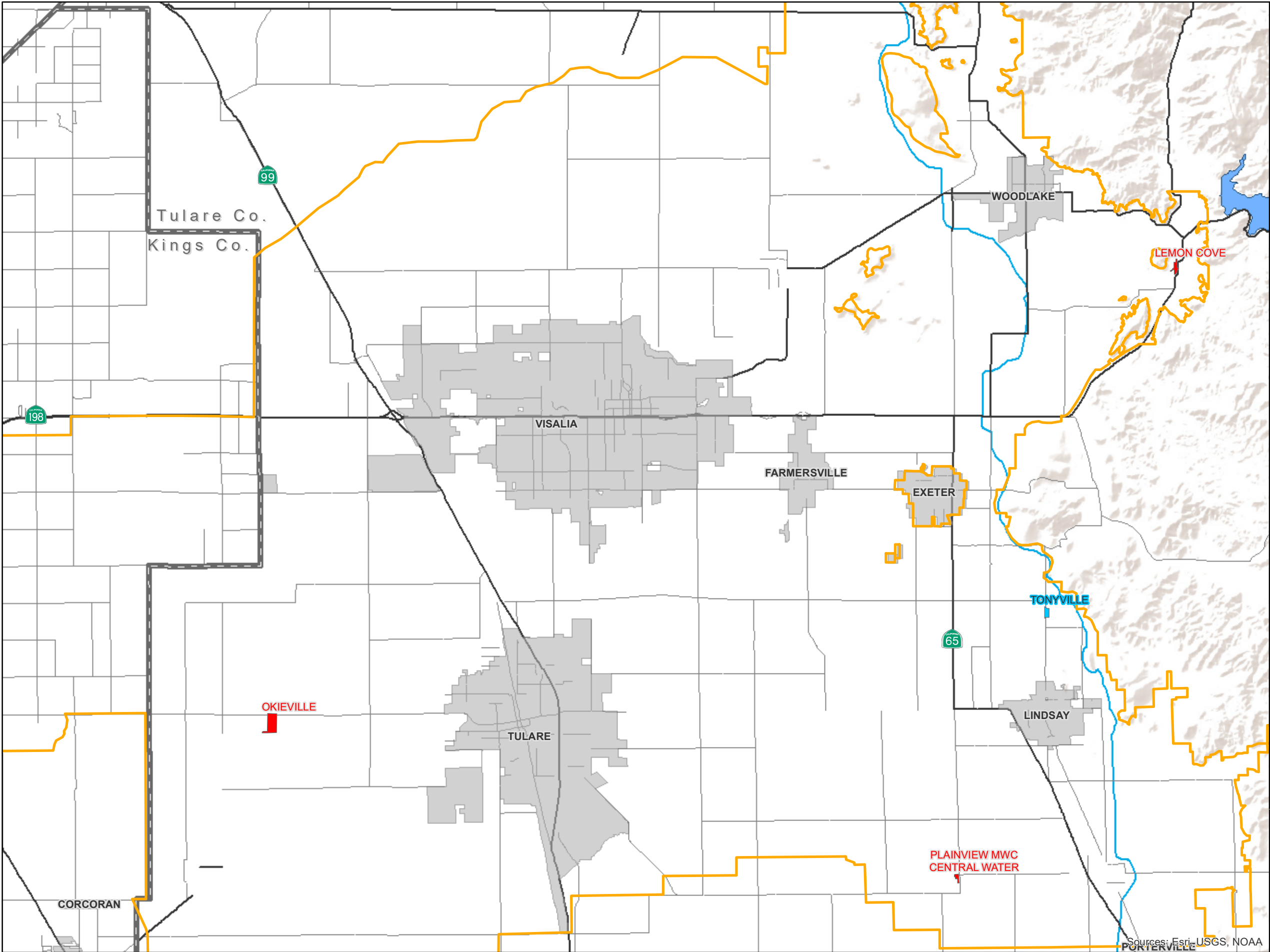
Table 8-2. Disadvantaged Communities with a Single Water Source

COMMUNITY NAME	DAC STATUS	WATER SOURCE	COUNTY	IRWM
LEMON COVE	SDAC	GROUNDWATER	TULARE	KAWEAH
OKIEVILLE	SDAC	GROUNDWATER	TULARE	KAWEAH
PLAINVIEW MWC CENTRAL WATER	SDAC	GROUNDWATER	TULARE	KAWEAH
TONYVILLE	DAC	SURFACE WATER	TULARE	KAWEAH
ALTA SIERRA	SDAC	GROUNDWATER	KERN	KERN
ATHAL	SDAC	GROUNDWATER	KERN	KERN
BELLA VISTA	SDAC	GROUNDWATER	KERN	KERN
CLARK STREET COMMUNITY WELL	SDAC	GROUNDWATER	KERN	KERN
EAST WILSON ROAD	SDAC	GROUNDWATER	KERN	KERN
GLENNVILLE	SDAC	GROUNDWATER	KERN	KERN
KERNVALE	SDAC	GROUNDWATER	KERN	KERN
KRISTA MUTUAL WATER COMPANY	SDAC	GROUNDWATER	KERN	KERN
LAKE OF THE WOODS MHP	DAC	GROUNDWATER	KERN	KERN
MIRASOL COMPANY WATER SYSTEM	SDAC	GROUNDWATER	KERN	KERN
OPAL FRY AND SON	SDAC	GROUNDWATER	KERN	KERN

COMMUNITY NAME	DAC STATUS	WATER SOURCE	COUNTY	IRWM
PANAMA ROAD PROPERTY OWNERS ASSOCIATION	SDAC	GROUNDWATER	KERN	KERN
PINON HILL WATER COMPANY	DAC	GROUNDWATER	KERN	KERN
R.S. MUTUAL WATER COMPANY	SDAC	GROUNDWATER	KERN	KERN
RIVERDALE VILLAGE	SDAC	GROUNDWATER	KERN	KERN
SAN JOAQUIN ESTATES	DAC	GROUNDWATER	KERN	KERN
SIERRA MEADOWS	SDAC	GROUNDWATER	KERN	KERN
SOUTH FORK GRAMMAR SCHOOL	SDAC	GROUNDWATER	KERN	KERN
SOUTH FORK MIDDLE SCHOOL	SDAC	GROUNDWATER	KERN	KERN
V.R. S TRAILER PARK	SDAC	GROUNDWATER	KERN	KERN
WEST TEHACHAPI	DAC	GROUNDWATER	KERN	KERN
WILSON ROAD	DAC	GROUNDWATER	KERN	KERN
WINI MUTUAL WATER COMPANY	DAC	GROUNDWATER	KERN	KERN
ALICE MANOR	DAC	GROUNDWATER	FRESNO	KINGS BASIN
BERAN WAY	DAC	GROUNDWATER	FRESNO	KINGS BASIN
CAMDEN TRAILER PARK	DAC	GROUNDWATER	FRESNO	KINGS BASIN
DOUBLE L MOBILE RANCH PARK	SDAC	GROUNDWATER	FRESNO	KINGS BASIN
EL MONTE VILLAGE M.H.P.	DAC	GROUNDWATER	TULARE	KINGS BASIN
ELM COURT	DAC	GROUNDWATER	FRESNO	KINGS BASIN
FRED RAU DAIRY	DAC	GROUNDWATER	FRESNO	KINGS BASIN
GLEANINGS FOR THE HUNGRY	SDAC	GROUNDWATER	TULARE	KINGS BASIN
GREEN ACRES MOBILE HOME ESTATE	DAC	GROUNDWATER	FRESNO	KINGS BASIN
HARDWICK	SDAC	GROUNDWATER	KINGS	KINGS BASIN
KINGS PARK APARTMENTS	DAC	GROUNDWATER	FRESNO	KINGS BASIN
LINDA VISTA FARMS	SDAC	GROUNDWATER	FRESNO	KINGS BASIN
LOPEZ LABOR CAMP	SDAC	GROUNDWATER	TULARE	KINGS BASIN
MONSON	DAC	GROUNDWATER	TULARE	KINGS BASIN
NEW HORIZONS MOBILE/RV PARK	SDAC	GROUNDWATER	FRESNO	KINGS BASIN
ORANGE COVE	SDAC	SURFACE WATER	FRESNO	KINGS BASIN
RAISIN CITY	SDAC	GROUNDWATER	FRESNO	KINGS BASIN
RUBYS VALLEY CARE HOME	SDAC	GROUNDWATER	FRESNO	KINGS BASIN

COMMUNITY NAME	DAC STATUS	WATER SOURCE	COUNTY	IRWM
SHADY LAKES MOBILE HOME PARK	SDAC	GROUNDWATER	FRESNO	KINGS BASIN
SUNNYSIDE CONVALESCENT HOSP	DAC	GROUNDWATER	FRESNO	KINGS BASIN
TRACT 1199 WATER SYSTEM	SDAC	GROUNDWATER	FRESNO	KINGS BASIN
WATERTEK- METROPOLITAN	SDAC	GROUNDWATER	FRESNO	KINGS BASIN
WOODWARD BLUFFS MHP	DAC	GROUNDWATER	FRESNO	KINGS BASIN
DOYAL'S MOBILE HOME PARK	DAC	GROUNDWATER	FRESNO	KINGS BASIN/SOUTHERN SIERRA
RIO VISTA MOBILE HOME PARK	DAC	GROUNDWATER	FRESNO	KINGS BASIN/SOUTHERN SIERRA
AGBAYANI VILLAGE	DAC	GROUNDWATER	KERN	POSO CREEK
POND	DAC	GROUNDWATER	KERN	POSO CREEK
POND SCHOOL	SDAC	GROUNDWATER	KERN	POSO CREEK
POPLAR AVE COMMUNITY	DAC	GROUNDWATER	KERN	POSO CREEK
RODRIQUEZ LABOR CAMP	DAC	GROUNDWATER	TULARE	POSO CREEK
SEMITROPIC SCHOOL	SDAC	GROUNDWATER	KERN	POSO CREEK
SIERRA VISTA ASSOCIATION	DAC	GROUNDWATER	TULARE	POSO CREEK
LAKE SUCCESS MOBILE LODGE	DAC	GROUNDWATER	TULARE	SOUTHERN SIERRA
SPRINGVILLE	SDAC	SURFACE WATER	TULARE	SOUTHERN SIERRA
TRACT 327 MUTUAL WATER CO.	SDAC	GROUNDWATER	TULARE	SOUTHERN SIERRA
A & A MHP	DAC	GROUNDWATER	TULARE	TULE
BEVERLY-GRAND MUTUAL WATER	DAC	GROUNDWATER	TULARE	TULE
CENTRAL MUTUAL WATER CO	DAC	GROUNDWATER	TULARE	TULE
E PLANO	DAC	GROUNDWATER	TULARE	TULE
GRANDVIEW GARDENS	DAC	GROUNDWATER	TULARE	TULE
LAKESIDE TRAILER PARK	DAC	GROUNDWATER	TULARE	TULE
MOUNTAIN VIEW DUPLEXES	SDAC	GROUNDWATER	TULARE	TULE
SHADY GROVE MHP	DAC	GROUNDWATER	TULARE	TULE
SHILOH WATER CO.	DAC	GROUNDWATER	TULARE	TULE
SPIEGELBERG	SDAC	GROUNDWATER	TULARE	TULE
WILLIAMS	SDAC	GROUNDWATER	TULARE	TULE
BRITZ/COLUSA	SDAC	SURFACE WATER	FRESNO	WESTSIDE SJ

COMMUNITY NAME	DAC STATUS	WATER SOURCE	COUNTY	IRWM
BRITZ/FIVE POINTS SYSTEM	SDAC	SURFACE WATER	FRESNO	WESTSIDE SJ
CANTUA CREEK	SDAC	SURFACE WATER	FRESNO	WESTSIDE SJ
COIT GINNING COMPANY	SDAC	SURFACE WATER	FRESNO	WESTSIDE SJ
EL PORVENIR	SDAC	SURFACE WATER	FRESNO	WESTSIDE SJ
FARMING D	SDAC	SURFACE WATER	FRESNO	WESTSIDE SJ
FCSA #49	DAC	SURFACE WATER	FRESNO	WESTSIDE SJ
FIVE POINTS RANCH	SDAC	GROUNDWATER	FRESNO	WESTSIDE SJ
FIVE STAR RANCH	SDAC	GROUNDWATER	FRESNO	WESTSIDE SJ
HARRIS FARMS CAMP C #501-523	DAC	SURFACE WATER	FRESNO	WESTSIDE SJ
HARRIS FARMS SOUTH #101-144	SDAC	SURFACE WATER	FRESNO	WESTSIDE SJ
HOULDING FARMS	SDAC	GROUNDWATER	FRESNO	WESTSIDE SJ
HURON	SDAC	SURFACE WATER	FRESNO	WESTSIDE SJ
PAPPAS & CO (FARM HOUSING)	DAC	SURFACE WATER	FRESNO	WESTSIDE SJ
PAPPAS & COMPANY (FARM HOUSING)	DAC	SURFACE WATER	FRESNO	WESTSIDE SJ
PILIBOS BROTHERS RANCH	SDAC	SURFACE WATER	FRESNO	WESTSIDE SJ
SAN ANDREAS FARMS	SDAC	SURFACE WATER	FRESNO	WESTSIDE SJ
STEVE MARKS CATTLE COMPANY	SDAC	SURFACE WATER	FRESNO	WESTSIDE SJ
SUMNER PECK RANCH	SDAC	SURFACE WATER	FRESNO	WESTSIDE SJ
TERRA LINDA FARMS	SDAC	SURFACE WATER	FRESNO	WESTSIDE SJ
VAQUERO FARMS	DAC	SURFACE WATER	FRESNO	WESTSIDE SJ



**Tulare Kern Funding Area
Disadvantaged Community
Needs Assessment**

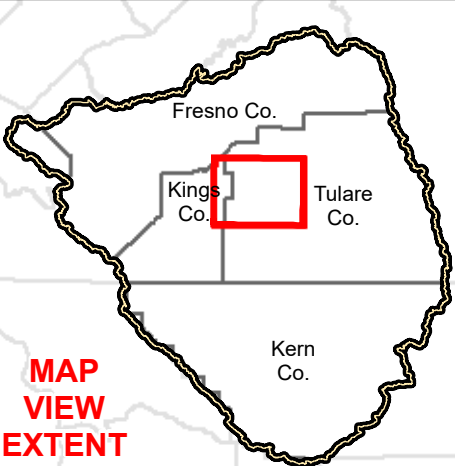
Kaweah River Basin
IRWMA
DAC and SDAC Communities
with Single Water Source
FIGURE 8-1

Legend

- Prop 1 Funding Area
- Kaweah River Basin IRWMA
- City
- County
- Major Road
- Highway / Interstate
- Major Canal

Single Water Source

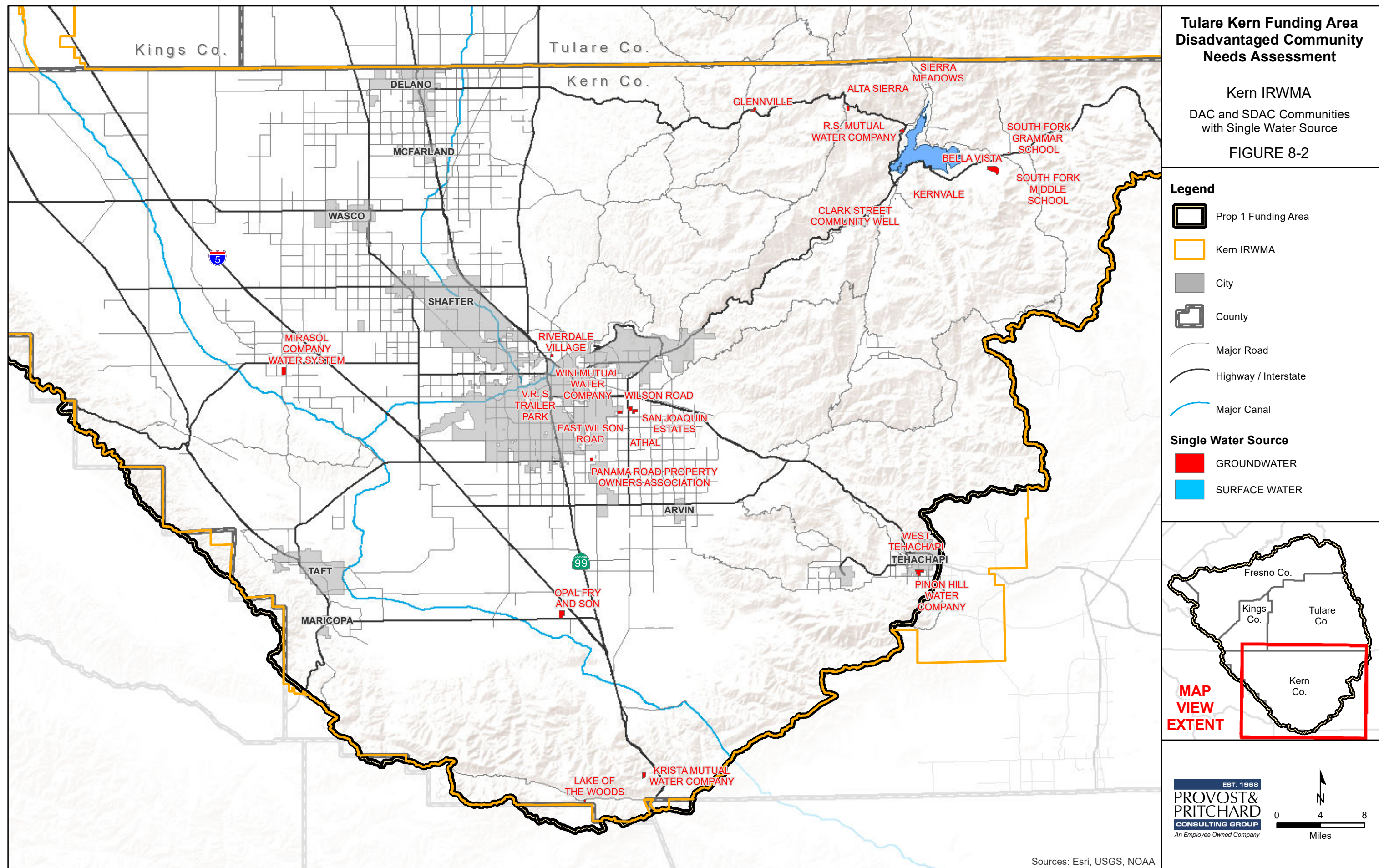
- GROUNDWATER
- SURFACE WATER

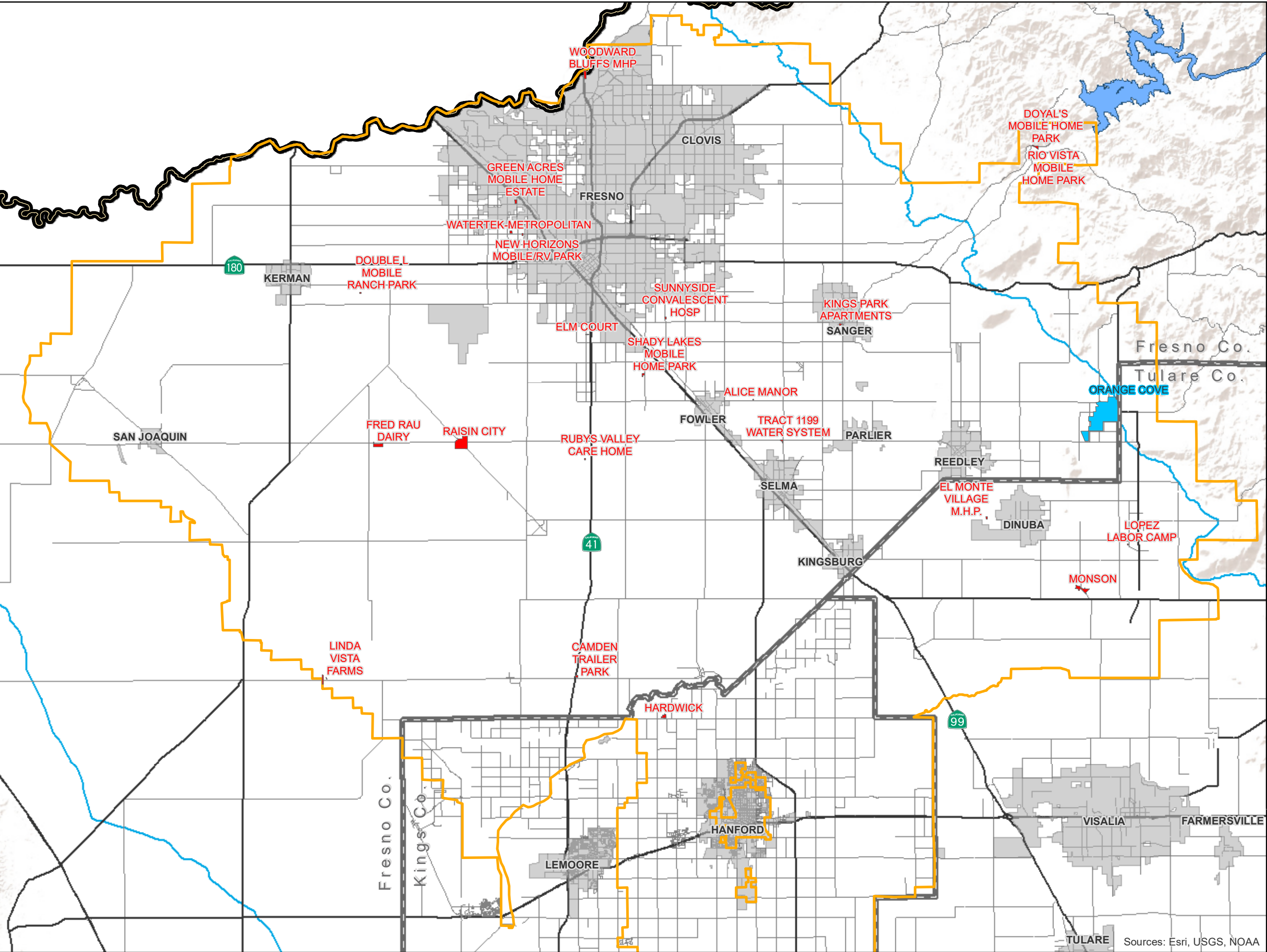


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**Tulare Kern Funding Area
Disadvantaged Community
Needs Assessment**

Kings Basin Water Authority

DAC and SDAC Communities
with Single Water Source

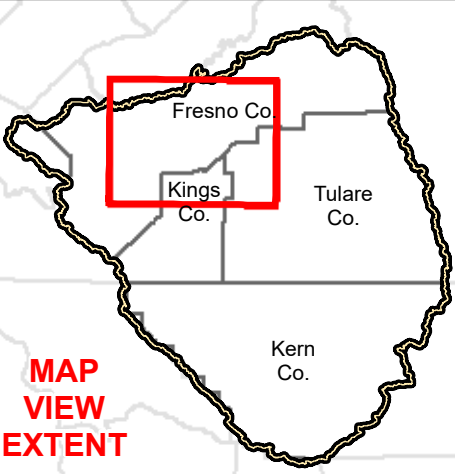
FIGURE 8-3

Legend

- Prop 1 Funding Area
- Kings Basin Water Authority
- City
- County
- Major Road
- Highway / Interstate
- Major Canal

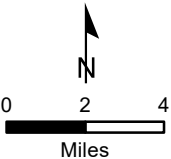
Single Water Source

- GROUNDWATER
- SURFACE WATER

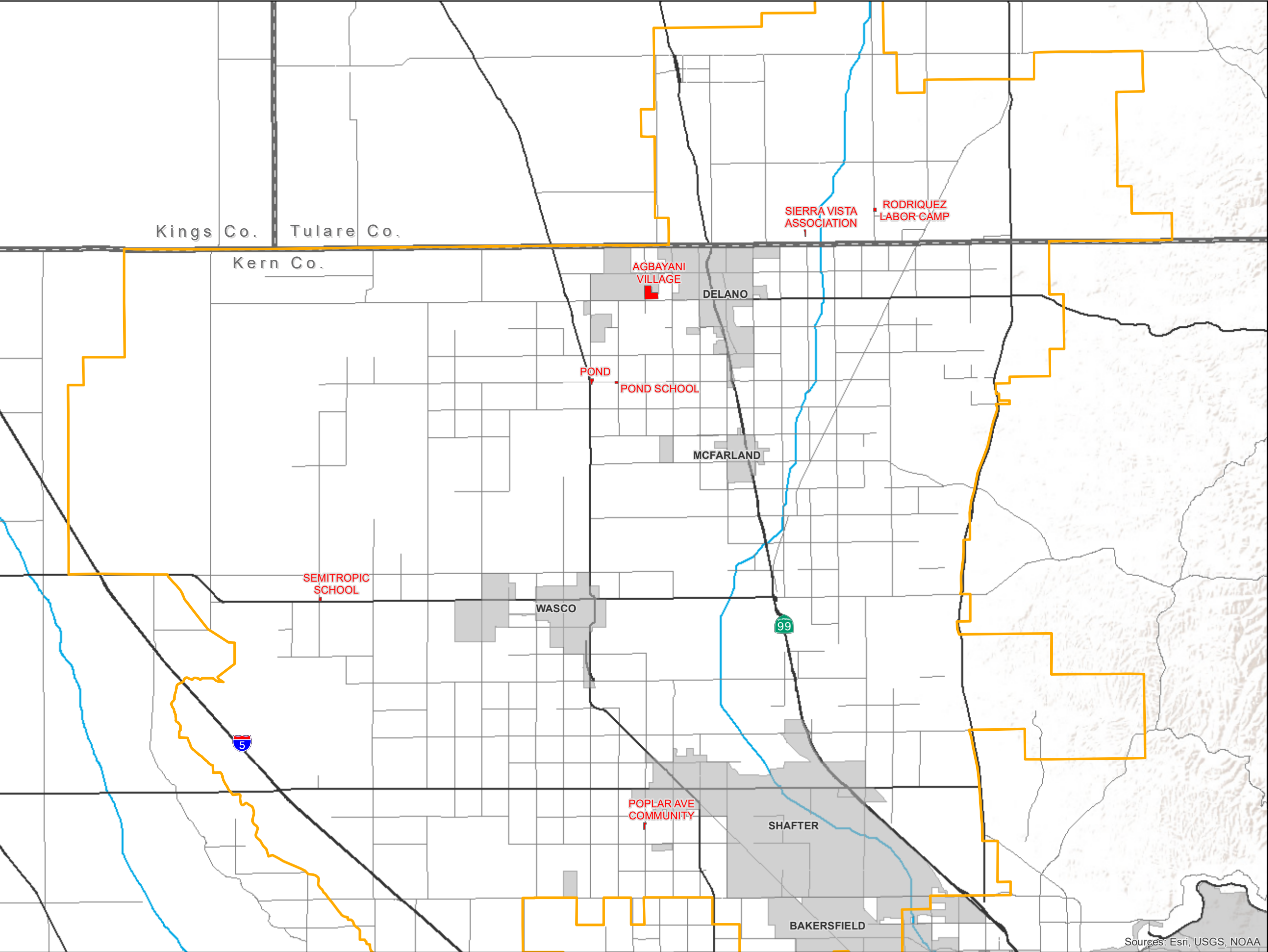


**MAP
VIEW
EXTENT**

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Sources: Esri, USGS, NOAA



**Tulare Kern Funding Area
Disadvantaged Community
Needs Assessment**

Poso Creek IRWMA
DAC and SDAC Communities
with Single Water Source

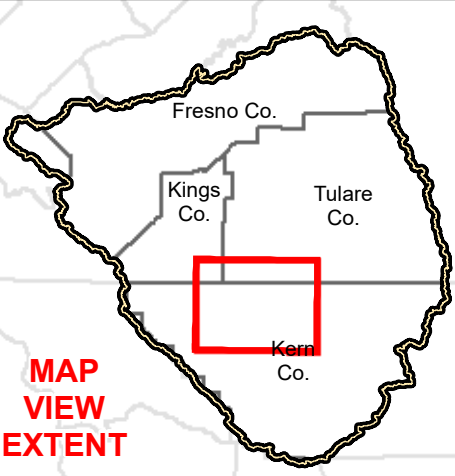
FIGURE 8-4

Legend

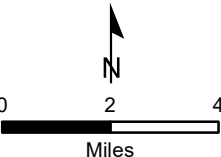
- Prop 1 Funding Area
- Poso Creek IRWMA
- City
- County
- Major Road
- Highway / Interstate
- Major Canal

Single Water Source

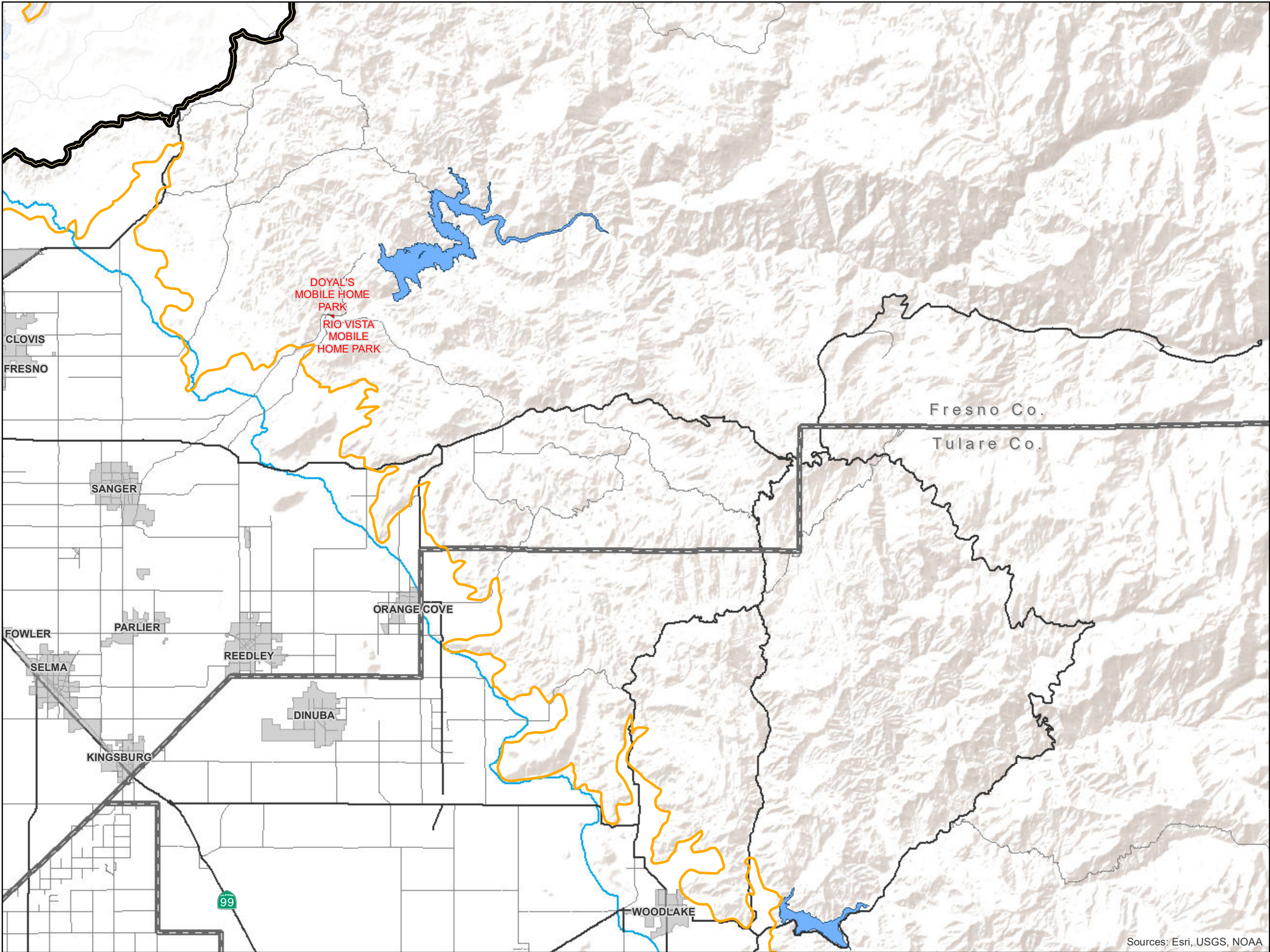
- GROUNDWATER
- SURFACE WATER



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Sources: Esri, USGS, NOAA










**Tulare Kern Funding Area
Disadvantaged Community
Needs Assessment**

Southern Sierra IRWMA
(North)



DAC and SDAC Communities
with Single Water Source

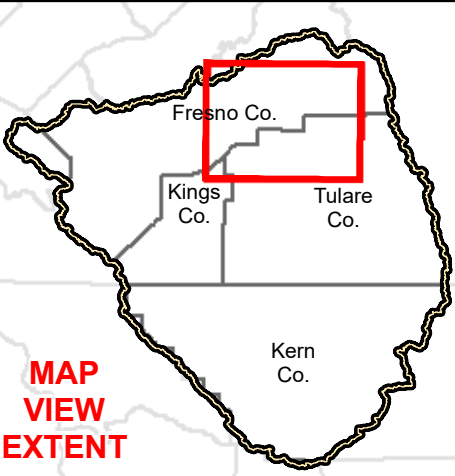
FIGURE 8-5

Legend

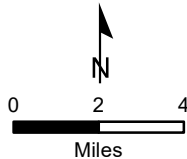
-  Prop 1 Funding Area
-  Southern Sierra IRWMA
-  City
-  County
-  Major Road
-  Highway / Interstate
-  Major Canal

Single Water Source

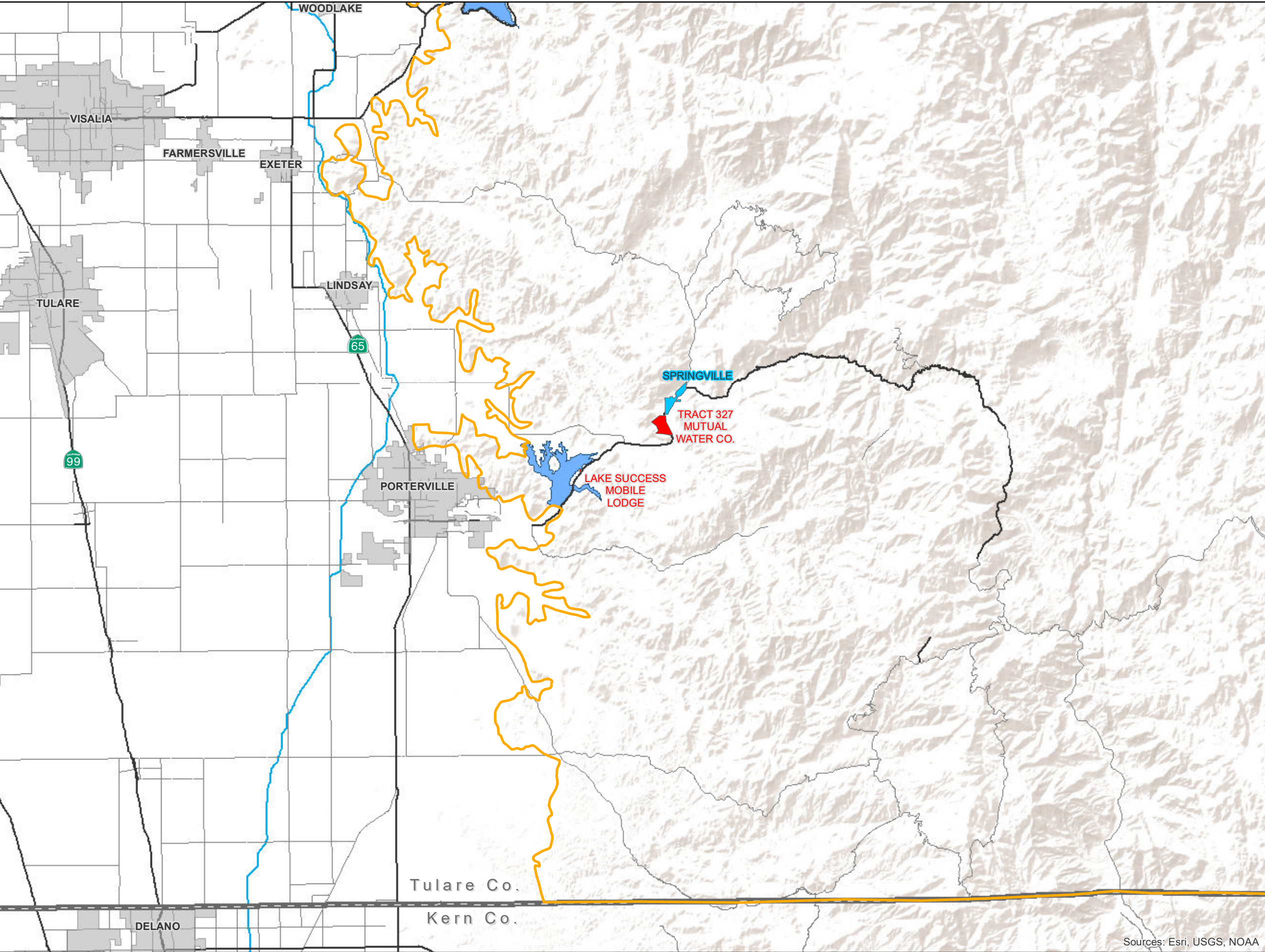
-  GROUNDWATER
-  SURFACE WATER



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Sources: Esri, USGS, NOAA










**Tulare Kern Funding Area
Disadvantaged Community
Needs Assessment**

Southern Sierra IRWMA
(South)



DAC and SDAC Communities
with Single Water Source

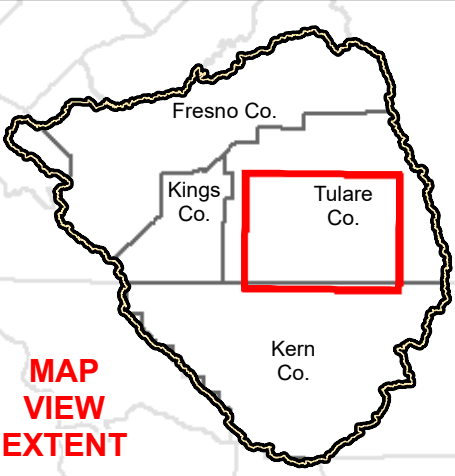
FIGURE 8-6

Legend

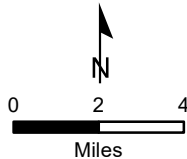
-  Prop 1 Funding Area
-  Southern Sierra IRWMA
-  City
-  County
-  Major Road
-  Highway / Interstate
-  Major Canal

Single Water Source

-  GROUNDWATER
-  SURFACE WATER



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Sources: Esri, USGS, NOAA

Tulare Kern Funding Area
Disadvantaged Community
Needs Assessment

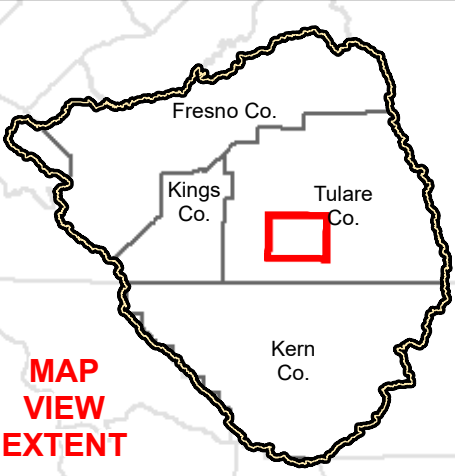
Tule River Basin
IRWMA
DAC and SDAC Communities
with Single Water Source
FIGURE 8-7

Legend

- Prop 1 Funding Area
- Tule River Basin IRWMA
- City
- County
- Major Road
- Highway / Interstate
- Major Canal

Single Water Source

- GROUNDWATER
- SURFACE WATER

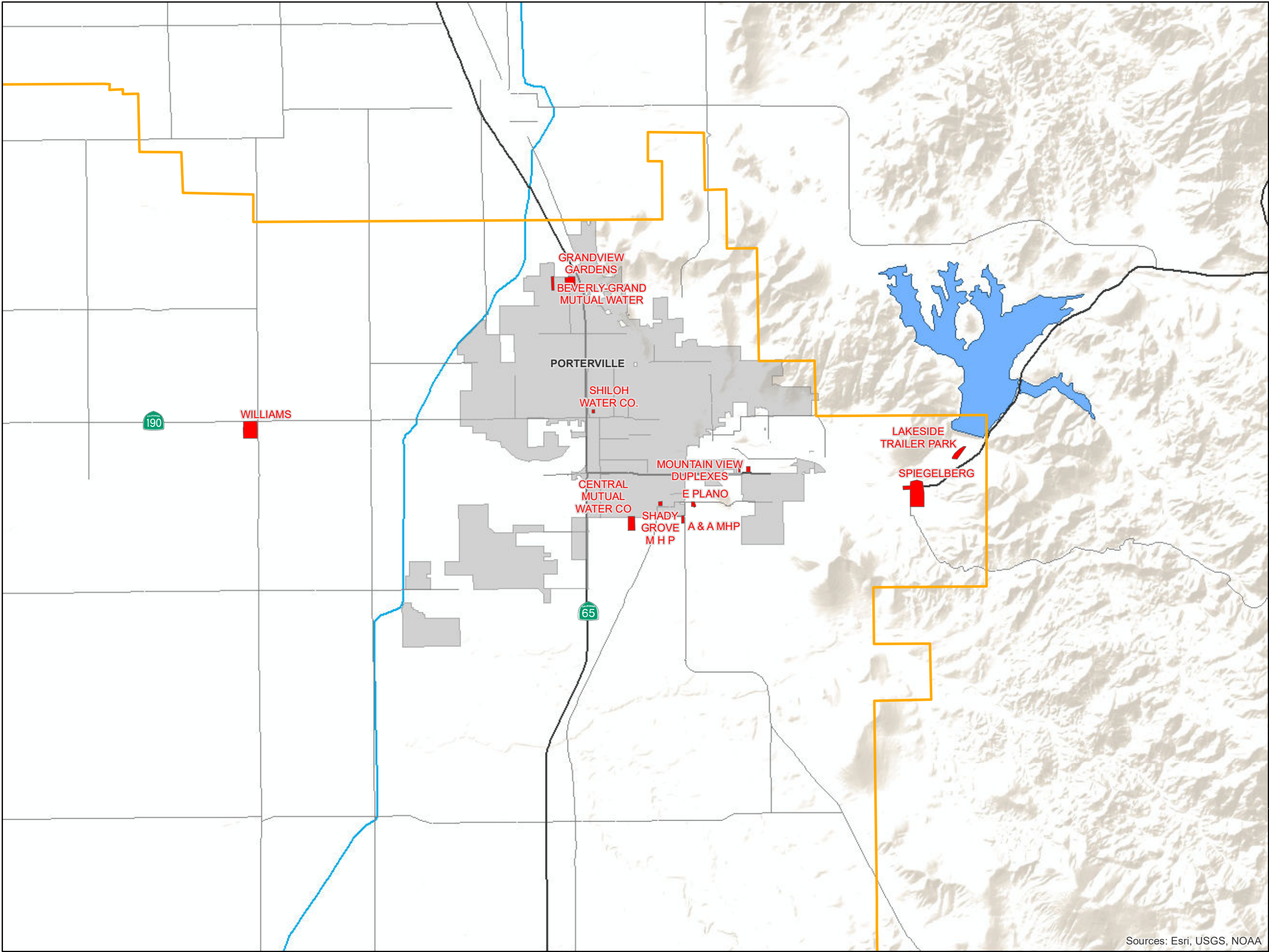


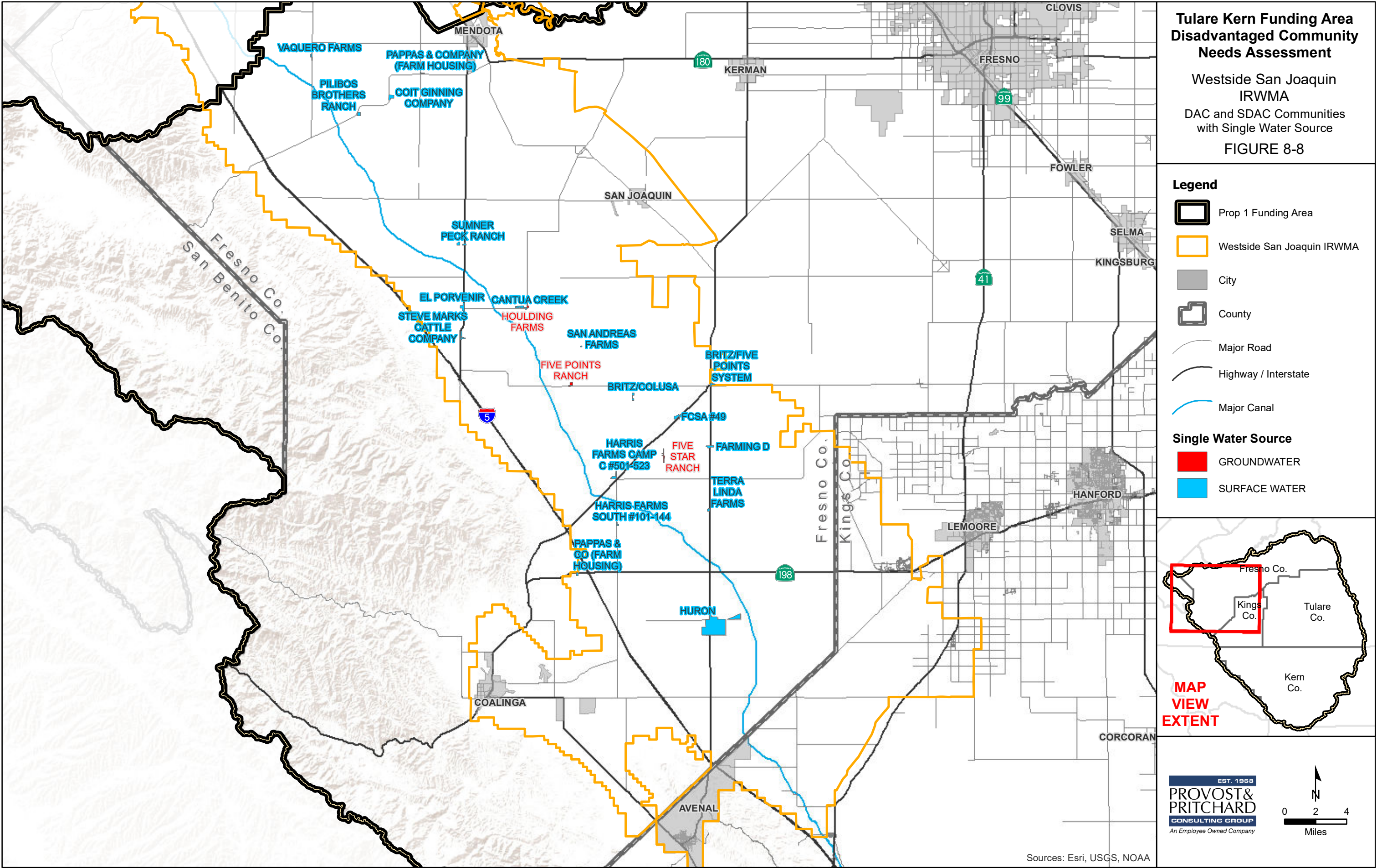
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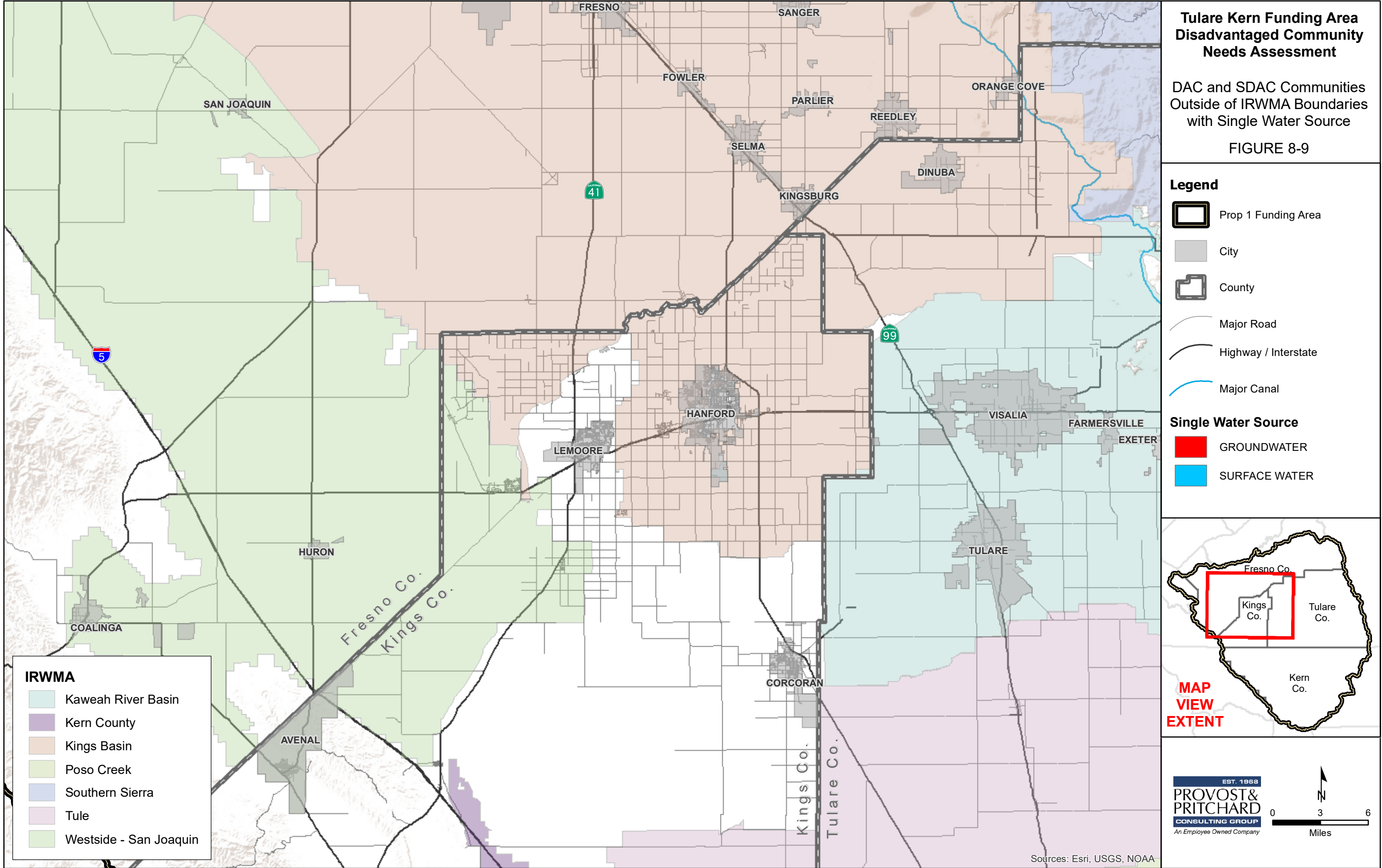
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Sources: Esri, USGS, NOAA







9 Water Quality

9.1 Water Quality Compliance

For the purposes of this Needs Assessment, systems are identified as 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)

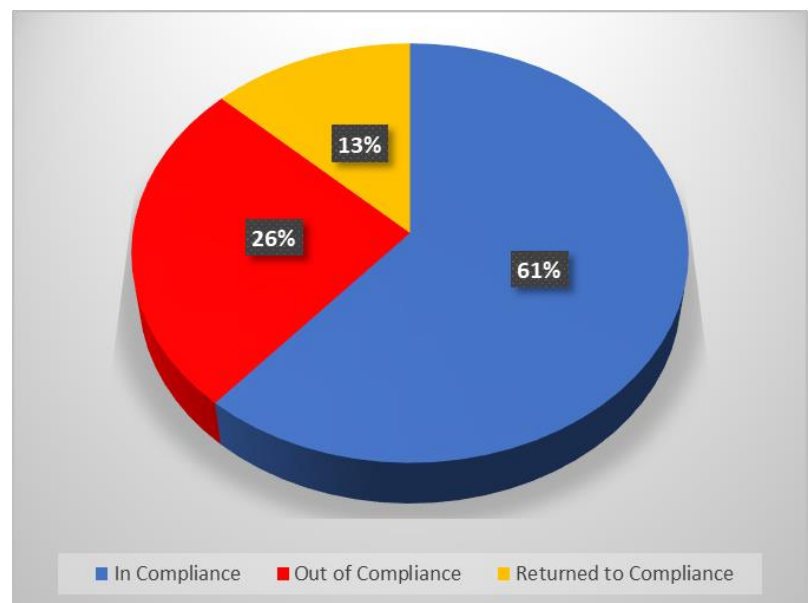
For those that are Out of Compliance, the water system name and contaminant that caused the compliance order is shown on Table 9-1, while those that are Returned to Compliance are shown on Table 9-2.

Compliance issues related to monitoring or reporting issues are not included in this data set. Coliform violations are not used to determine compliance. The State currently issues citations rather than compliance orders for the coliform MCL. So, communities that have had recent coliform violations are still considered “In Compliance” by the State and in this report.

There are 355 DACs within the TKFA. Some DACs are consolidated with another water system or are served by private domestic wells. There are, therefore only 248 DACs with water systems within the TKFA. Of the DACs with water systems, 152 (61%) are currently in compliance with water quality standards, 64 (26%) are out of compliance, and 32 (13%) have returned to compliance.

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

- *Coliform MCL violation*
- *Insufficient water*
- *Distribution system insufficiencies*
- *Vulnerability due to contaminants near the MCL (potential to exceed)*



Also, the MCL for TCP was just implemented two years ago. Many systems have already received compliance orders for TCP violations, and there are systems that may be on the verge of receiving a compliance order. TCP is the subject of ongoing litigation. It is advised that communities consult with legal counsel regarding TCP contamination issues.

The main water quality issues for those systems that are out of compliance include: TCP, arsenic, nitrate, total trihalomethanes (TTHM), and Haloacetic Acids (HAA5). Other compliance orders were for nitrate-nitrite,

uranium, fluoride, 1,2-Dibromo-3-Chloropropane (DBCP), surface water treatment rule (SWTR), perchlorate, ethylene dibromide (EDB), and combined radium.

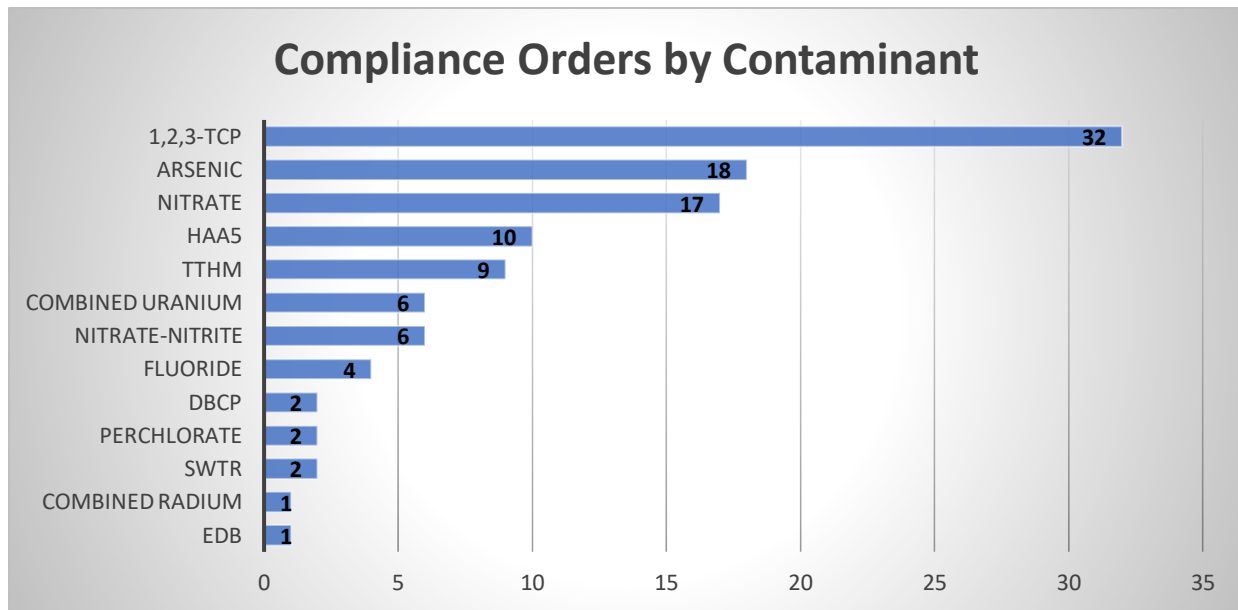


Table 9-1. Disadvantaged Communities - Out of Compliance Status

Water System Name	Compliance Issue	County	IRWM
CITY OF LINDSAY	DBCP, HAA5, TTHM	TULARE	KAWEAH
CITY OF TULARE	1,2,3-TCP	TULARE	KAWEAH
LEMON COVE SANITARY DISTRICT	NITRATE	TULARE	KAWEAH
LSID - TONYVILLE	HAA5, NITRATE, NITRATE-NITRITE, PERCHLORATE, SWTR, TTHM	TULARE	KAWEAH
PLAINVIEW MWC CENTRAL WATER	NITRATE, NITRATE-NITRITE	TULARE	KAWEAH
ARVIN COMMUNITY SERVICES DISTRICT	ARSENIC	KERN	KERN
ATHAL MWC	1,2,3-TCP	KERN	KERN
CWS - KERNVILLE SYSTEM	HAA5	KERN	KERN
EAST NILES CSD	1,2,3-TCP	KERN	KERN
EAST WILSON ROAD WATER COMPANY	1,2,3-TCP, NITRATE, NITRATE-NITRITE	KERN	KERN
EL ADOBE POA, INC.	ARSENIC	KERN	KERN
FULLER ACRES MWC	1,2,3-TCP	KERN	KERN
GREENFIELD COUNTY WD	ARSENIC	KERN	KERN
HUNGRY GULCH WATER SYSTEM	ARSENIC	KERN	KERN
KRISTA MUTUAL WATER COMPANY	FLUORIDE	KERN	KERN
LAKE OF THE WOODS MWC	FLUORIDE, NITRATE	KERN	KERN
LAKEVIEW RANCHOS	ARSENIC, COMBINED RADIUM, COMBINED URANIUM	KERN	KERN

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Water System Name	Compliance Issue	County	IRWM
LAMONT PUBLIC UTILITY DIST	1,2,3-TCP, ARSENIC	KERN	KERN
LEBEC COUNTY WATER DISTRICT	COMBINED URANIUM, FLUORIDE	KERN	KERN
METTLER	1,2,3-TCP, NITRATE	KERN	KERN
OASIS PROPERTY OWNERS ASSOCIATION	ARSENIC	KERN	KERN
PINON PINES MWC	ARSENIC, FLUORIDE	KERN	KERN
R.S. MUTUAL WATER COMPANY	ARSENIC, COMBINED URANIUM, NITRATE	KERN	KERN
RAINBIRD VALLEY MWC	COMBINED URANIUM, NITRATE	KERN	KERN
SAN JOAQUIN ESTATES MWC	1,2,3-TCP, NITRATE, NITRATE-NITRITE	KERN	KERN
VICTORY MUTUAL WATER COMPANY	1,2,3-TCP	KERN	KERN
WILSON ROAD WATER COMMUNITY	1,2,3-TCP, NITRATE, NITRATE-NITRITE	KERN	KERN
WINI MUTUAL WATER COMPANY	1,2,3-TCP, NITRATE	KERN	KERN
ALICE MANOR	1,2,3-TCP	FRESNO	KINGS BASIN
CARUTHERS COMM SERV DIST	1,2,3-TCP, ARSENIC, EDB	FRESNO	KINGS BASIN
CITY OF FOWLER	1,2,3-TCP	FRESNO	KINGS BASIN
CITY OF PARLIER	1,2,3-TCP	FRESNO	KINGS BASIN
DEL REY COMMUNITY SERV DIST	1,2,3-TCP	FRESNO	KINGS BASIN
DOUBLE L MOBILE RANCH PARK	1,2,3-TCP, COMBINED URANIUM	FRESNO	KINGS BASIN
EAST OROSI C.S.D.	1,2,3-TCP, NITRATE	TULARE	KINGS BASIN
GEORGE COX WATER SYSTEM	DBCP	FRESNO	KINGS BASIN
GLEANINGS FOR THE HUNGRY	NITRATE, PERCHLORATE	TULARE	KINGS BASIN
HOME GARDEN CSD	1,2,3-TCP	KINGS	KINGS BASIN
LINDA VISTA FARMS	COMBINED URANIUM	FRESNO	KINGS BASIN
LONDON COMMUNITY SERV DIST	1,2,3-TCP	TULARE	KINGS BASIN
THREE PALMS MOBILEHOME PARK	1,2,3-TCP	FRESNO	KINGS BASIN
TRAVER WATER LLC	1,2,3-TCP	TULARE	KINGS BASIN
CITY OF DELANO	1,2,3-TCP, ARSENIC	KERN	POSO CREEK
CITY OF MCFARLAND	1,2,3-TCP, ARSENIC	KERN	POSO CREEK
CITY OF SHAFTER	1,2,3-TCP, ARSENIC	KERN	POSO CREEK
CITY OF WASCO	1,2,3-TCP	KERN	POSO CREEK
RICHGROVE COMMUNITY SERVICES DISTRICT	1,2,3-TCP	TULARE	POSO CREEK
RODRIGUEZ LABOR CAMP	1,2,3-TCP, NITRATE	TULARE	POSO CREEK
SIERRA VISTA ASSOCIATION	1,2,3-TCP, NITRATE	TULARE	POSO CREEK
ALPAUGH COMMUNITY SERVICES DISTRICT	ARSENIC	TULARE	TULE
BEVERLY-GRAND MUTUAL WATER	NITRATE	TULARE	TULE
PIXLEY PUBLIC UTIL DIST	1,2,3-TCP, ARSENIC	TULARE	TULE

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Tulare Kern DACIP Needs Assessment

Water System Name	Compliance Issue	County	IRWM
TEVISTON CSD	1,2,3-TCP	TULARE	TULE
WATERTEK - GRANDVIEW GARDENS	NITRATE, NITRATE-NITRITE	TULARE	TULE
WOODVILLE FARM LABOR CENTER	1,2,3-TCP	TULARE	TULE
FCSA #30/EL PORVENIR	HAA5, TTHM	FRESNO	WESTSIDE SJ
FCSA #32/CANTUA CREEK	HAA5, TTHM	FRESNO	WESTSIDE SJ
FCSA #49/ FIVE POINTS	HAA5, TTHM	FRESNO	WESTSIDE SJ
HOULDING FARMS	ARSENIC	FRESNO	WESTSIDE SJ
HURON	HAA5, TTHM	FRESNO	WESTSIDE SJ
PAPPAS & COMPANY (FARM HOUSING)	HAA5, SWTR, TTHM	FRESNO	WESTSIDE SJ
SAN ANDREAS FARMS	HAA5, TTHM	FRESNO	WESTSIDE SJ
CITY OF LEMOORE	ARSENIC, HAA5, TTHM	KINGS	Outside of IRWM
KETTLEMAN CITY CSD	ARSENIC	KINGS	Outside of IRWM

Table 9-2. Disadvantaged Communities - Returned to Compliance Status

Water System Name	Compliance Issue	County	IRWM
SOULTS MUTUAL WATER CO.	NITRATE	TULARE	KAWEAH
TRACT 92 CSD	1,2,3-TCP	TULARE	KAWEAH
FOURTH STREET WATER SYSTEM	ARSENIC	KERN	KERN
KRVWC - KERVALE MUTUAL WATER CO	ARSENIC	KERN	KERN
MIL POTRERO MUTUAL WATER COMPANY	ARSENIC	KERN	KERN
PINON HILL WATER COMPANY	ARSENIC	KERN	KERN
ARMONA COMMUNITY SERVICES DIST	ARSENIC, TTHM	KINGS	KINGS BASIN
CAMDEN TRAILER PARK	ARSENIC	FRESNO	KINGS BASIN
CUTLER PUD	NITRATE	TULARE	KINGS BASIN
EL MONTE VILLAGE M.H.P.	NITRATE	TULARE	KINGS BASIN
HARDWICK WATER COMPANY	COMBINED URANIUM	KINGS	KINGS BASIN
LANARE COMMUNITY SERVICES DIST	ARSENIC	FRESNO	KINGS BASIN
RIVERDALE PUD	ARSENIC	FRESNO	KINGS BASIN
ZONNEVELD DAIRY	ARSENIC, NITRATE	FRESNO	KINGS BASIN
DOYAL'S MOBILE HOME PARK	SWTR	FRESNO	KINGS BASIN/ SOUTHERN SIERRA
TRANQUILLITY	ARSENIC	FRESNO	KINGS BASIN/ WESTSIDE SJ
EARLIMART PUD	1,2,3-TCP	TULARE	POSO CREEK
POND MWC	ARSENIC	KERN	POSO CREEK
LAKE SUCCESS MOBILE LODGE	NITRATE	TULARE	SOUTHERN SIERRA

Water System Name	Compliance Issue	County	IRWM
ALLENSWORTH C.S.D.	ARSENIC	TULARE	TULE
POPLAR COMM SERVICE DIST	NITRATE	TULARE	TULE
AVENAL	TTHM	KINGS	WESTSIDE SJ
BRITZ/COLUSA	TTHM	FRESNO	WESTSIDE SJ
BRITZ/FIVE POINTS SYSTEM	TTHM	FRESNO	WESTSIDE SJ
FARMING D	TTHM	FRESNO	WESTSIDE SJ
FIVE POINTS RANCH	NITRATE	FRESNO	WESTSIDE SJ
HARRIS FARMS CAMP C #501-523	HAA5, SWTR, TTHM	FRESNO	WESTSIDE SJ
HARRIS FARMS SOUTH #101-144	HAA5, SWTR, TTHM	FRESNO	WESTSIDE SJ
LEMOORE NAVAL AIR STATION	CHLORINE, SWTR, TTHM	KINGS	WESTSIDE SJ
STEVE MARKS CATTLE COMPANY	SWTR, TTHM, TURBIDITY	FRESNO	WESTSIDE SJ
SUMNER PECK RANCH	TTHM	FRESNO	WESTSIDE SJ
TERRA LINDA FARMS	HAA5, SWTR, TTHM	FRESNO	WESTSIDE SJ

9.2 Water Quality Exceedance

As mentioned in Section 9.1, some systems may currently be in compliance but may be vulnerable to a water quality issue. While an exceedance of an MCL does not necessarily mean a violation of water quality standards or that a system is out of compliance, it can indicate that there is potential for the system to be in violation of that standard in the future. Table 9-3 shows DACs that have had an exceedance of a primary MCL and indicates the number of exceedances reported between July 2015 through March 2020. Only the MCLs that are most prevalent in the TKFA are shown.

Additional water quality data has been collected and incorporated in the web portal but is not summarized in this report due to the volume of data for each community. For additional data, refer to the TKFA web mapping tool or the State Water Resources Control Board data portals.

Table 9-3. Water Quality Exceedance – Number of Exceedances July 2015 – March 2020

Community Name	DAC Status	IRWM Region	1,2,3-TCP	ARSENIC	DBCP	EDB	FLUORIDE	GROSS ALPHA	HAA5	NITRATE (AS N)	NITRATE (AS NO3)	NITRATE + NITRITE	PERCHLORATE	TTHM	URANIUM
GOSHEN	DAC	KAWEAH	222		1										
IVANHOE	SDAC	KAWEAH	68							40	4	3	1		
LEMON COVE	SDAC	KAWEAH								16		2			
LINDSAY	SDAC	KAWEAH			4				45					47	
LONE OAK TRACT	SDAC	KAWEAH	290	26						11					
MATHENY TRACT	SDAC	KAWEAH	290	26						11					
NORTH OF VISALIA TRACT	DAC	KAWEAH	222		1										
PAIGE-MOORE TRACT	SDAC	KAWEAH			4				45					47	
PLAINVIEW	SDAC	KAWEAH								2					
PLAINVIEW MWC CENTRAL WATER	SDAC	KAWEAH								3					
SIERRA SHADOWS MOBILE MANOR	SDAC	KAWEAH			4				45					47	
SOULTS TRACT	SDAC	KAWEAH								7	2	1			
STRATHMORE	SDAC	KAWEAH							8	17	1	1		12	
STRATHMORE EAST	SDAC	KAWEAH							2					6	
TONYVILLE	DAC	KAWEAH		12					11	49	2	6	31	11	
TULARE	DAC	KAWEAH	290	26						11					
TOOLEVILLE	SDAC	KAWEAH/ SOUTHERN SIERRA													
ARVIN	SDAC	KERN	57	384					1	5					
ARVIN LABOR CENTER	SDAC	KERN	111	26											
ATHAL	SDAC	KERN	13												
BELLA VISTA	SDAC	KERN	1											1	
BONANZA FARMS	SDAC	KERN	1							1					
BUTTONWILLOW	SDAC	KERN						3							4
CANYON MEADOWS	SDAC	KERN		27						22	1				
COUNTRY ESTATES	DAC	KERN	15	203					4	16				1	
EAST NILES	SDAC	KERN	15	203					4	16				1	
EAST WILSON ROAD	SDAC	KERN	10							18	1				
EDMUNDSON ACRES	DAC	KERN	57	384					1	5					
EL ADOBE POA, INC	SDAC	KERN		22											
ERSKINE CREEK WC	SDAC	KERN								1					
FORD CITY	SDAC	KERN		33				6				10			4
FOURTH STREET	SDAC	KERN		10						3					
FRAZIER PARK	SDAC	KERN					1	23							6
FULLER ACRES	SDAC	KERN	23	11											
GREENFIELD COUNTY WD	DAC	KERN	1	37											
HUNGRY GULCH	SDAC	KERN		56											

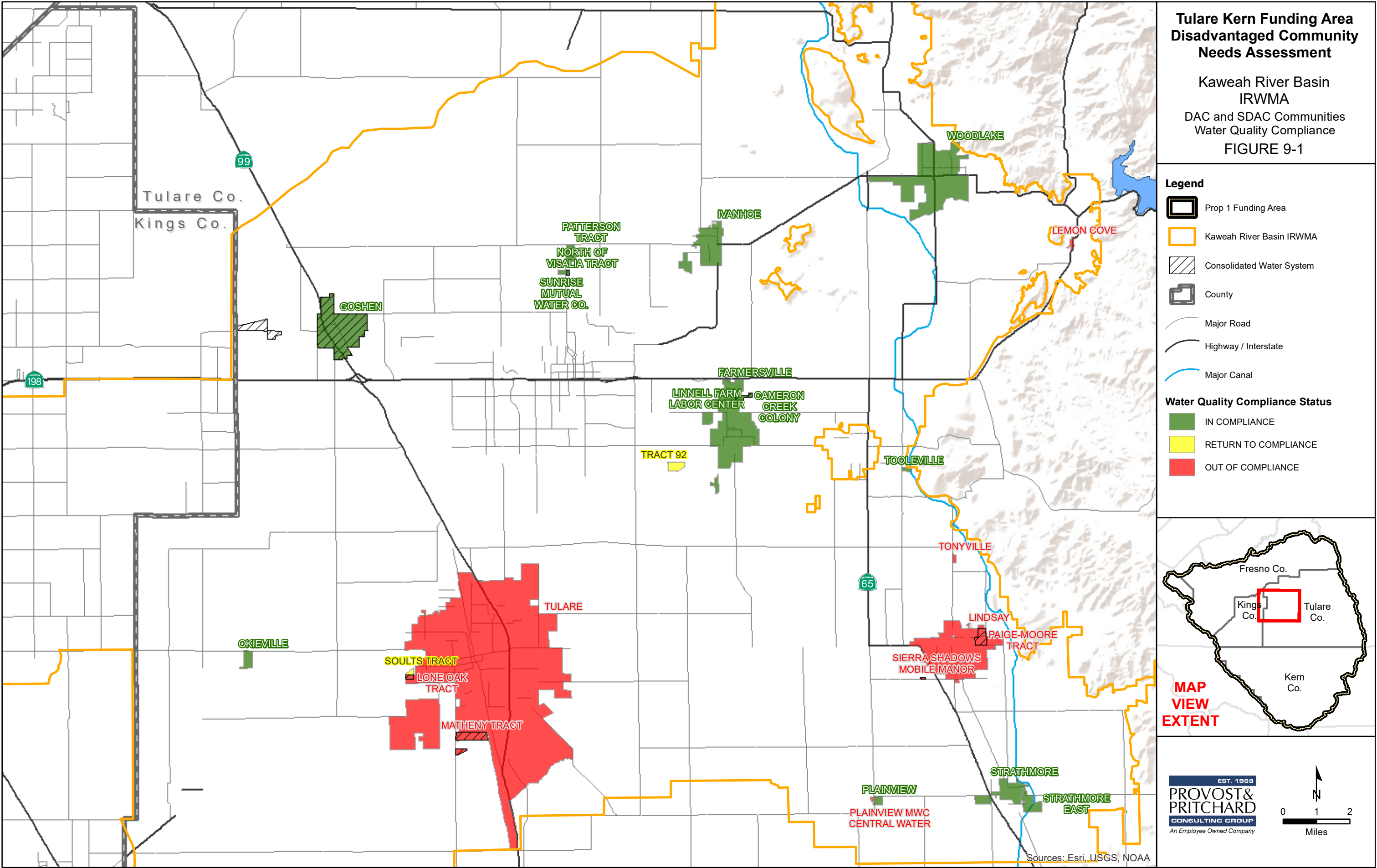
Community Name	DAC Status	IRWM Region	1,2,3-TCP	ARSENIC	DBCP	EDB	FLUORIDE	GROSS ALPHA	HAA5	NITRATE (AS N)	NITRATE (AS NO3)	NITRATE + NITRITE	PERCHLORATE	TTHM	URANIUM
KERNVILLE	SDAC	KERN		8			8		19					6	
KRISTA MUTUAL WATER COMPANY	SDAC	KERN					10	1							
LAKE OF THE WOODS	DAC	KERN					25	1		25					
LAKE OF THE WOODS MHP	DAC	KERN						2		9	2				
LAKELAND	SDAC	KERN		38			78	38		19	1	1			7
LAKEVIEW RANCHOS	SDAC	KERN		26				4							1
LAMONT	SDAC	KERN	111	26											
LEBEC	SDAC	KERN					17	27							19
LONG CANYON	SDAC	KERN	2					1							2
LOST HILLS	SDAC	KERN		106										1	
LOWER BODFISH	SDAC	KERN		31											
MARICOPA	SDAC	KERN		33				6				10			4
MCKITTICK	DAC	KERN		33				6				10			4
METTLER	SDAC	KERN	15							9					
MITCHELLS CORNER	DAC	KERN	57	384					1	5					
MOUNTAIN MESA	SDAC	KERN		30				1		11					
OASIS PROPERTY OWNERS ASSOCIATION	DAC	KERN		12											
OILDALE	SDAC	KERN	3					2	17					5	
ONYX	SDAC	KERN													1
PINE MOUNTAIN CLUB	DAC	KERN		21											
PINEBROOK	SDAC	KERN	1												
PINON HILL WATER COMPANY	DAC	KERN		49											
PINON PINES MWC	DAC	KERN		5			22	1							
PONDEROSA PINE	SDAC	KERN		8			8		19					6	
R.S. MUTUAL WATER COMPANY	SDAC	KERN		13				2		13					20
RAINBIRD VALLEY	SDAC	KERN						3		19	1				30
REEDER TRACT	SDAC	KERN								1					
REXLAND ACRES	SDAC	KERN	257	89					10	1		13		1	
SAN JOAQUIN ESTATES	DAC	KERN	9							18					
SOUTH FORK MIDDLE SCHOOL	SDAC	KERN						5							
SOUTH TAFT	DAC	KERN		33				6				10			4
SPLIT MOUNTAIN	SDAC	KERN		1				1	1						
TAFT	DAC	KERN		33				6				10			4
TAFT HEIGHTS	DAC	KERN		33				6				10			4
TEHACHAPI	DAC	KERN								4					
TRADEWINDS	SDAC	KERN						4							9

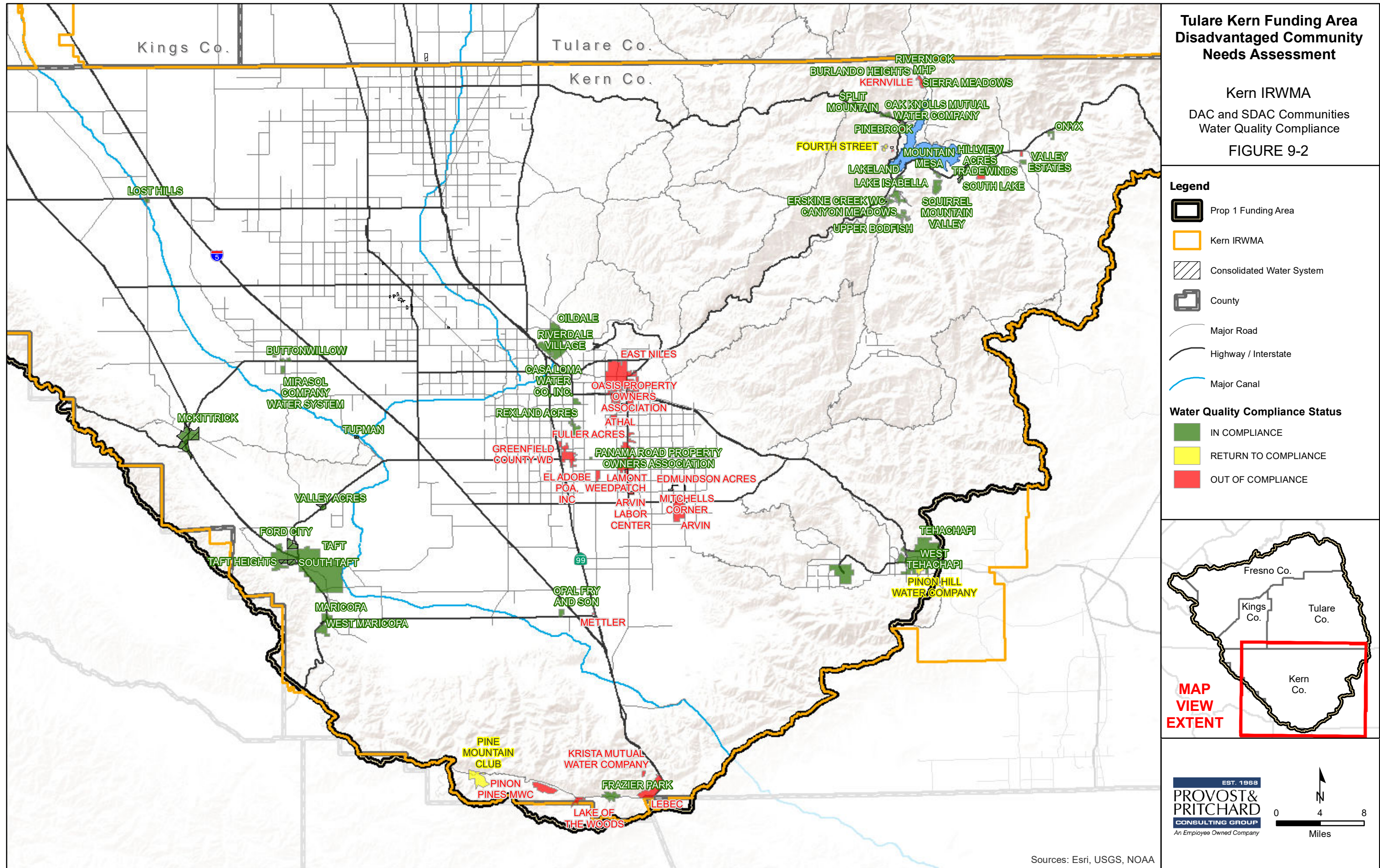
Community Name	DAC Status	IRWM Region	1,2,3-TCP	ARSENIC	DBCP	EDB	FLUORIDE	GROSS ALPHA	HAA5	NITRATE (AS N)	NITRATE (AS NO3)	NITRATE + NITRITE	PERCHLORATE	TTHM	URANIUM
TUPMAN	SDAC	KERN		33				6				10			4
UPPER BODFISH	SDAC	KERN		94			14	1							14
VALLEY ACRES	DAC	KERN		33				6				10			4
VICTORY MWC	DAC	KERN	15												
WEEDPATCH	SDAC	KERN	111	26											
WEST MARICOPA	DAC	KERN		33				6				10			4
WILSON ROAD	DAC	KERN	11							23					
WINI MUTUAL WATER COMPANY	DAC	KERN	9							3					
ALICE MANOR	DAC	KINGS BASIN	26		1			4							
ARMONA	SDAC	KINGS BASIN		24				3						11	
BIOLA	SDAC	KINGS BASIN								2					
CALWA	SDAC	KINGS BASIN	307	1	155	31		8		278	36	1			
CAMDEN TRAILER PARK	DAC	KINGS BASIN		10											
CARUTHERS	SDAC	KINGS BASIN	15	25		2									
COMMUNITY 227	SDAC	KINGS BASIN	72												
COMMUNITY 2512	DAC	KINGS BASIN	15												
CUTLER	SDAC	KINGS BASIN									1				
DATE STREET	SDAC	KINGS BASIN	6					8							3
DEL REY	SDAC	KINGS BASIN	51												
DINUBA	SDAC	KINGS BASIN	15												
DOUBLE L MOBILE RANCH PARK	SDAC	KINGS BASIN	2					12							8
EAST OROSI	SDAC	KINGS BASIN	2							18		1			
EL MONTE VILLAGE M.H.P.	DAC	KINGS BASIN			5										
FOWLER	DAC	KINGS BASIN	21												
FRED RAU DAIRY	DAC	KINGS BASIN						1							1
FRESNO	DAC	KINGS BASIN	307	1	155	31		8		278	36	1			
GEORGE COX WATER SYSTEM	SDAC	KINGS BASIN			4										
GLEANINGS FOR THE HUNGRY	SDAC	KINGS BASIN								52		1	46		
HAMBLIN	DAC	KINGS BASIN		5										7	
HARDWICK	SDAC	KINGS BASIN													3
HOME GARDEN	SDAC	KINGS BASIN		46											
KERMAN	DAC	KINGS BASIN	6					8							3
LACEY COURTS MHP	DAC	KINGS BASIN		5										7	
LANARE	SDAC	KINGS BASIN		22											
LATON	SDAC	KINGS BASIN						1							
LINDA VISTA FARMS	SDAC	KINGS BASIN						16							20
LONDON	SDAC	KINGS BASIN	50												

Community Name	DAC Status	IRWM Region	1,2,3-TCP	ARSENIC	DBCP	EDB	FLUORIDE	GROSS ALPHA	HAA5	NITRATE (AS N)	NITRATE (AS NO3)	NITRATE + NITRITE	PERCHLORATE	TTHM	URANIUM
MAYFAIR	DAC	KINGS BASIN	307	1	155	31		8		278	36	1			
ORANGE COVE	SDAC	KINGS BASIN							6						
OROSI	SDAC	KINGS BASIN	30												
PARLIER	SDAC	KINGS BASIN	80		1					3		1			
REEDLEY	DAC	KINGS BASIN	83		54										
SANGER	DAC	KINGS BASIN	11		45			1							1
SELMA	DAC	KINGS BASIN	72												
SHADY ACRE TRAILER PARK	SDAC	KINGS BASIN	307	1	155	31		8		278	36	1			
SHADY LAKES MOBILE HOME PARK	SDAC	KINGS BASIN						1							
SULTANA	SDAC	KINGS BASIN			2							1			
TAFOYA WATER SYSTEM	DAC	KINGS BASIN								15					
THREE PALMS MOBILEHOME PARK	DAC	KINGS BASIN	8												
TODD'S TRAILER COURT	SDAC	KINGS BASIN	307	1	155	31		8		278	36	1			
TRAVER	SDAC	KINGS BASIN	22					1		3	1				
WATERTEK-METROPOLITAN	SDAC	KINGS BASIN						1		6					
YETTEM	DAC	KINGS BASIN								15					
ZONNEVELD DAIRY	SDAC	KINGS BASIN		21						1					
TRANQUILLITY	SDAC	KINGS BASIN/WESTSIDE SJ												3	
BISHOP ACRES	SDAC	POSO CREEK	279							10		1			
CHEROKEE STRIP	SDAC	POSO CREEK	279							10		1			
DELANO	SDAC	POSO CREEK	57	849						75					
EARLIMART	SDAC	POSO CREEK	57												
MADONNA	DAC	POSO CREEK	57	849						75					
MAPLE SCHOOL	SDAC	POSO CREEK	279							10		1			
MCFARLAND	SDAC	POSO CREEK	26	40						2					
MEXICAN COLONY	SDAC	POSO CREEK	279							10		1			
POND MWC	DAC	POSO CREEK		20											
POND SCHOOL	SDAC	POSO CREEK		35											
RICHGROVE	SDAC	POSO CREEK	20	5						9					
RODRIQUEZ LABOR CAMP	DAC	POSO CREEK	7							20	1				
SHAFTER	SDAC	POSO CREEK	279							10		1			
SHAFTER FARM LABOR CENTER	SDAC	POSO CREEK	279							10		1			
SIERRA VISTA ASSOCIATION	DAC	POSO CREEK	9					2		19	1				
SMITH'S CORNER	SDAC	POSO CREEK	279							10		1			
SOUTHWEST SHAFTER	SDAC	POSO CREEK	279							10		1			

Community Name	DAC Status	IRWM Region	1,2,3-TCP	ARSENIC	DBCP	EDB	FLUORIDE	GROSS ALPHA	HAA5	NITRATE (AS N)	NITRATE (AS NO3)	NITRATE + NITRITE	PERCHLORATE	TTHM	URANIUM
SUPERIOR	DAC	POSO CREEK	16												
THOMAS LANE	SDAC	POSO CREEK	279							10		1			
WASCO	DAC	POSO CREEK	153							13					
WEST SHAFTER	SDAC	POSO CREEK	279							10		1			
LAKE SUCCESS MOBILE LODGE	DAC	SOUTHERN SIERRA								16	1	2			
PINE FLAT	SDAC	SOUTHERN SIERRA						7							1
SPRINGVILLE	SDAC	SOUTHERN SIERRA							2					1	
ALLENSWORTH	SDAC	TULE		40								1			
ALPAUGH	DAC	TULE		37											
BEVERLY-GRAND MUTUAL WATER	DAC	TULE								19	1	1			
CENTRAL MUTUAL WATER CO	DAC	TULE								1					
DUCOR	SDAC	TULE									1				
EAST PORTERVILLE	SDAC	TULE						1		1					
GOLDEN KEY APARTMENTS	DAC	TULE						1		1					
GRANDVIEW GARDENS	DAC	TULE								19	2	2			
PIXLEY	SDAC	TULE	23	30											
POPLAR	SDAC	TULE								11	1				
PORTERVILLE	DAC	TULE						1		1					
TEVISTON	SDAC	TULE	7												
TIPTON	SDAC	TULE		1						9		1			
TIPTON BURNETT ROAD	DAC	TULE		1						9		1			
TRACTS 45 - 68 - 157 - 199 - 201 - 319	SDAC	TULE						1		1					
WOODVILLE	SDAC	TULE	9							22					
WOODVILLE FARM LABOR CENTER	SDAC	TULE	22												
AVENAL	SDAC	WESTSIDE SJ							3					9	
BRITZ/COLUSA	SDAC	WESTSIDE SJ												2	
BRITZ/FIVE POINTS SYSTEM	SDAC	WESTSIDE SJ												2	
CANTUA CREEK	SDAC	WESTSIDE SJ							13					17	
EL PORVENIR	SDAC	WESTSIDE SJ							15				1	18	
FARMING D	SDAC	WESTSIDE SJ												2	
FCSA #49	DAC	WESTSIDE SJ							5					13	
HARRIS FARMS CAMP C #501-523	DAC	WESTSIDE SJ							6					3	
HARRIS FARMS SOUTH #101-144	SDAC	WESTSIDE SJ							6					1	
HOULDING FARMS	SDAC	WESTSIDE SJ		19											

Community Name	DAC Status	IRWM Region	1,2,3-TCP	ARSENIC	DBCP	EDB	FLUORIDE	GROSS ALPHA	HAA5	NITRATE (AS N)	NITRATE (AS NO3)	NITRATE + NITRITE	PERCHLORATE	TTHM	URANIUM
HURON	SDAC	WESTSIDE SJ							1					26	
LEMOORE NAVAL AIR STATION	DAC	WESTSIDE SJ												13	
PAPPAS & CO (FARM HOUSING)	DAC	WESTSIDE SJ							13					15	
PAPPAS & COMPANY (FARM HOUSING)	DAC	WESTSIDE SJ							10					18	
PILIBOS BROTHERS RANCH	SDAC	WESTSIDE SJ							2					5	
SAN ANDREAS FARMS	SDAC	WESTSIDE SJ							7					6	
STEVE MARKS CATTLE COMPANY	SDAC	WESTSIDE SJ							2					2	
SUMNER PECK RANCH	SDAC	WESTSIDE SJ							3					5	
TERRA LINDA FARMS	SDAC	WESTSIDE SJ							4					2	
VAQUERO FARMS	DAC	WESTSIDE SJ							4					7	
COMMUNITY 259	SDAC	Outside of IRWM	512												
CORCORAN	SDAC	Outside of IRWM	512												
EXETER	DAC	Outside of IRWM													
HANFORD	SDAC	Outside of IRWM	5												
KETTLEMAN CITY	SDAC	Outside of IRWM	20												
LEMOORE	DAC	Outside of IRWM	185												





Tulare Kern Funding Area
Disadvantaged Community
Needs Assessment

Kings Basin Water Authority

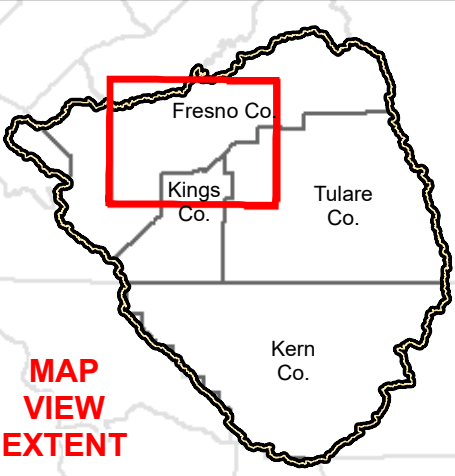
DAC and SDAC Communities
Water Quality Compliance
FIGURE 9-3

Legend

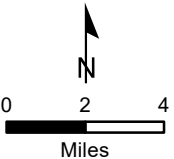
- Prop 1 Funding Area
- Kings Basin Water Authority
- Consolidated Water System
- County
- Major Road
- Highway / Interstate
- Major Canal

Water Quality Compliance Status

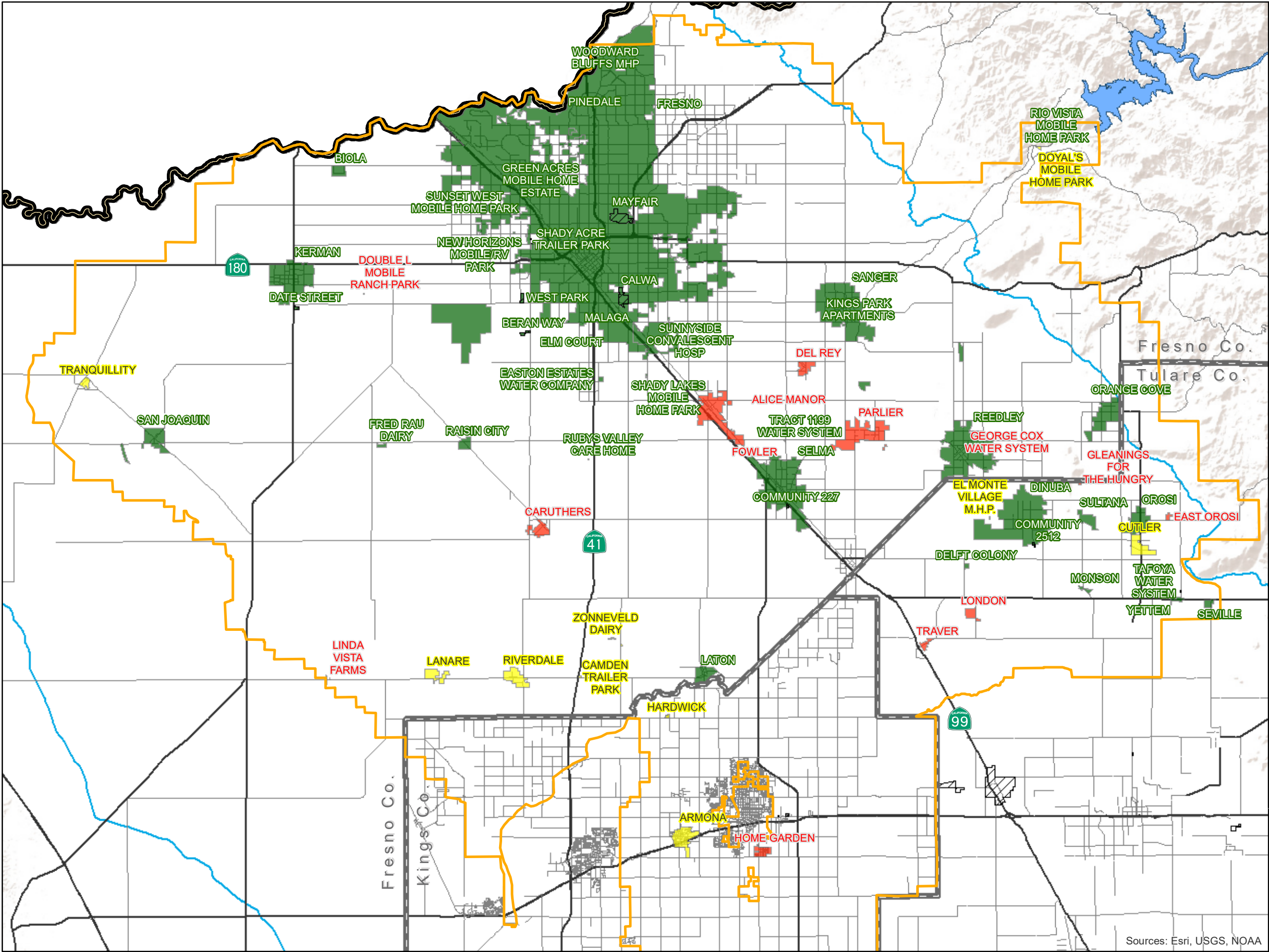
- IN COMPLIANCE
- RETURN TO COMPLIANCE
- OUT OF COMPLIANCE

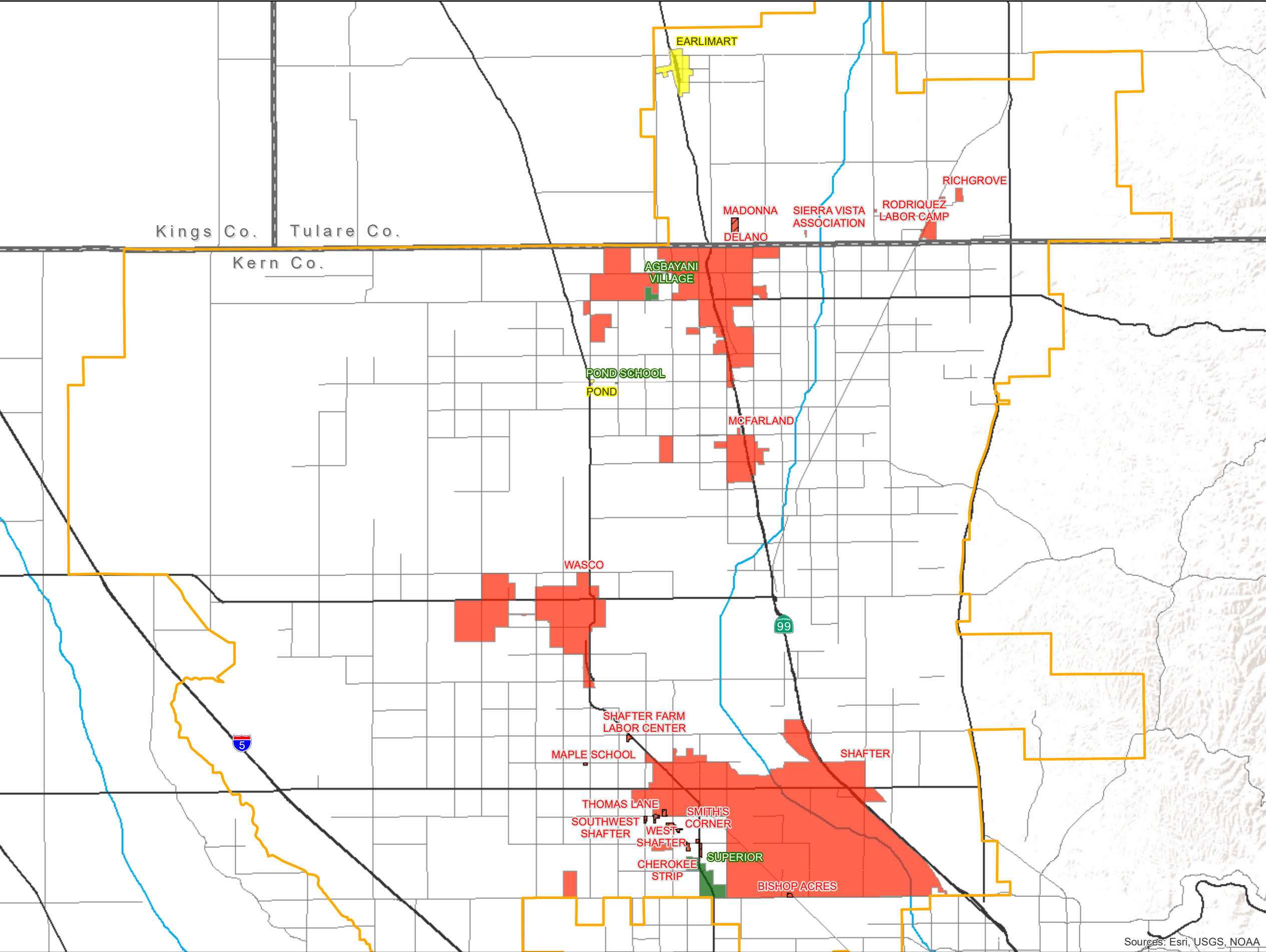


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**Tulare Kern Funding Area
Disadvantaged Community
Needs Assessment**

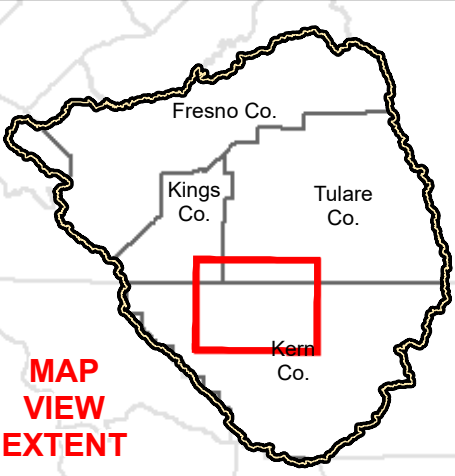
Poso Creek IRWMA
DAC and SDAC Communities
Water Quality Compliance
FIGURE 9-4

Legend

- Prop 1 Funding Area
- Poso Creek IRWMA
- Consolidated Water System
- County
- Major Road
- Highway / Interstate
- Major Canal

Water Quality Compliance Status

- IN COMPLIANCE
- RETURN TO COMPLIANCE
- OUT OF COMPLIANCE

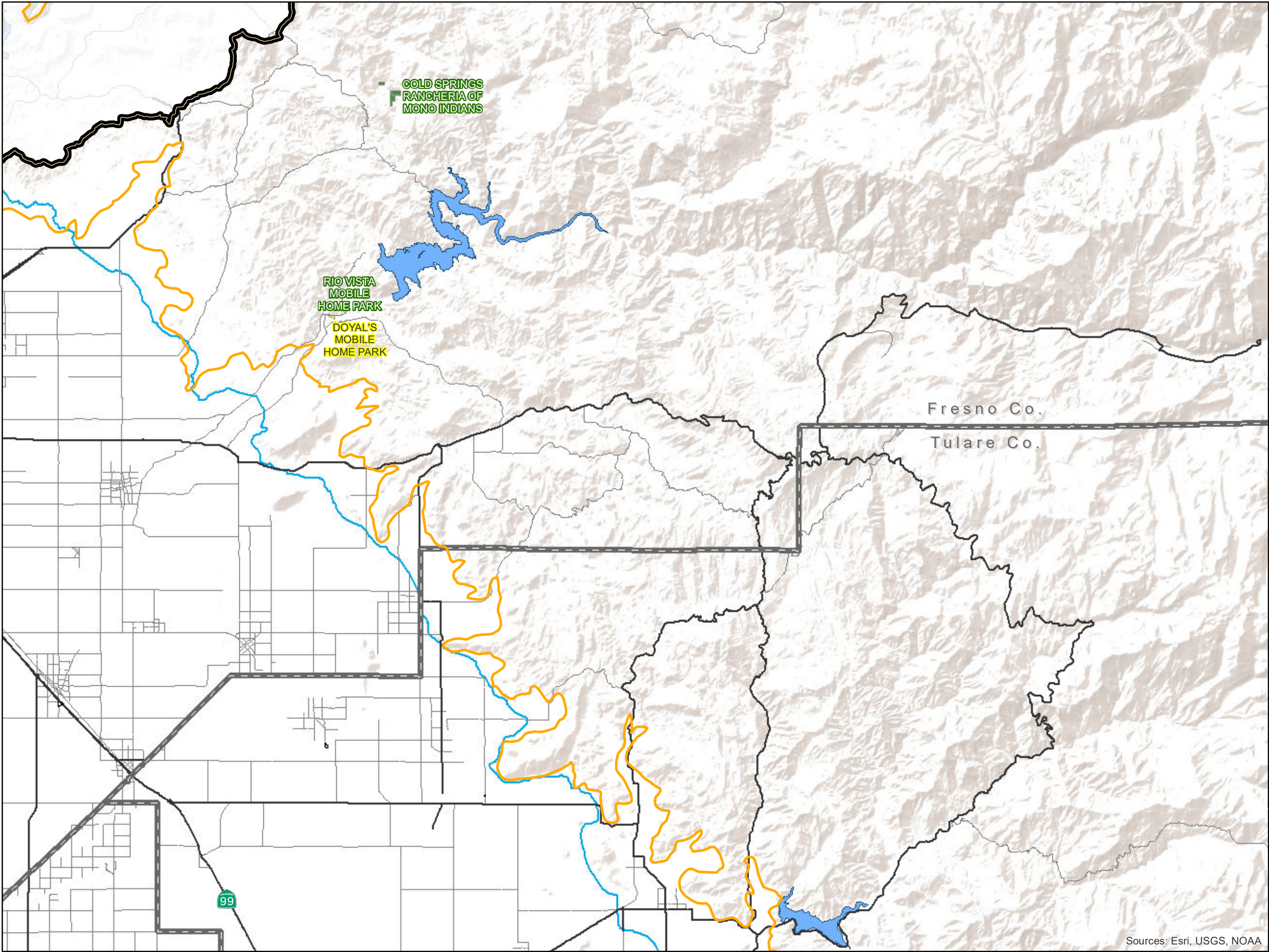


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Sources: Esri, USGS, NOAA










**Tulare Kern Funding Area
Disadvantaged Community
Needs Assessment**

Southern Sierra IRWMA
(North)




DAC and SDAC Communities
Water Quality Compliance

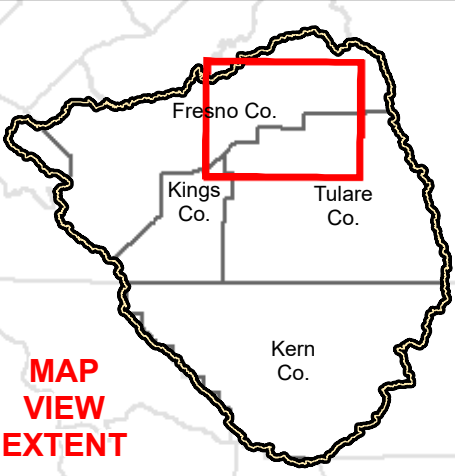
FIGURE 9-5

Legend

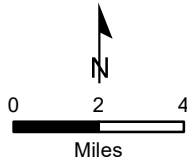
-  Prop 1 Funding Area
-  Southern Sierra IRWMA
-  Consolidated Water System
-  County
-  Major Road
-  Highway / Interstate
-  Major Canal

Water Quality Compliance Status

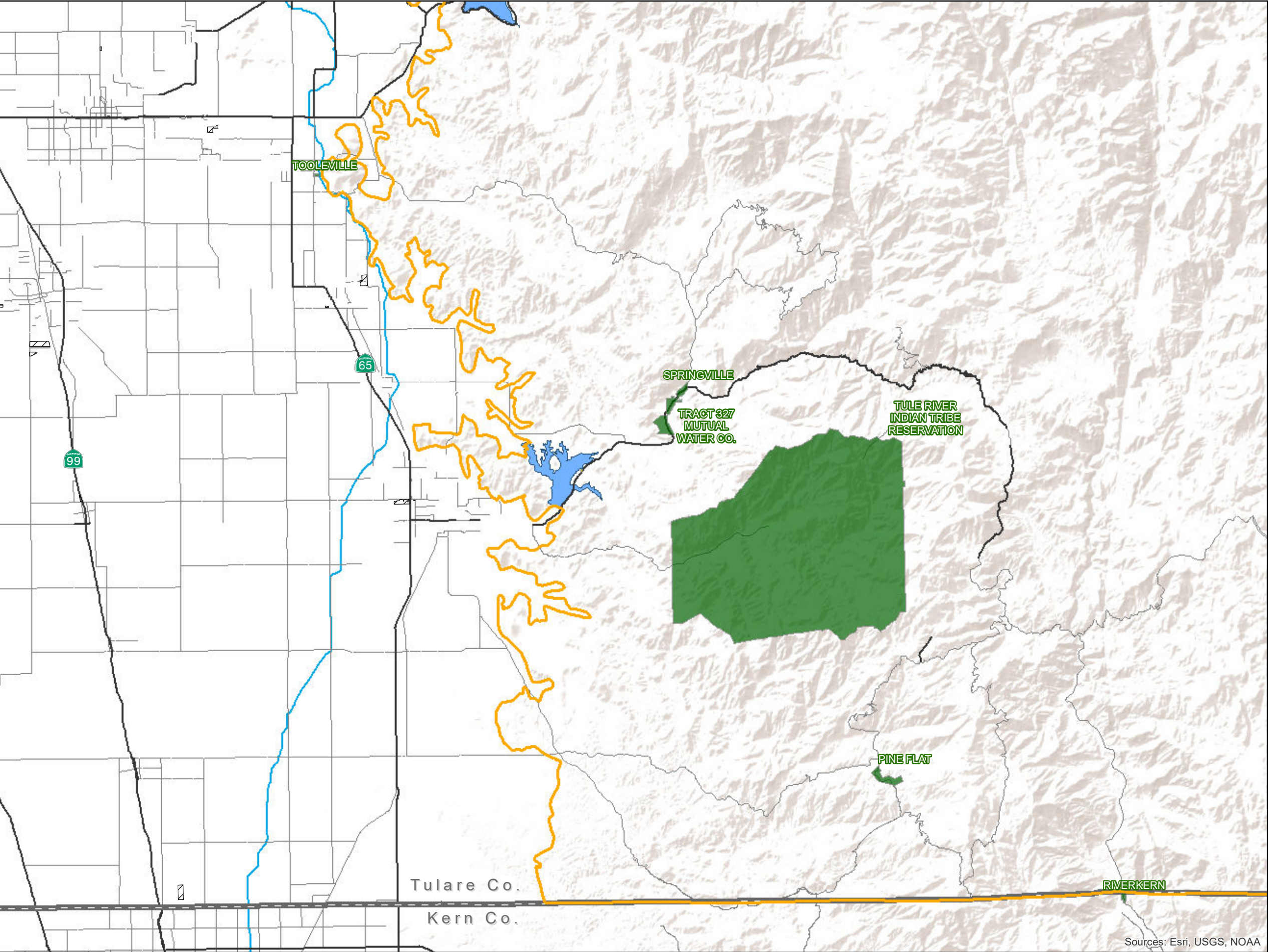
-  IN COMPLIANCE
-  RETURN TO COMPLIANCE
-  OUT OF COMPLIANCE



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**Tulare Kern Funding Area
Disadvantaged Community
Needs Assessment**

Southern Sierra IRWMA
(South)

DAC and SDAC Communities
Water Quality Compliance

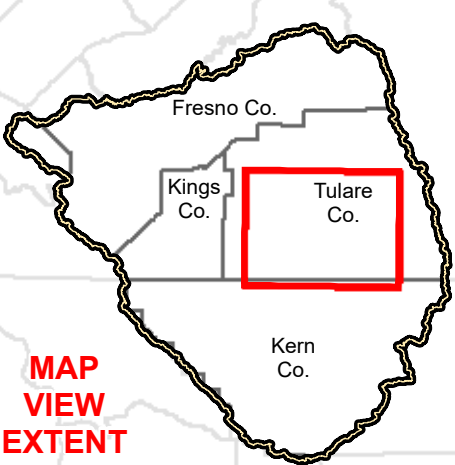
FIGURE 9-6

Legend

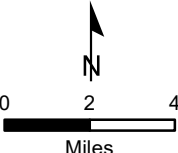
- Prop 1 Funding Area
- Southern Sierra IRWMA
- Consolidated Water System
- County
- Major Road
- Highway / Interstate
- Major Canal

Water Quality Compliance Status

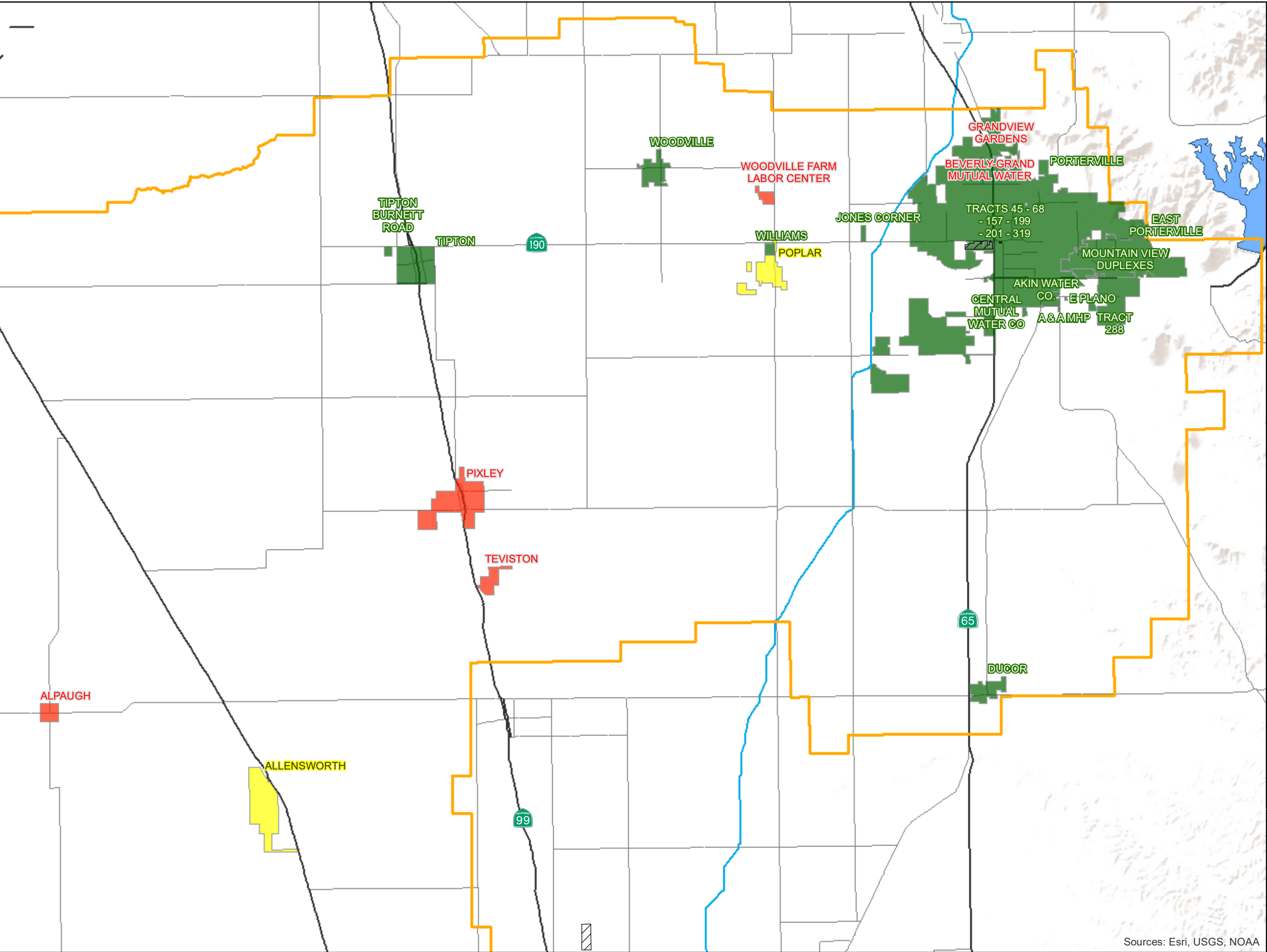
- IN COMPLIANCE
- RETURN TO COMPLIANCE
- OUT OF COMPLIANCE



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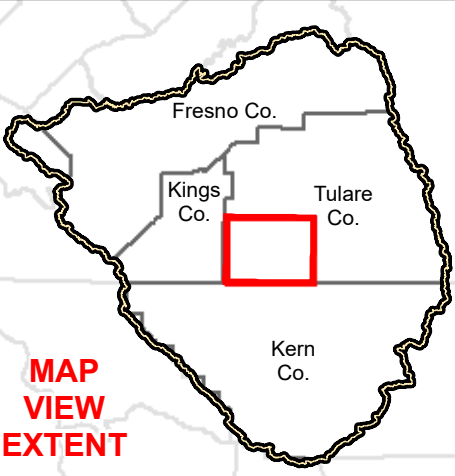


**Tulare Kern Funding Area
Disadvantaged Community
Needs Assessment**

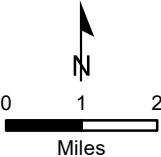
Tule River Basin
IRWMA
DAC and SDAC Communities
Water Quality Compliance
FIGURE 9-7

- Legend**
- Prop 1 Funding Area
 - Tule River Basin IRWMA
 - Consolidated Water System
 - County
 - Major Road
 - Highway / Interstate
 - Major Canal

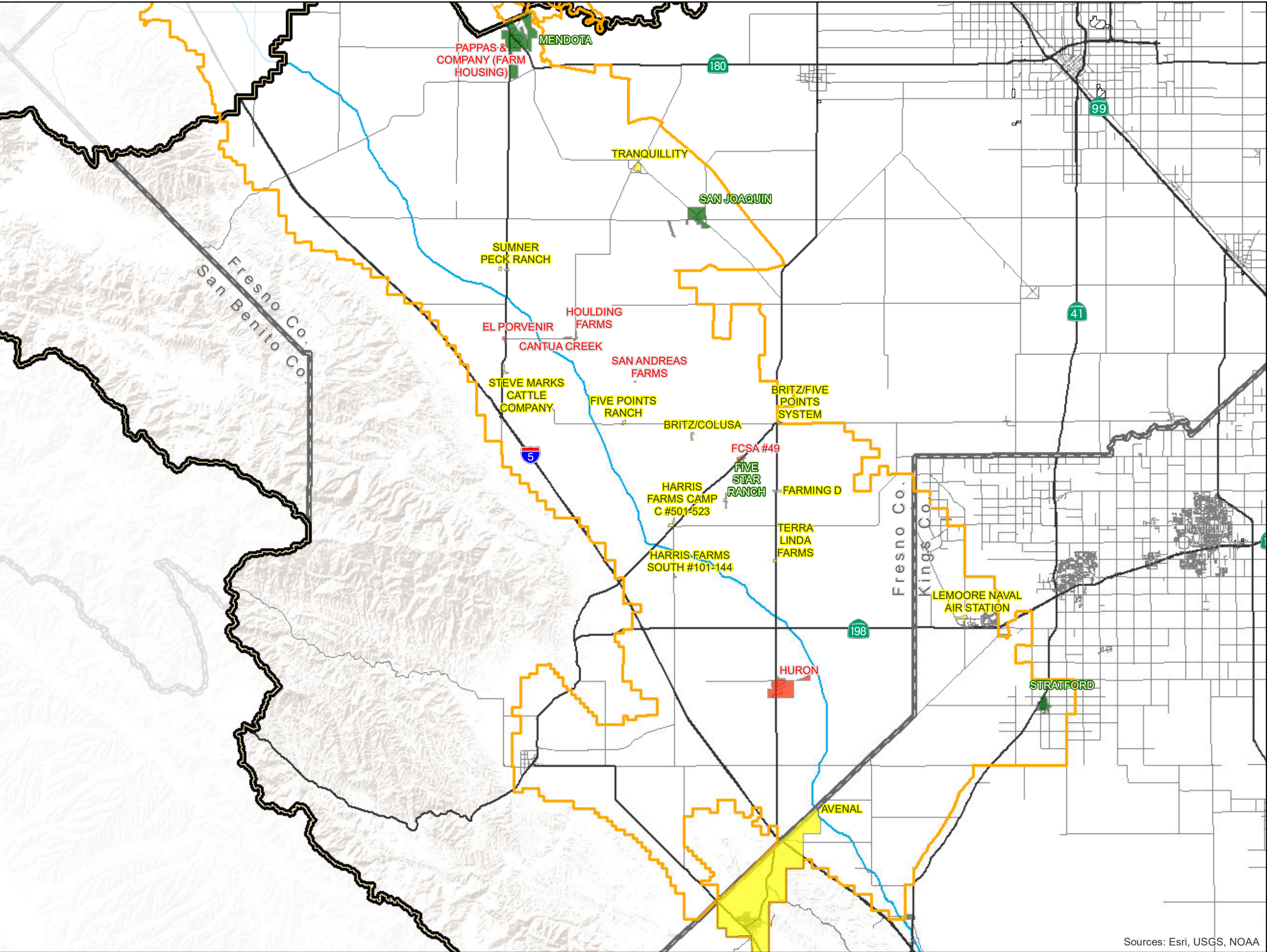
- Water Quality Compliance Status**
- IN COMPLIANCE
 - RETURN TO COMPLIANCE
 - OUT OF COMPLIANCE



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Sources: Esri, USGS, NOAA



Tulare Kern Funding Area Disadvantaged Community Needs Assessment

Westside San Joaquin
IRWMA

DAC and SDAC Communities
Water Quality Compliance

FIGURE 9-8

Legend

- Prop 1 Funding Area
- Westside San Joaquin IRWMA
- Consolidated Water System
- County
- Major Road
- Highway / Interstate
- Major Canal

Water Quality Compliance Status

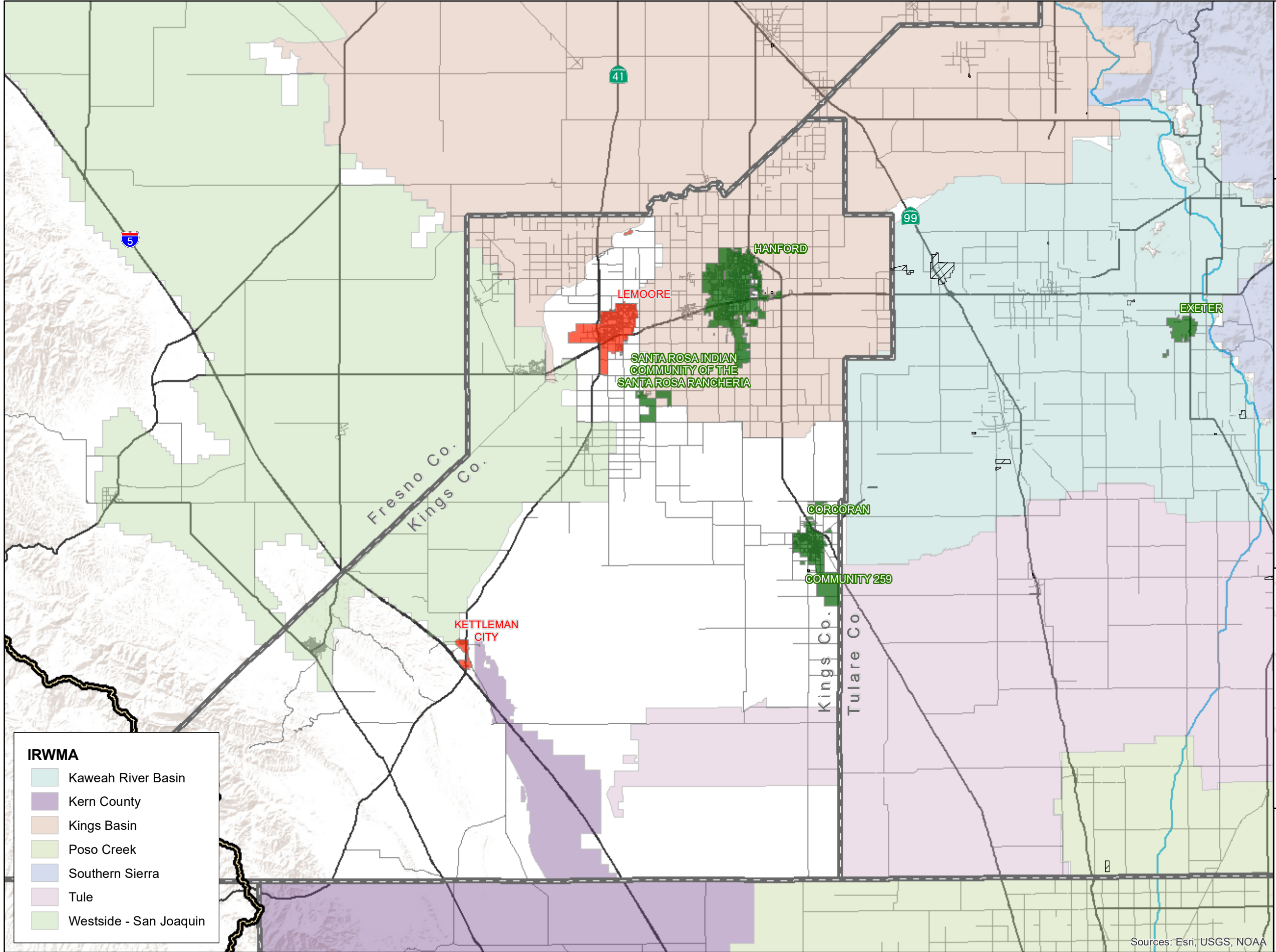
- IN COMPLIANCE
- RETURN TO COMPLIANCE
- OUT OF COMPLIANCE

**MAP
VIEW
EXTENT**

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Sources: Esri, USGS, NOAA



**Tulare Kern Funding Area
Disadvantaged Community
Needs Assessment**

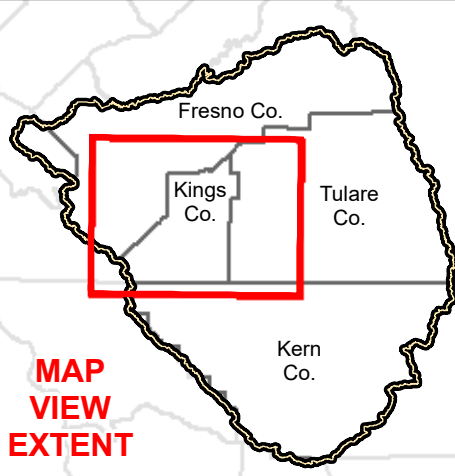
DAC and SDAC Communities
Outside of IRWMA Boundaries
Water Quality Compliance
FIGURE 9-9

Legend

- Prop 1 Funding Area
- Consolidated Water System
- County
- Major Road
- Highway / Interstate
- Major Canal

Water Quality Compliance Status

- IN COMPLIANCE
- RETURN TO COMPLIANCE
- OUT OF COMPLIANCE



IRWMA

- Kaweah River Basin
- Kern County
- Kings Basin
- Poso Creek
- Southern Sierra
- Tule
- Westside - San Joaquin

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Sources: Esri, USGS, NOAA

10 Consolidated Systems

10.1 Explanation of Consolidation

The SWRCB defines consolidation as the joining of two or more water systems, which includes, usually but not always, a smaller system being absorbed into a larger water system. Consolidation provides more reliability for water systems and improves cost efficiencies due to economies of scale on operating, maintenance, monitoring, and administrative costs.

10.2 Consolidation Projects

Several water systems have been consolidated since the TLB Study was completed in 2014. The SWRCB Division of Drinking Water started tracking consolidations in 2017. They did not comprehensively track consolidations prior to 2017.

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

- Consolidation statistics from the SWRCB for 2017 – 2019;
- Comparison of active water system IDs from the TLB Study to present; and
- System consolidations known by the project team.

Sixty-one (61) consolidated systems have been identified within the TKFA—51 of which are DACs, as shown on Table 10-1 and Figure 10-1 through Figure 10-9.

Table 10-1. Disadvantaged Communities – Consolidated Systems

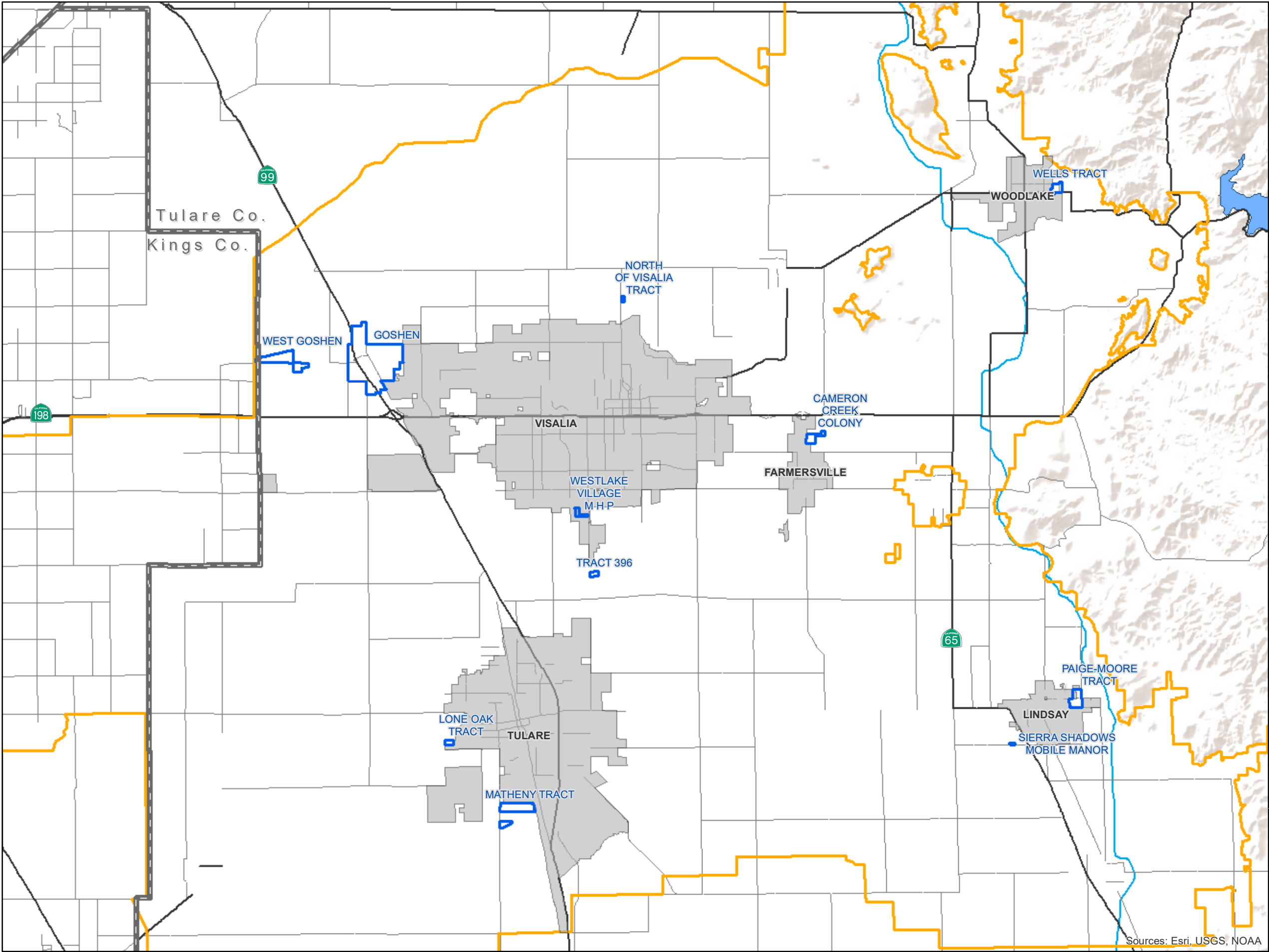
COMMUNITY NAME	SYSTEM NAME	COUNTY	IRWM	DAC STATUS
CAMERON CREEK COLONY	CITY OF FARMERSVILLE	TULARE	KAWEAH	DAC
PAIGE-MOORE TRACT	CITY OF LINDSAY	TULARE	KAWEAH	SDAC
SIERRA SHADOWS MOBILE MANOR	CITY OF LINDSAY	TULARE	KAWEAH	SDAC
LONE OAK TRACT	CITY OF TULARE	TULARE	KAWEAH	SDAC
MATHENY TRACT	CITY OF TULARE	TULARE	KAWEAH	SDAC
WELLS TRACT	CITY OF WOODLAKE	TULARE	KAWEAH	NOT DISADVANTAGED
GOSHEN	CWS - VISALIA	TULARE	KAWEAH	DAC
NORTH OF VISALIA TRACT	CWS - VISALIA	TULARE	KAWEAH	DAC
TRACT 396	CWS - VISALIA	TULARE	KAWEAH	NOT DISADVANTAGED
WEST GOSHEN	CWS - VISALIA	TULARE	KAWEAH	SDAC

Section Ten: Consolidated Systems
Tulare Kern DACIP Needs Assessment

COMMUNITY NAME	SYSTEM NAME	COUNTY	IRWM	DAC STATUS
WESTLAKE VILLAGE M H P	CWS - VISALIA	TULARE	KAWEAH	NOT DISADVANTAGED
MITCHELLS CORNER	ARVIN COMMUNITY SERVICES DIST	KERN	KERN	DAC
EDMUNDSON ACRES	ARVIN COMMUNITY SERVICES DISTRICT	KERN	KERN	DAC
BROCK MUTUAL WC	CITY OF BAKERSFIELD	KERN	KERN	NOT DISADVANTAGED
TWIN PINES MOBILEHOME PARK	CITY OF BAKERSFIELD	KERN	KERN	NOT DISADVANTAGED
BOULDER CANYON	CWS - KERNVILLE SYSTEM	KERN	KERN	SDAC
PONDEROSA PINE	CWS - KERNVILLE SYSTEM	KERN	KERN	SDAC
SOUTH LAKE	CWS SOUTHLAKE SQUIRREL VALLEY SYSTEM	KERN	KERN	SDAC
COUNTRY ESTATES	EAST NILES CSD	KERN	KERN	DAC
JUNIPER HILLS	LAKE ISABELLA CSD	KERN	KERN	SDAC
SHADY LANE MOBILE PARK	LAKE ISABELLA CSD	KERN	KERN	SDAC
ARVIN LABOR CENTER	LAMONT PUBLIC UTILITY DIST	KERN	KERN	SDAC
WEEDPATCH	LAMONT PUBLIC UTILITY DISTRICT	KERN	KERN	SDAC
DERBY ACRES	WEST KERN CWD	KERN	KERN	NOT DISADVANTAGED
DUSTIN ACRES	WEST KERN CWD	KERN	KERN	NOT DISADVANTAGED
FORD CITY	WEST KERN CWD	KERN	KERN	SDAC
MCKITTICK	WEST KERN CWD	KERN	KERN	DAC
SOUTH TAFT	WEST KERN CWD	KERN	KERN	DAC
TAFT HEIGHTS	WEST KERN CWD	KERN	KERN	DAC
TUPMAN	WEST KERN CWD	KERN	KERN	SDAC
VALLEY ACRES	WEST KERN CWD	KERN	KERN	DAC
WEST MARICOPA	WEST KERN CWD	KERN	KERN	DAC
COMMUNITY 2512	CITY OF DINUBA	TULARE	KINGS BASIN	DAC
CALWA	CITY OF FRESNO	FRESNO	KINGS BASIN	SDAC
MAYFAIR	CITY OF FRESNO	FRESNO	KINGS BASIN	DAC
SHADY ACRE TRAILER PARK	CITY OF FRESNO	FRESNO	KINGS BASIN	SDAC
SUNNYSIDE	CITY OF FRESNO	FRESNO	KINGS BASIN	NOT DISADVANTAGED

Section Ten: Consolidated Systems
Tulare Kern DACIP Needs Assessment

COMMUNITY NAME	SYSTEM NAME	COUNTY	IRWM	DAC STATUS
TODD'S TRAILER COURT	CITY OF FRESNO	FRESNO	KINGS BASIN	SDAC
FOUR SEASONS MOBILE HOME PARK	CITY OF HANFORD	KINGS	KINGS BASIN	NOT DISADVANTAGED
HAMBLIN	CITY OF HANFORD	KINGS	KINGS BASIN	DAC
LACEY COURTS MHP	CITY OF HANFORD	KINGS	KINGS BASIN	DAC
DATE STREET	CITY OF KERMAN	FRESNO	KINGS BASIN	SDAC
NORSEMAN M.H.P.	CITY OF KINGSBURG	TULARE	KINGS BASIN	NOT DISADVANTAGED
COMMUNITY 227	CITY OF SELMA	FRESNO	KINGS BASIN	SDAC
BERAN WAY	FCSA #39 A&B	FRESNO	KINGS BASIN	DAC
WEST PARK	FCSA #39 A&B	FRESNO	KINGS BASIN	DAC
TAFOYA WATER SYSTEM	YETTEM WATER SYSTEM	TULARE	KINGS BASIN	DAC
MADONNA	CITY OF DELANO	TULARE	POSO CREEK	DAC
BISHOP ACRES	CITY OF SHAFER	KERN	POSO CREEK	SDAC
CHEROKEE STRIP	CITY OF SHAFER	KERN	POSO CREEK	SDAC
MAPLE SCHOOL	CITY OF SHAFER	KERN	POSO CREEK	SDAC
MEXICAN COLONY	CITY OF SHAFER	KERN	POSO CREEK	SDAC
SHAFER FARM LABOR CENTER	CITY OF SHAFER	KERN	POSO CREEK	SDAC
SMITH'S CORNER	CITY OF SHAFER	KERN	POSO CREEK	SDAC
SOUTHWEST SHAFER	CITY OF SHAFER	KERN	POSO CREEK	SDAC
THOMAS LANE	CITY OF SHAFER	KERN	POSO CREEK	SDAC
WEST SHAFER	CITY OF SHAFER	KERN	POSO CREEK	SDAC
GOLDEN KEY APARTMENTS	CITY OF PORTERVILLE	TULARE	TULE	DAC
TRACTS 45 - 68 - 157 - 199 - 201 - 319	CITY OF PORTERVILLE	TULARE	TULE	SDAC
TIPTON BURNETT ROAD	TIPTON COMMUNITY SERVICES DIST	TULARE	TULE	DAC
COMMUNITY 259	CITY OF CORCORAN	KINGS	Outside of IRWM	SDAC

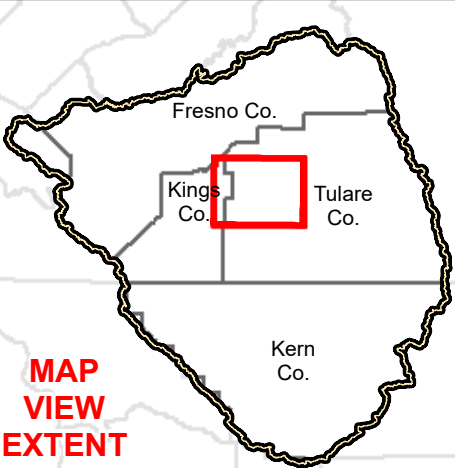


**Tulare Kern Funding Area
Disadvantaged Community
Needs Assessment**

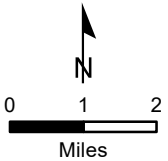
Kaweah River Basin
IRWMA
Consolidated Water Systems

FIGURE 10-1

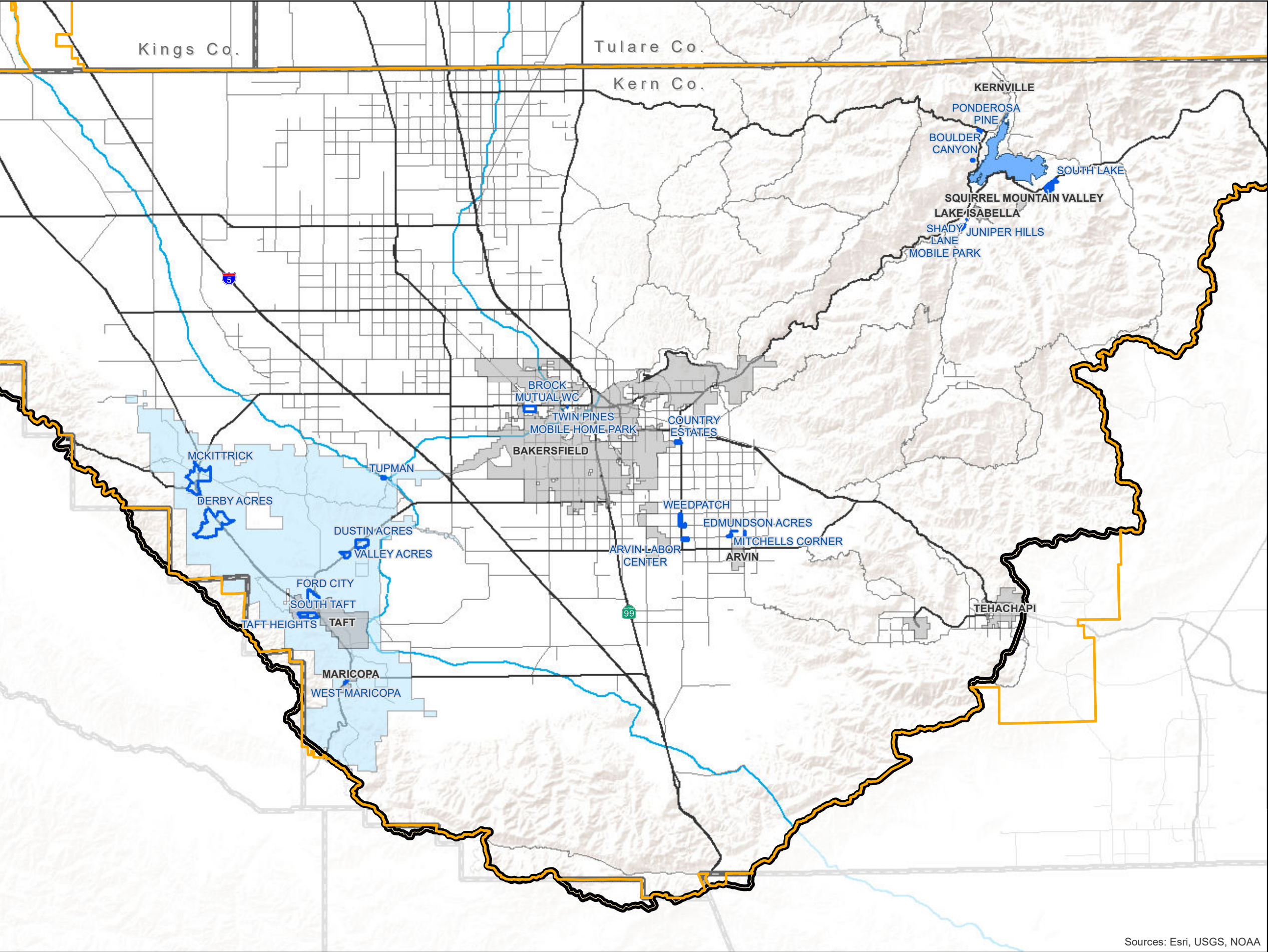
- Legend**
- Prop 1 Funding Area
 - Kaweah River Basin IRWMA
 - Communities That Have Consolidated With Another Water System
 - City or Community Receiving Water System Consolidation
 - County
 - Major Road
 - Highway / Interstate
 - Major Canal



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Sources: Esri, USGS, NOAA

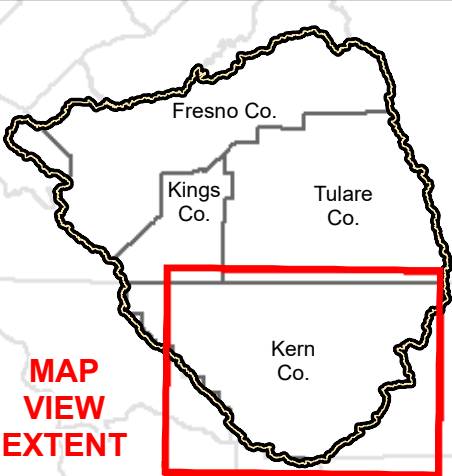


**Tulare Kern Funding Area
Disadvantaged Community
Needs Assessment**

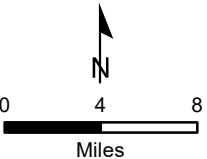
Kern IRWMA
Consolidated Water Systems

FIGURE 10-2

- Legend**
- Prop 1 Funding Area
 - Kern IRWMA
 - Communities That Have Consolidated With Another Water System
 - City or Community Receiving Water System Consolidation
 - West Kern W.D.
 - County
 - Major Road
 - Highway / Interstate
 - Major Canal



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Sources: Esri, USGS, NOAA

Tulare Kern Funding Area
Disadvantaged Community
Needs Assessment

Kings Basin Water Authority

Consolidated Water Systems

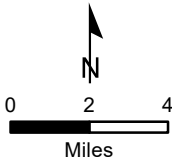
FIGURE 10-3

Legend

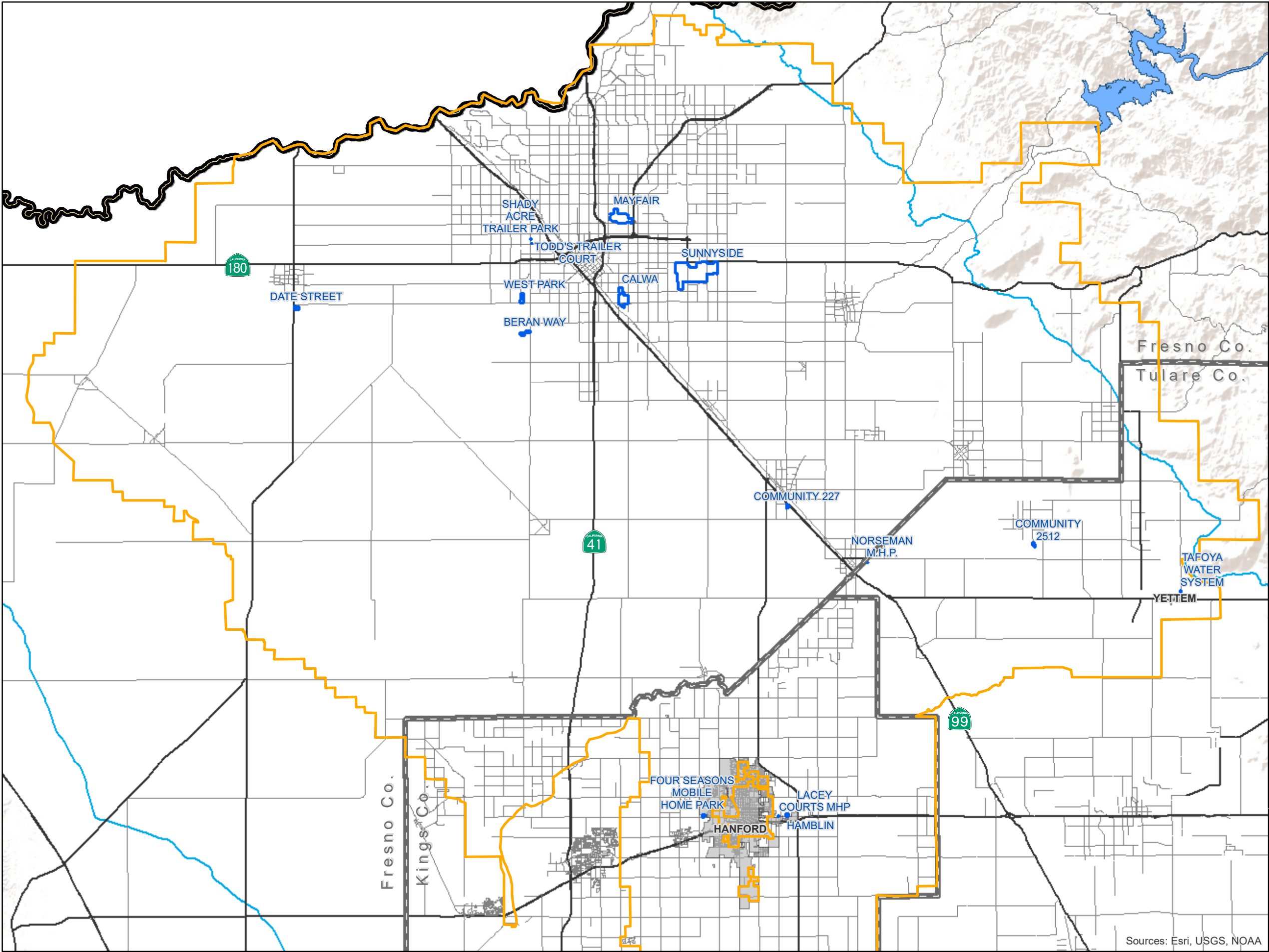
- Prop 1 Funding Area
- Kings Basin Water Authority
- Communities That Have Consolidated With Another Water System
- City or Community Receiving Water System Consolidation
- County
- Major Road
- Highway / Interstate
- Major Canal



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Sources: Esri, USGS, NOAA

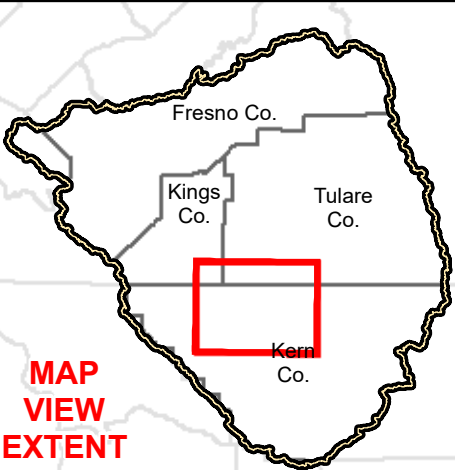


Tulare Kern Funding Area
Disadvantaged Community
Needs Assessment

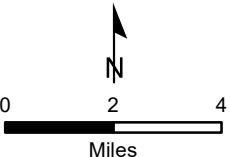
Poso Creek IRWMA
Consolidated Water Systems

FIGURE 10-4

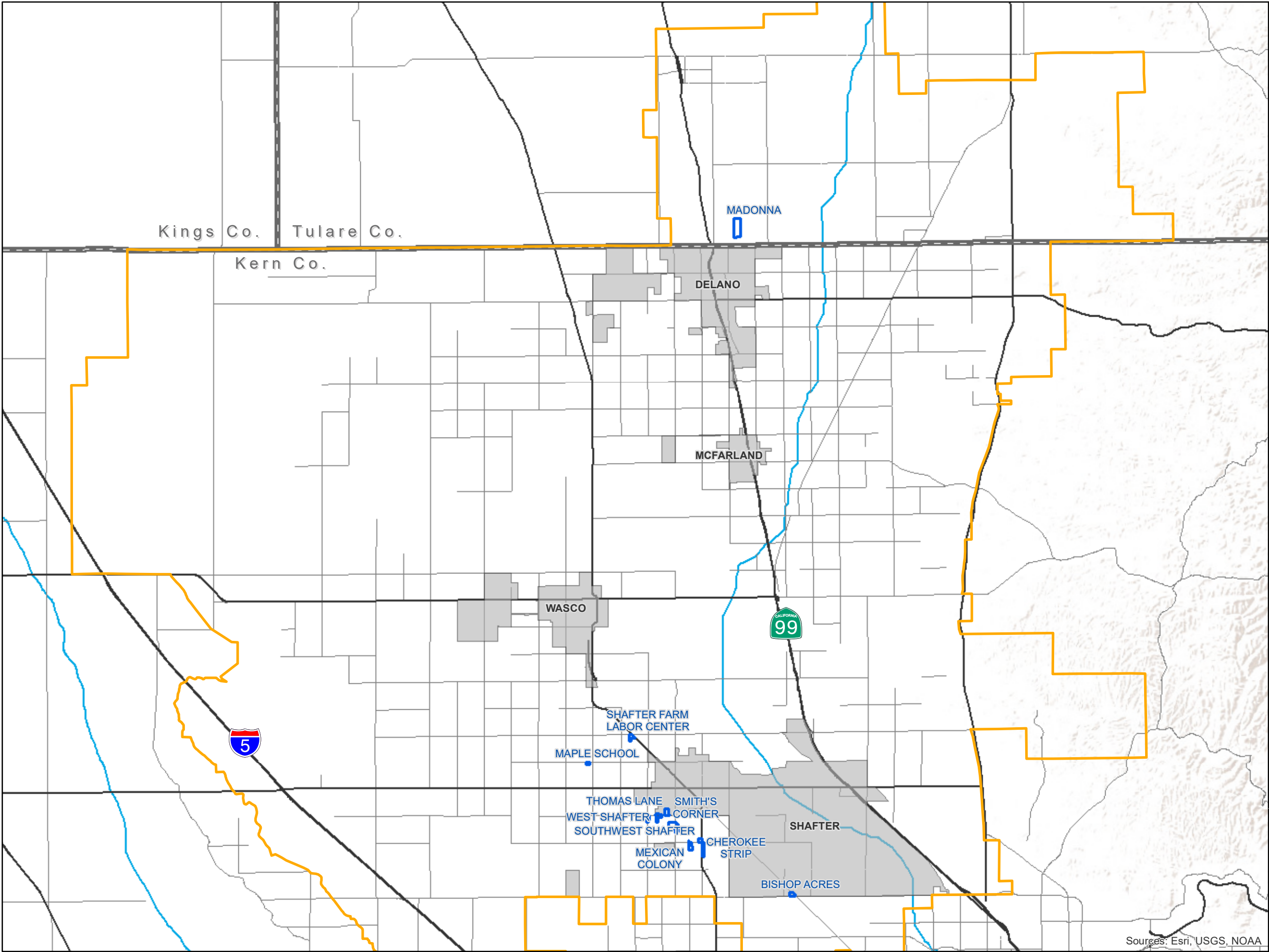
- Legend**
- Prop 1 Funding Area
 - Poso Creek IRWMA
 - Communities That Have Consolidated With Another Water System
 - City or Community Receiving Water System Consolidation
 - County
 - Major Road
 - Highway / Interstate
 - Major Canal

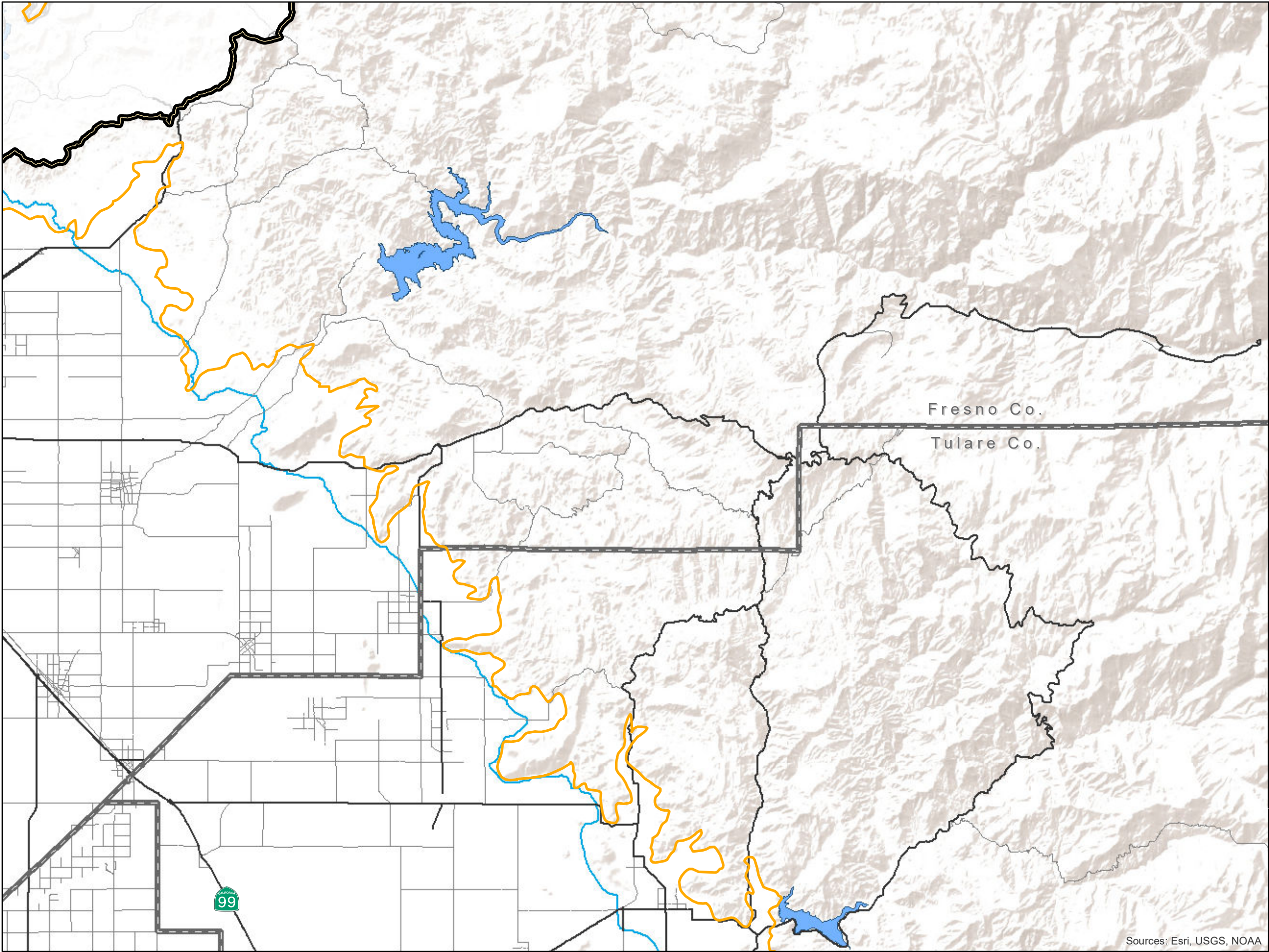


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Sources: Esri, USGS, NOAA













**Tulare Kern Funding Area
Disadvantaged Community
Needs Assessment**

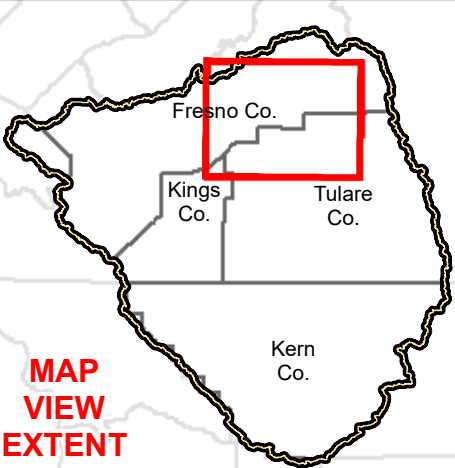
Southern Sierra IRWMA
(North)
Consolidated Water Systems

FIGURE 10-5

Legend

-  Prop 1 Funding Area
-  Southern Sierra IRWMA
-  Communities That Have Consolidated With Another Water System *
-  City or Community Receiving Water System Consolidation *
-  County
-  Major Road
-  Highway / Interstate
-  Major Canal

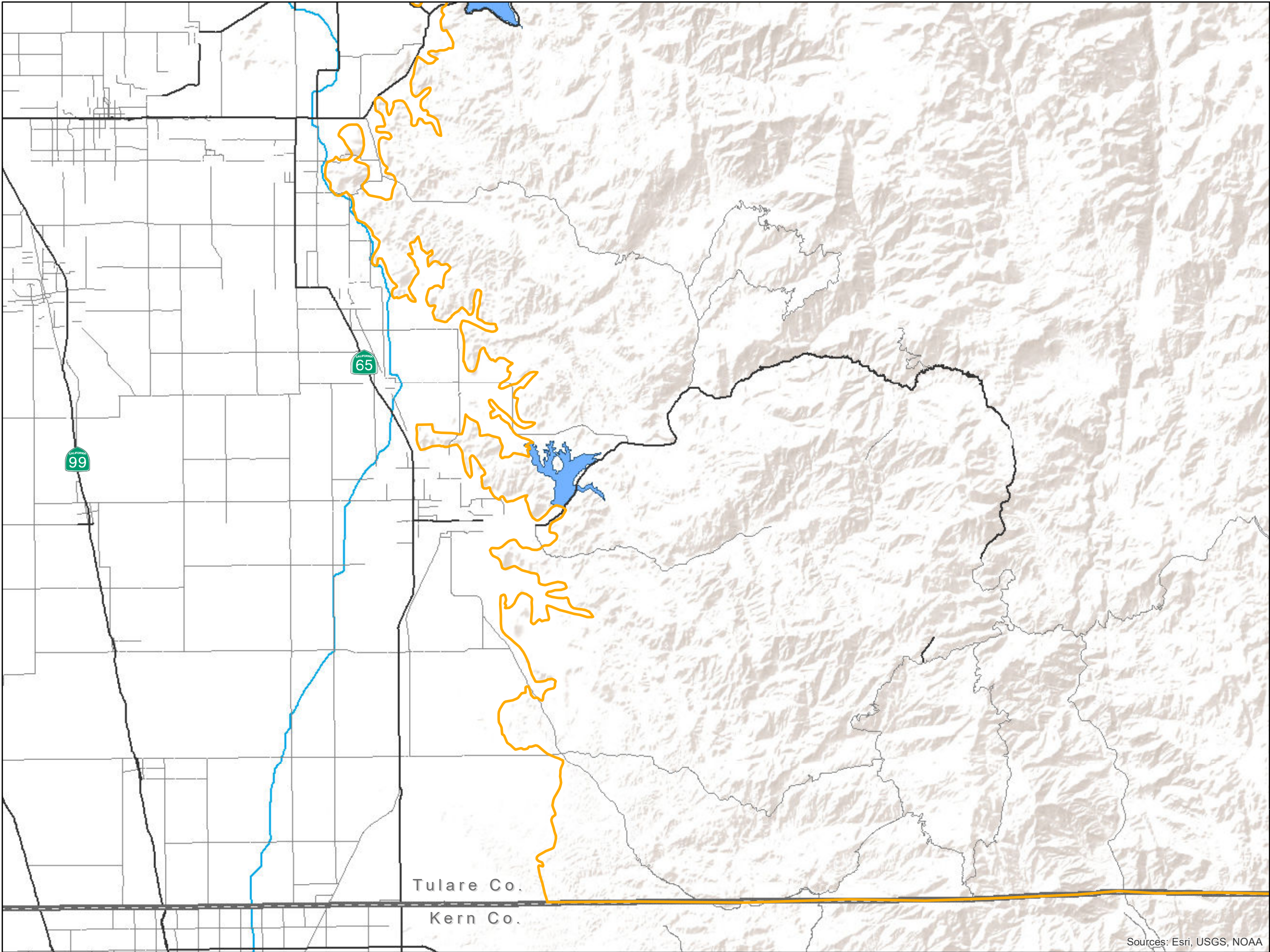
**No Communities That Have Consolidated in this IRWMA, no Cities in this IRWMA*



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Sources: Esri, USGS, NOAA



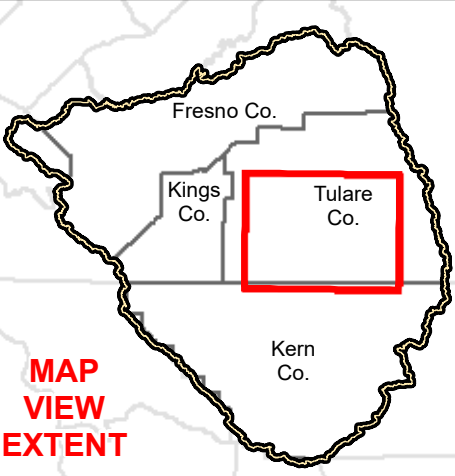
**Tulare Kern Funding Area
Disadvantaged Community
Needs Assessment**

Southern Sierra IRWMA
(South)
Consolidated Water Systems

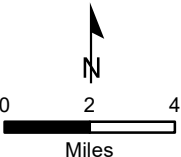
FIGURE 10-6

- Legend**
- Prop 1 Funding Area
 - Southern Sierra IRWMA
 - Communities That Have Consolidated With Another Water System *
 - City or Community Receiving Water System Consolidation *
 - County
 - Major Road
 - Highway / Interstate
 - Major Canal

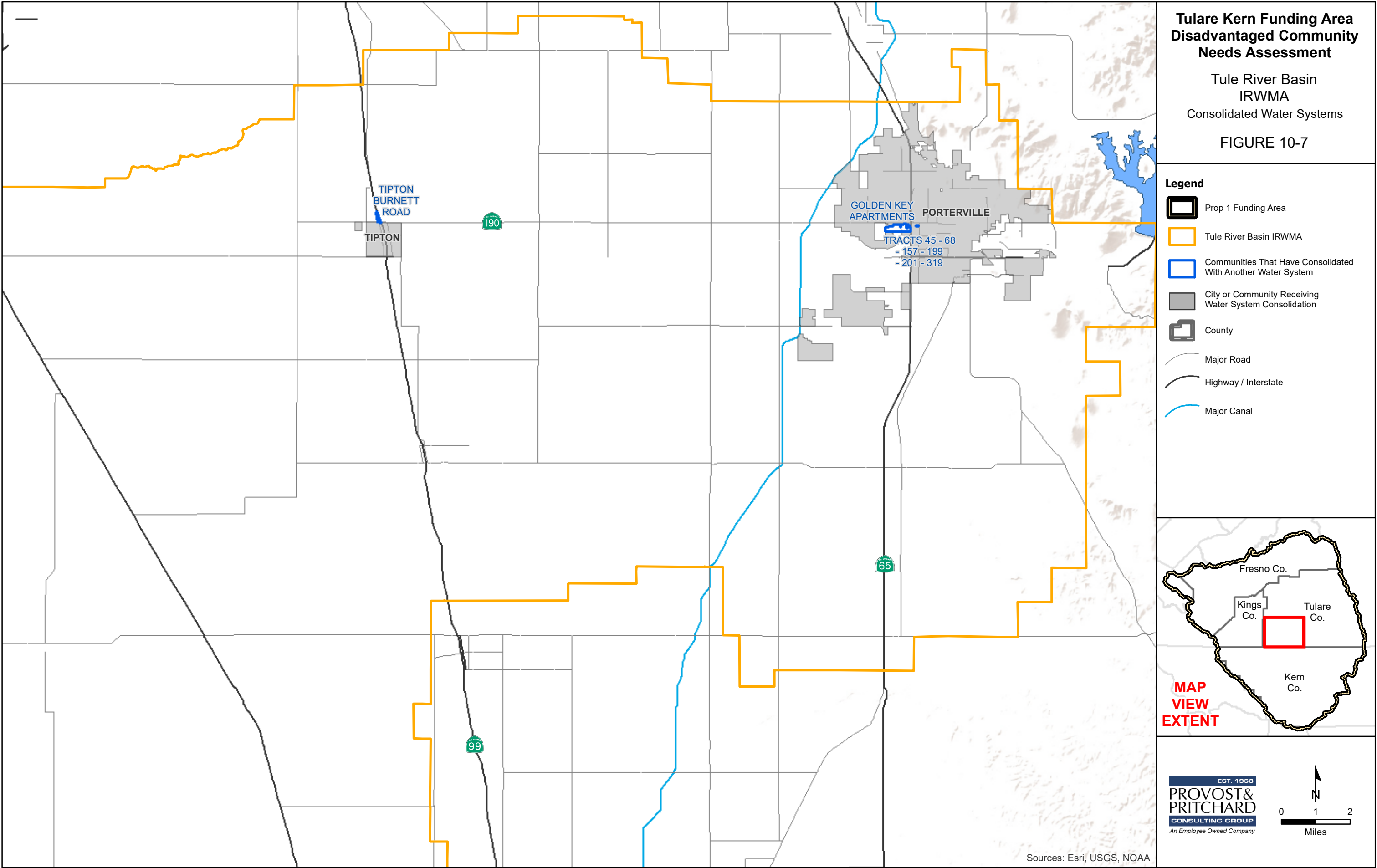
**No Communities That Have Consolidated in this IRWMA, no Cities in this IRWMA*

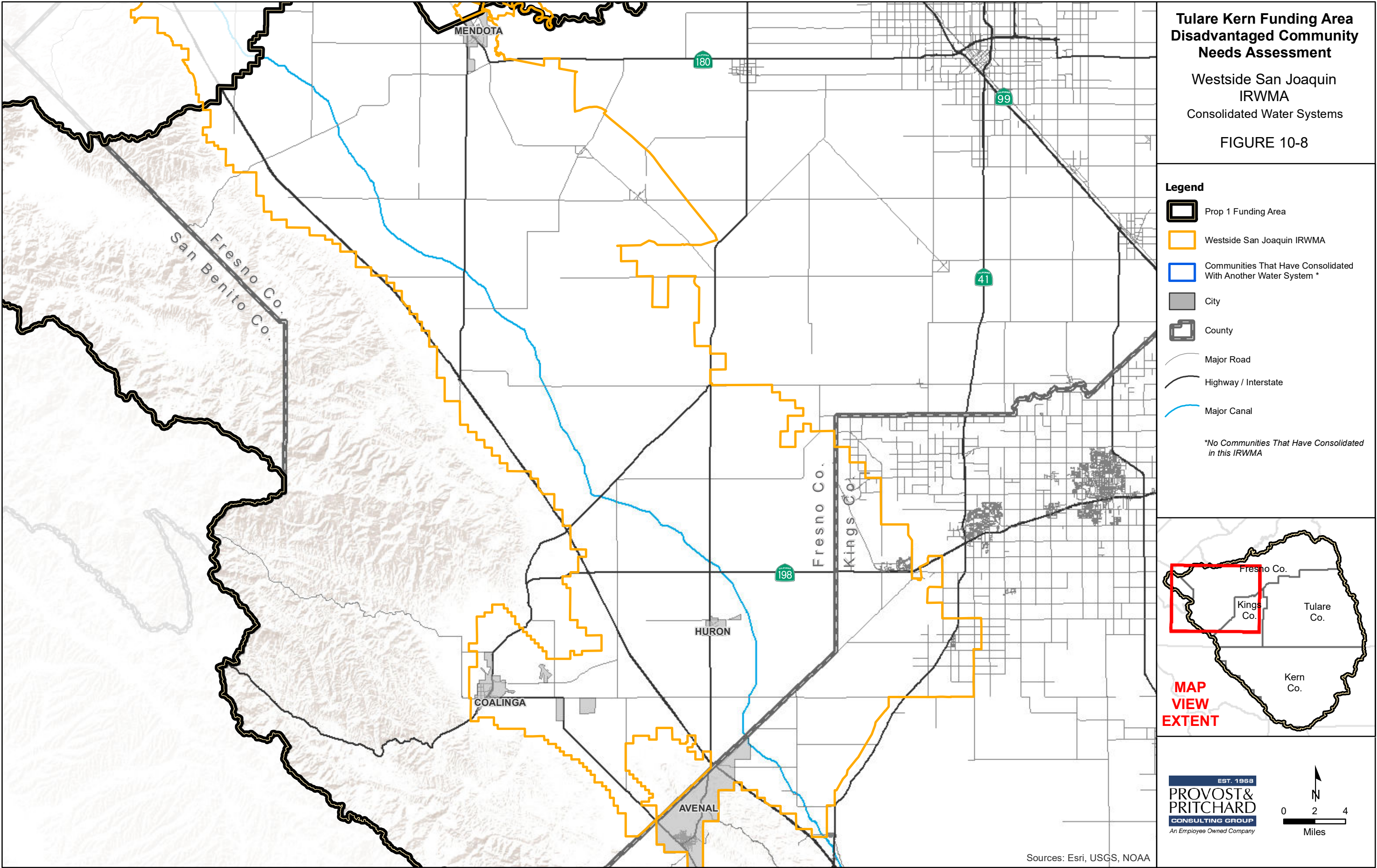


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Sources: Esri, USGS, NOAA



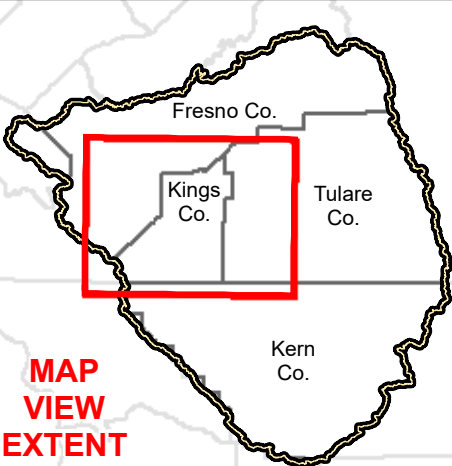


Tulare Kern Funding Area
Disadvantaged Community
Needs Assessment

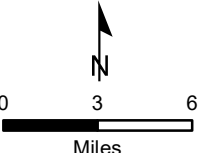
Outside of IRWMA Boundaries
Consolidated Water Systems

FIGURE 10-9

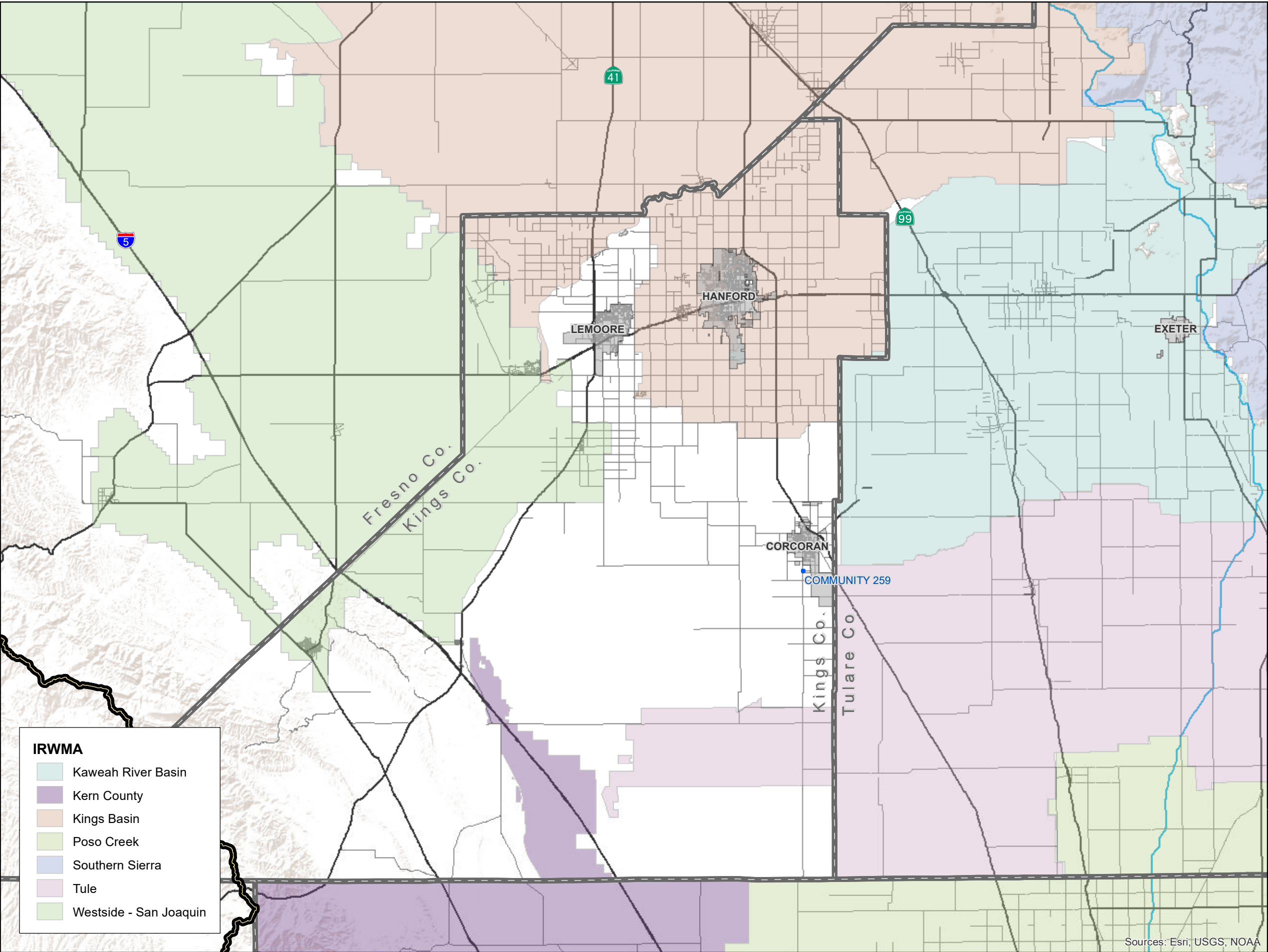
- Legend**
- Prop 1 Funding Area
 - Communities That Have Consolidated With Another Water System
 - City or Community Receiving Water System Consolidation
 - County
 - Major Road
 - Highway / Interstate
 - Major Canal



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Sources: Esri, USGS, NOAA



- IRWMA**
- Kaweah River Basin
 - Kern County
 - Kings Basin
 - Poso Creek
 - Southern Sierra
 - Tule
 - Westside - San Joaquin

10.3 Mandatory Consolidation

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 the Division of Drinking Water authority to mandate such consolidations or extension of service following a series of specific actions. The Division of Drinking Water 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 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 10-2 below). The last entity listed in the table for each consolidation is the potential receiving water system.

Table 10-2. Mandatory Consolidation or Extension of Service for DACs¹

Water Systems	6-Month Consolidation Letter	Public Meeting Date ²	Public Hearing Date ²	Mandatory Consolidation Order	Resolved to Consolidate Voluntarily
East Orosi CSD	7/13/2018	10/22/2018	4/10/2019		
Orosi Public Utility District*					
Desert Breeze Mobile Home Estates	4/6/2018	6/12/2018	9/5/2018		
Rosamond CSD*					
60th Street Assoc. Water System	12/15/2017	6/12/2018	9/5/2018		
First Mutual Water System					
Lucky 18 on Rosamond, LLC					
Rosamond Mobile Home Park					
Rosamond School Water System					
Rosamond CSD*					
MD#08 North Fork	11/16/2017				✓
North Fork Union School*					
Yosemite High School	10/24/2017				✓
Hillview Water Company*					
Ceres West Mobile Home Park	8/23/2017	5/30/2018	10/1/2018		
City of Ceres ³ *					
South Kern Mutual Water Company	11/15/2016	7/10/2017	9/7/2017	9/27/2018	
City of Bakersfield*					

Water Systems	6-Month Consolidation Letter	Public Meeting Date ²	Public Hearing Date ²	Mandatory Consolidation Order	Resolved to Consolidate Voluntarily
Black Rascal Water Company	9/22/2016	12/8/2016		Note: Determined not to be DAC. Mandatory consolidation ceased.	
City of Merced*					
Lakeside School	6/15/2016	2/16/2017	7/11/2017		
City of Bakersfield*					
Old River Mutual Water Company	6/15/2016	7/10/2017	9/7/2017	9/27/2018	
City of Bakersfield*					
Madera County Maintenance District #19 Parkwood	6/15/2016				✓
City of Madera*					
Pratt Mutual Water Company	8/15/2015	3/3/2016	3/17/2016	3/29/2016	
City of Tulare*					
Souls Mutual Water Company ⁴	8/18/2015	11/14/2017	11/28/2017		✓
City of Tulare*					

¹As defined in SB 88

²Meeting completed or scheduled

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

⁴As an interim measure Souls MWC is purchasing water from the City of Tulare through a wholesale agreement.

*Potential receiving water system.

10.4 Potential Consolidation

In addition to those mandatory consolidations, Table 10-3 provides a summary of water systems serving DACs with water quality or quantity issues that are currently evaluating the feasibility of consolidation or are in a construction project for consolidation through the SWRCB, Division of Financial Assistance. This table is only for those DACs that are within the TKFA. The SWRCB website has a listing of additional water systems evaluating the feasibility of consolidation.

Table 10-3. Potential Consolidation for DACs with Water System Violations

System No.	System Name	Population	County	Compliance Issue	Receiving System	Approximate Consolidation Distance (miles)
CONSOLIDATION PROJECTS FOR DISADVANTAGED COMMUNITIES WITH VIOLATIONS, POTENTIAL MANDATORY CONSOLIDATION PROJECTS						
1500096	Old River Mutual Water Company	48	Kern	Uranium	City of Bakersfield	1.0
1500344	South Kern Mutual Water Company	32	Kern	Uranium	City of Bakersfield	1.0
1502154	Lakeside School	800	Kern	Arsenic	City of Bakersfield	3.0

Section Ten: Consolidated Systems
Tulare Kern DACIP Needs Assessment

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 ANTICIPATED IN OR BEFORE 2018						
1510023	Lake of the Woods Mutual Water Company	945	Kern	Nitrate, Fluoride, water shortage	Frazier Park PUD	2.0 - 2.5
1500459	Lake of the Woods Mobile Village	82	Kern	Nitrate	Frazier Park PUD	2.0 - 2.5
1502569	First Mutual Water Company	40	Kern	Arsenic	Rosamond CSD	0.1 - 1.0
1502744	60th Street Water Association	30		Arsenic		
1500571	Lucky 18 on Rosamond LLC	85		Arsenic		
1502231	Rosamond High School	940		Arsenic		
1502232	Rosamond Mobile Home Park	175		Uranium		
1502247	Desert Breeze Mobile Home Park	95		Uranium		
1500426	Rosevilla Apartments	100		-		
1500485	Antelope Valley MHP	84		-		
1500458	R.S. Mutual	67	Kern	Nitrate, Uranium, Arsenic	CWS - Kernville	4
5400805	Souls Mutual Water Company	120	Tulare	Nitrate	City of Tulare	0.25
5400651	Beverly Grand Mutual Water Company	108	Tulare	Nitrate	City of Porterville	0.1
5400903	Tract 92 CSD	500	Tulare	Total Coliform	CWS - Visalia	1.5
5400550	Seville Water Company	400	Tulare	Nitrate	Yettem Water System	1
5400666	Del Oro Grandview Gardens District	347	Tulare	Nitrate	City of Porterville	0.1
5400767	Del Oro East Plano District	46	Tulare	-	City of Porterville	0.6
5401003	East Orosi CSD	700	Tulare	Nitrate	Orosi Public Utilities District	1.5
SWRCB FUNDED CONSOLIDATION PROJECTS FOR DISADVANTAGED COMMUNITIES WITH UNSAFE WATER, CONSTRUCTION PROJECTS						
1000276	Orange Center School	410	Fresno	Lead	City of Fresno	1.5
1000221	Washington Union High School	1000	Fresno	Gross Alpha	Washington Colony School	0.5
1000407	George Cox Water System	40	Fresno	DBCP	City of Reedley	0.25
1000577	Dunlap Leadership Academy	78	Fresno	Uranium	Dunlap K-8 School	0.1
1000248	Double L Mobile Ranch Park	80	Fresno	Uranium & 1,2,3-TCP	City of Kerman	2.5

Section Ten: Consolidated Systems
Tulare Kern DACIP Needs Assessment

System No.	System Name	Population	County	Compliance Issue	Receiving System	Approximate Consolidation Distance (miles)
1500588	Son Shine Properties	438	Kern	Nitrate, DBCP, & 1,2,3-TCP	Arvin CSD	2.5
1500493	El Adobe POA, Inc.	200	Kern	Arsenic	Lamont PUD	0.2
5400655	Central Mutual Water Company	112	Tulare	Water Shortage	City of Porterville	0.5
5400651	Beverly Grand Mutual Water Company	108	Tulare	Nitrate	City of Porterville	0

11 Private Well Communities

Private well communities are communities that were identified through the TLB Study and local knowledge, which do not have a Public Water System Identification (PWSID) number. Generally, a community is assumed to be at least 15 homes; however, some of the private well communities shown in Table 11-1 only have 8 to 10 homes. Fifty-six (56) private well communities have been identified in the TKFA, as shown in Figure 11-1 through Figure 11-9. Private well communities face unique challenges and are more susceptible than most community water systems to changes in groundwater conditions, drought impacts, and water quality concerns. This is primarily due to the shallow nature of most private wells.

Water quality data for private wells is limited. Self-Help Enterprises has done some well sampling in several of the private well communities. A summary of the sample results for communities on private wells is provided in Table 11-2.

Table 11-1. Disadvantaged Communities – Private Well Communities

COMMUNITY NAME	POPULATION	CONNECTIONS	COUNTY	IRWM
COMMUNITY 290	69	21	TULARE	KAWEAH
COMMUNITY 321	33	10	TULARE	KAWEAH
COMMUNITY 415	50	15	TULARE	KAWEAH
HYPERICUM - DOG TOWN	132	40	TULARE	KAWEAH
LINDCOVE	500	100	TULARE	KAWEAH
SOUTH LEMON COVE	243	105	TULARE	KAWEAH
WAUKENA	99	30	TULARE	KAWEAH
COMMUNITY 2751	165	50	KERN	KERN
COMMUNITY 362	36	11	KERN	KERN
COMMUNITY 392	594	180	KERN	KERN
COMMUNITY 421	33	10	KERN	KERN
HAVILAH	79	24	KERN	KERN
WOODY	116	35	KERN	KERN
ALKALI FLATS	100	100	FRESNO	KINGS BASIN
BRITTEN	89	27	FRESNO	KINGS BASIN
BURREL	16	16	FRESNO	KINGS BASIN
COMMUNITY 152	877	266	FRESNO	KINGS BASIN
COMMUNITY 168	69	21	FRESNO	KINGS BASIN
COMMUNITY 173	49	13	FRESNO	KINGS BASIN
COMMUNITY 178	148	45	FRESNO	KINGS BASIN
COMMUNITY 180	59	18	FRESNO	KINGS BASIN
COMMUNITY 186	59	18	FRESNO	KINGS BASIN
COMMUNITY 192	33	10	FRESNO	KINGS BASIN
COMMUNITY 197	49	15	FRESNO	KINGS BASIN
COMMUNITY 204	66	20	FRESNO	KINGS BASIN

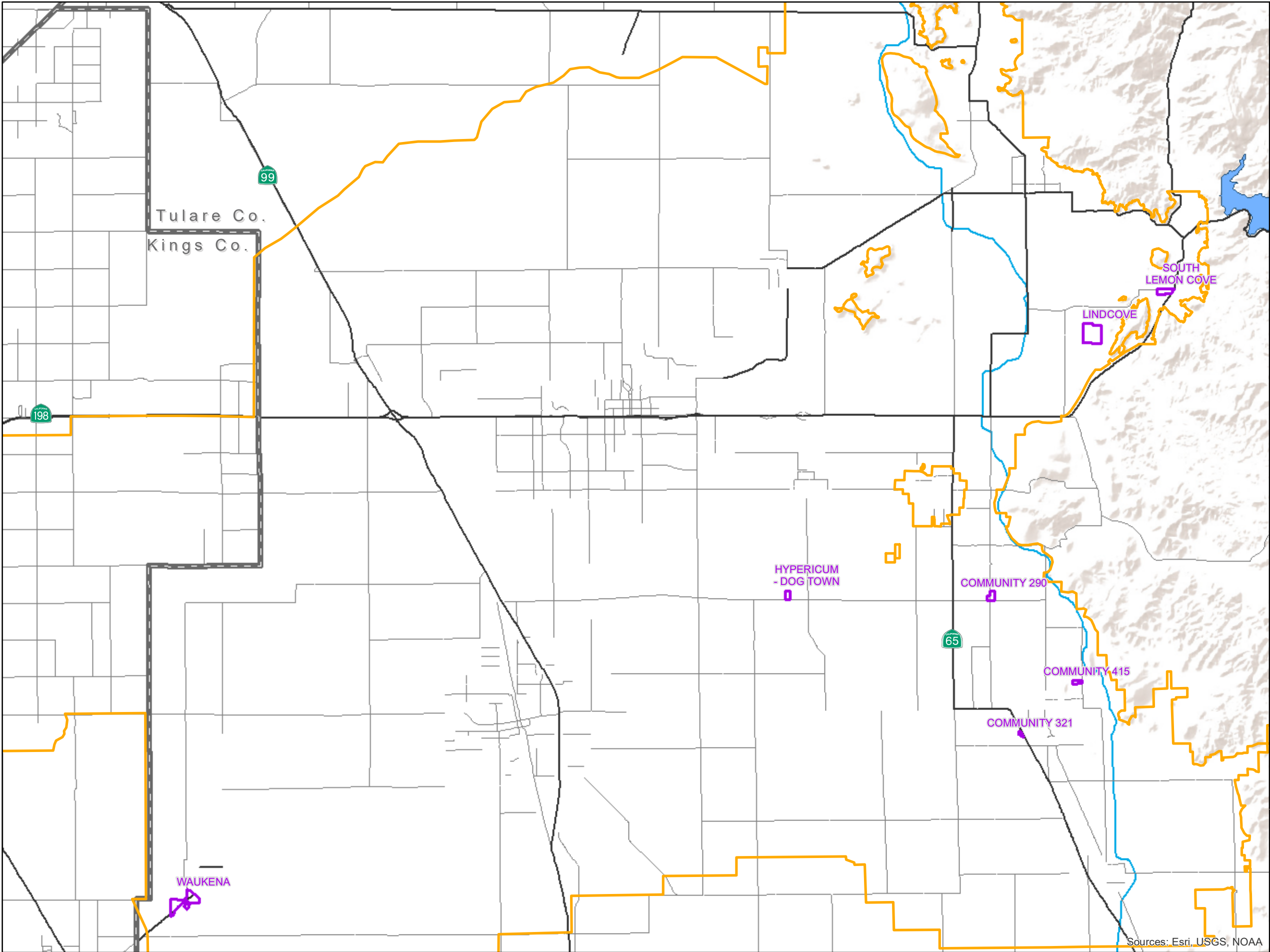
Section Eleven: Private Well Communities
Tulare Kern DACIP Needs Assessment

COMMUNITY NAME	POPULATION	CONNECTIONS	COUNTY	IRWM
COMMUNITY 214	42	13	FRESNO	KINGS BASIN
COMMUNITY 215	53	16	FRESNO	KINGS BASIN
COMMUNITY 216	63	19	FRESNO	KINGS BASIN
COMMUNITY 219	49	15	FRESNO	KINGS BASIN
COMMUNITY 235	72	22	FRESNO	KINGS BASIN
COMMUNITY 236	35	10	FRESNO	KINGS BASIN
DALEVILLE	138	42	FRESNO	KINGS BASIN
DOUBLE L NEIGHBORHOOD	70	35	FRESNO	KINGS BASIN
EASTON	1966	623	FRESNO	KINGS BASIN
MONMOUTH	120	37	FRESNO	KINGS BASIN
PERRY COLONY	50	50	FRESNO	KINGS BASIN
ROLINDA	20	20	FRESNO	KINGS BASIN
COMMUNITY 477	132	40	KERN	POSO CREEK
COMMUNITY 478	792	240	KERN	POSO CREEK
IDLEWILD	55	24	TULARE	SOUTHERN SIERRA
MCCLENNEY TRACT	10	10	TULARE	SOUTHERN SIERRA
MIRAMONTE	66	20	FRESNO	SOUTHERN SIERRA
POSEY	79	24	TULARE	SOUTHERN SIERRA
COMMUNITY 330	63	19	TULARE	TULE
COMMUNITY 332	59	18	TULARE	TULE
COMMUNITY 340	116	35	TULARE	TULE
COMMUNITY 342	36	11	TULARE	TULE
MULBERRY ISLAND	455	138	TULARE	TULE
PLANO	241	73	TULARE	TULE
TRACTS 24 - 41	393	119	TULARE	TULE
TRACTS 66 - 90 - 127 - 557	412	125	TULARE	TULE
TRICO OIL ACRES COLONIA	89	27	TULARE	TULE
FARM 1	50	15	FRESNO	WESTSIDE SJ
FARM 2	20	8	FRESNO	WESTSIDE SJ
FARM 3	20	8	FRESNO	WESTSIDE SJ
COMMUNITY 241	165	50	FRESNO	Outside of IRWM

Table 11-2. Summary of Water Quality Results from Private Wells

COMMUNITY NAME	Year	Number of Samples	Min Well Depth	Max Well Depth	Average Well Depth	Nitrate as NO3 (MCL 45 MG/L)		Nitrate as Nitrogen (MCL 10 MG/L)		Arsenic (MCL 10 UG/L)		Uranium (MCL 30 UG/L)		123-TCP (MCL 0.005 UG/L)		DBCP (MCL 0.20 UG/L)		Total Dissolved Solids (MCL 1000 MG/L)		Coliform Indicator	Ecoli
						Average	Maximum	Average	Maximum	Average	Maximum	Average	Maximum	Average	Maximum	Average	Maximum	Average	Maximum		
EASTON	1997	29	75	200	152	30.1	93.0														
	2012	56				48.9	120.0					32.5	93.0	0.039	0.1	0.23	0.93			Present	Present
LINDCOVE	2014	9						27.6	45.0			7.7	11.0	0.809	1.6			456.0	700.0	Present	Present
	2018	22	187	205	196			23.8	32.0				0.0	0.701	1.6			610.5	1152.0	Present	Present
OKIEVILLE	2013	10	194	400	318	10.3	18.0			2.9	6.6	6.6	12.0								
	2015	10	232	340	278	18.3	86.0			2.7	5.8	7.5	22.0					167.3	266.0	Present	
	2016	14	230	465	337			4.4	17.0	1.9	2.3	10.8	28.0					130.2	278.0		
DALEVILLE	2013	20	100	160	137	82.4	180.0					33.9	48.0							Present	
	2014	1				175.0	175.0													Present	
	2015	8				82.3	180.0					40.4	80.0							Present	
PERRY COLONY	2013	8				48.8	69.0					81.5	120.0								
	2015	6				40.7	56.0					69.2	110.0								
TOMBSTONE TERRITORY	2017	8						12.9	40.0	1.3	1.6	1.1	1.1	0.004	0.0	0.09	0.11			Present	
COMMUNITY 478 (Near Delano)	2013	8				40.9	69.0			4.0	7.1										

*The data summarized above includes results from water quality samples collected by Self-Help Enterprises from privately owned wells.

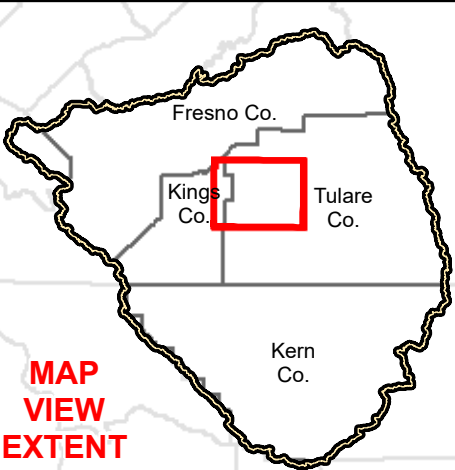


**Tulare Kern Funding Area
Disadvantaged Community
Needs Assessment**

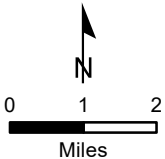
Kaweah River Basin
IRWMA
DAC and SDAC
Private Well Communities

FIGURE 11-1

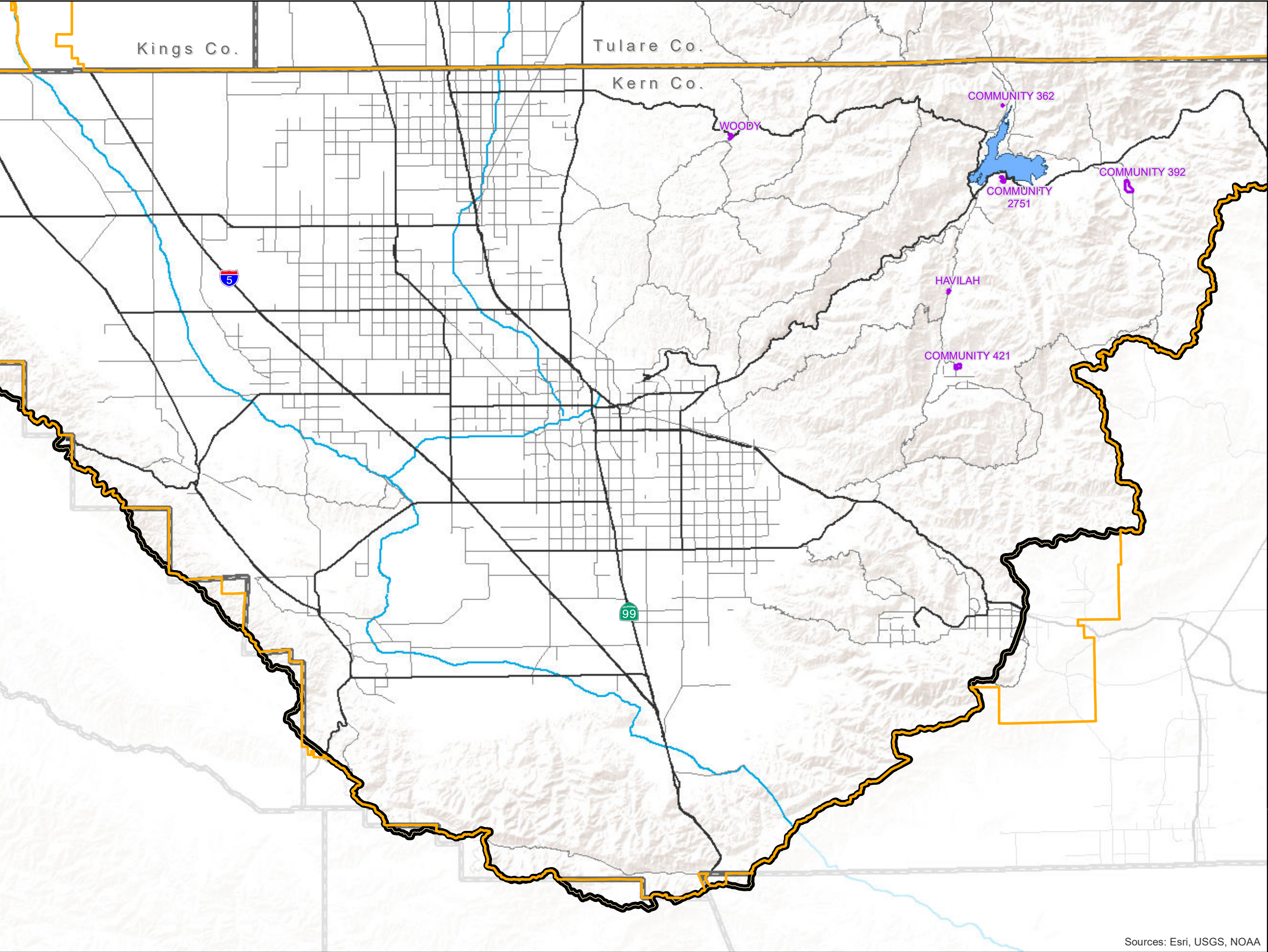
- Legend**
- Prop 1 Funding Area
 - Kaweah River Basin IRWMA
 - DAC and SDAC Communities
 - County
 - Major Road
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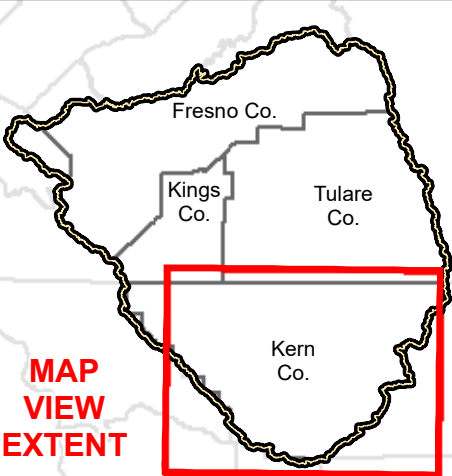
Sources: Esri, USGS, NOAA



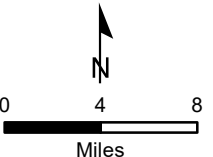
**Tulare Kern Funding Area
Disadvantaged Community
Needs Assessment**

Kern IRWMA
DAC and SDAC
Private Well Communities
FIGURE 11-2

- Legend**
- Prop 1 Funding Area
 - Kern IRWMA
 - DAC and SDAC Communities
 - County
 - Major Road
 - Highway / Interstate
 - Major Canal



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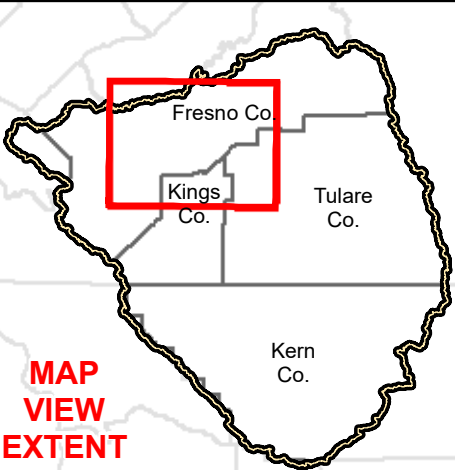
Sources: Esri, USGS, NOAA

Tulare Kern Funding Area
Disadvantaged Community
Needs Assessment

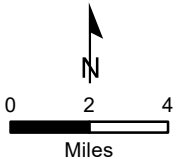
Kings Basin Water Authority

DAC and SDAC
Private Well Communities
FIGURE 11-3

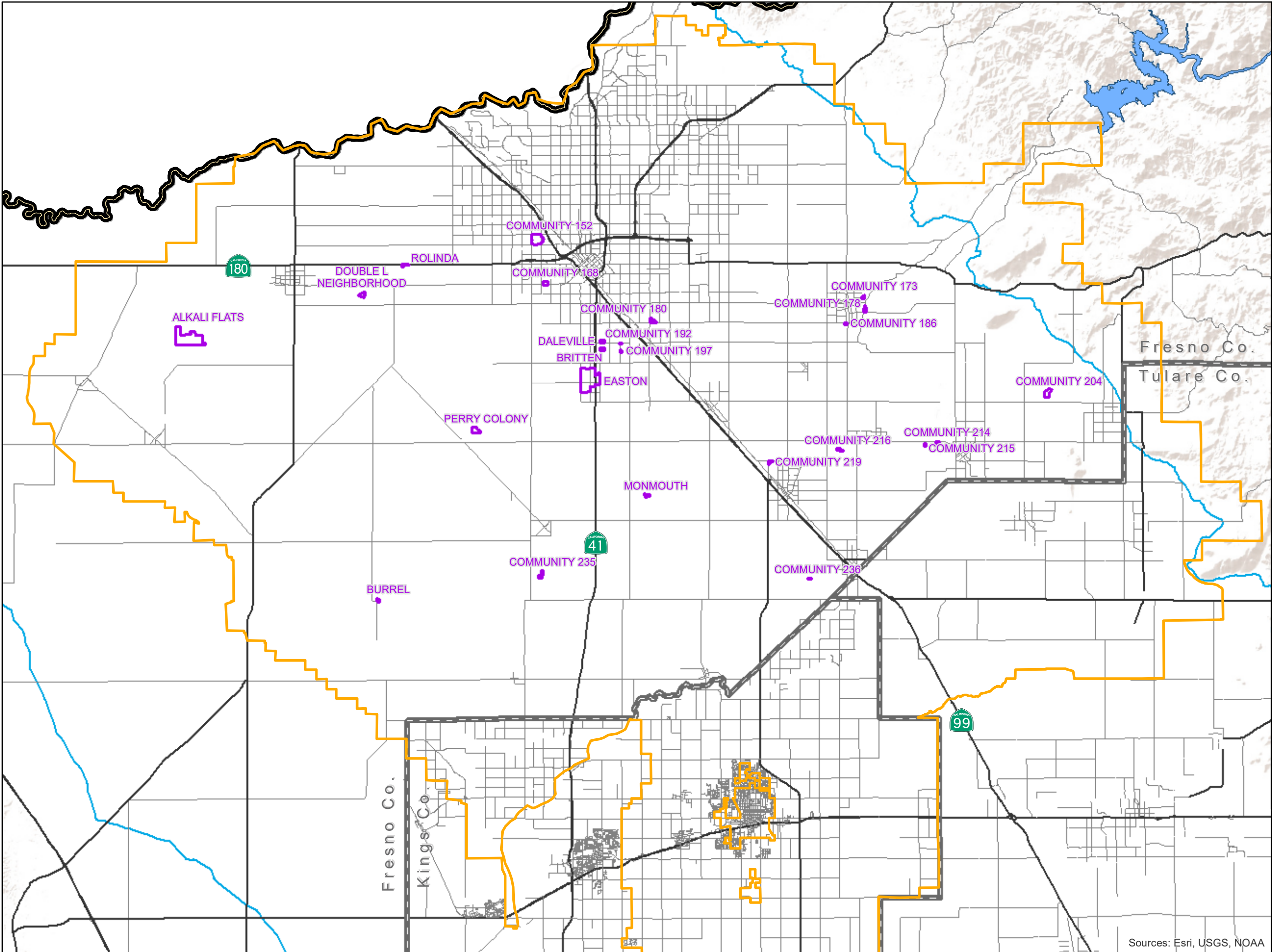
- Legend**
- Prop 1 Funding Area
 - Kings Basin Water Authority
 - DAC and SDAC Communities
 - County
 - Major Road
 - Highway / Interstate
 - Major Canal

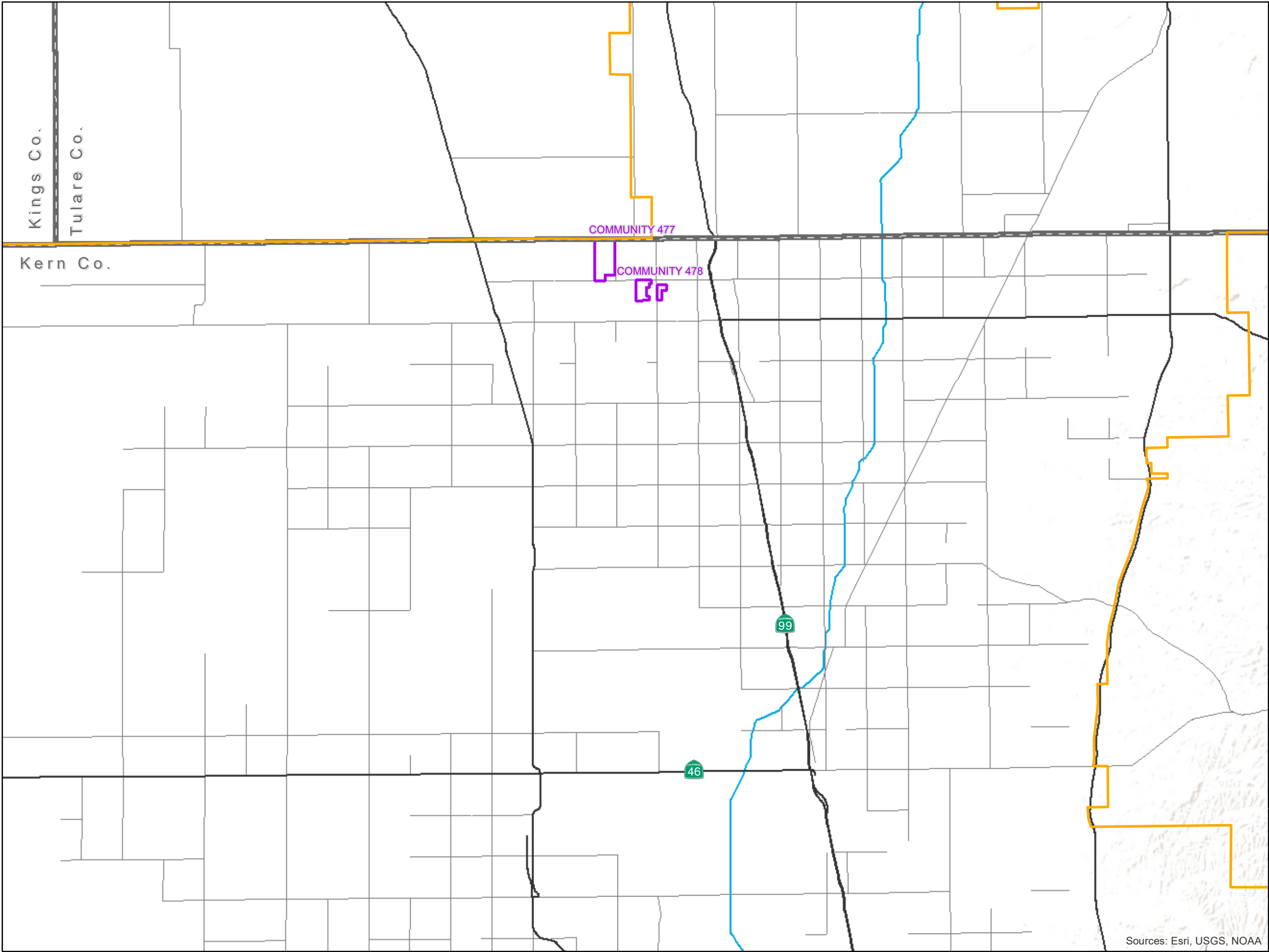


EST. 1968
PROVOST & PRITCHARD
CONSULTING GROUP
An Employee Owned Company



Sources: Esri, USGS, NOAA





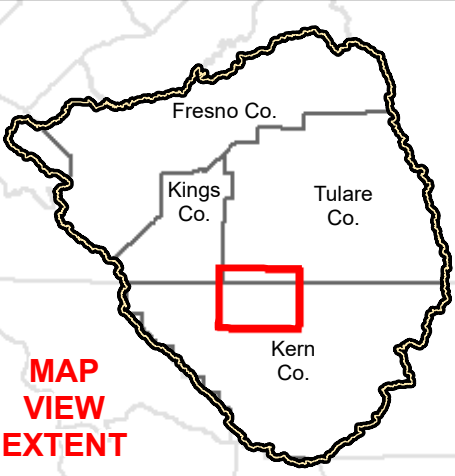
**Tulare Kern Funding Area
Disadvantaged Community
Needs Assessment**

Poso Creek IRWMA

DAC and SDAC
Private Well Communities

FIGURE 11-4

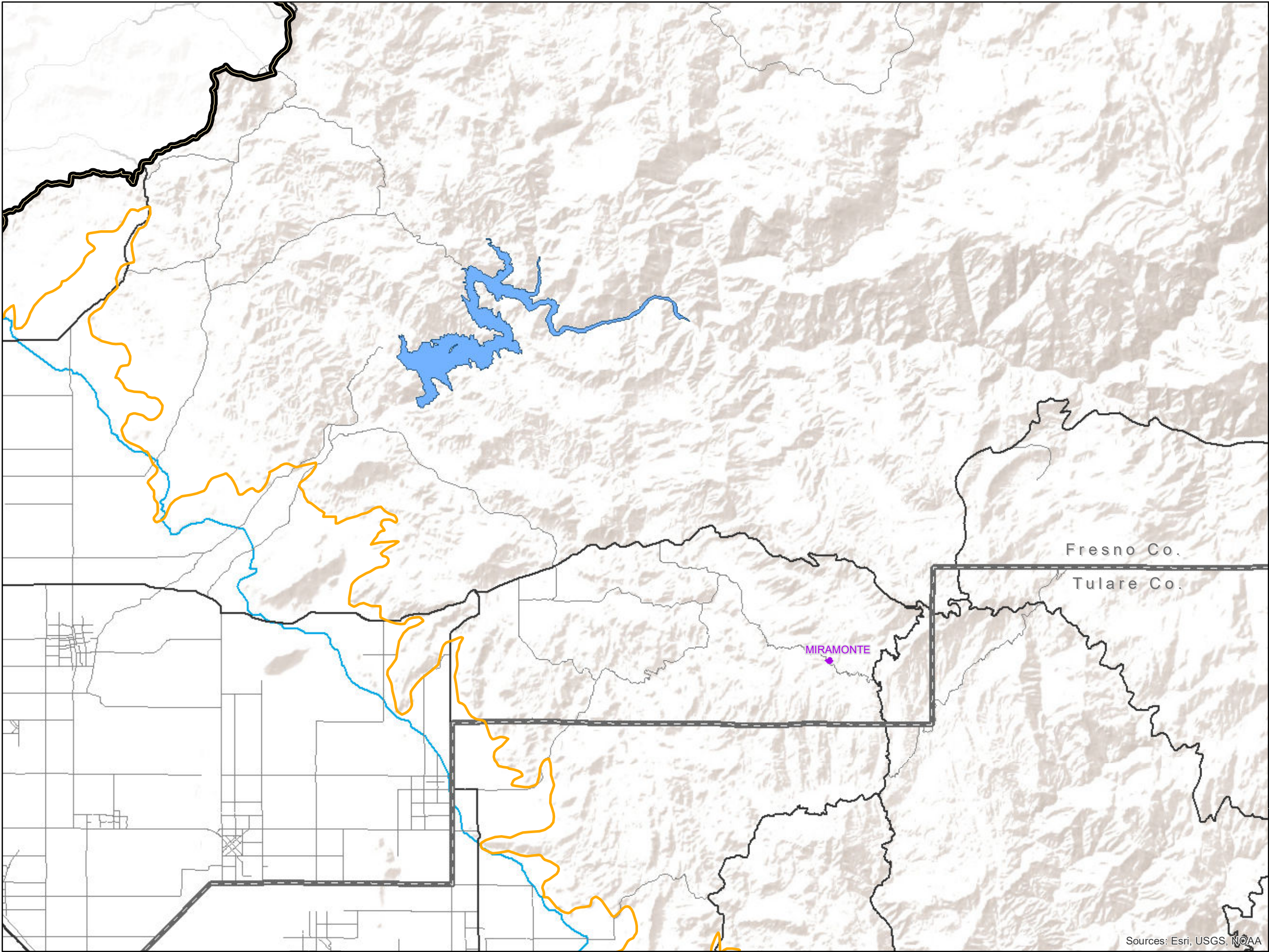
- Legend**
- Prop 1 Funding Area
 - Poso Creek IRWMA
 - DAC and SDAC Communities
 - County
 - Major Road
 - Highway / Interstate
 - Major Canal



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Sources: Esri, USGS, NOAA








**Tulare Kern Funding Area
Disadvantaged Community
Needs Assessment**

Southern Sierra IRWMA
(North)

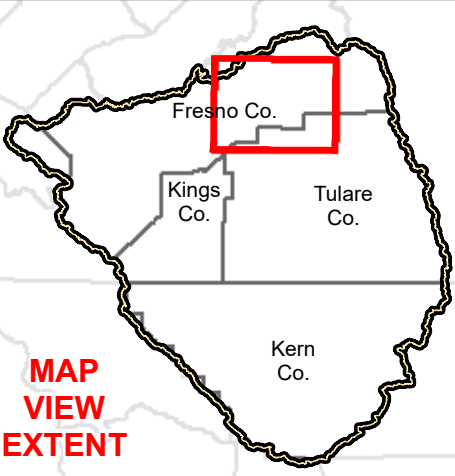
DAC and SDAC
Private Well Communities

FIGURE 11-5

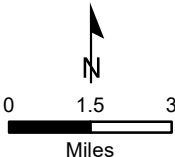
Legend

-  Prop 1 Funding Area
-  Southern Sierra IRWMA
-  DAC and SDAC Communities
-  County
-  Major Road
-  Highway / Interstate
-  Major Canal

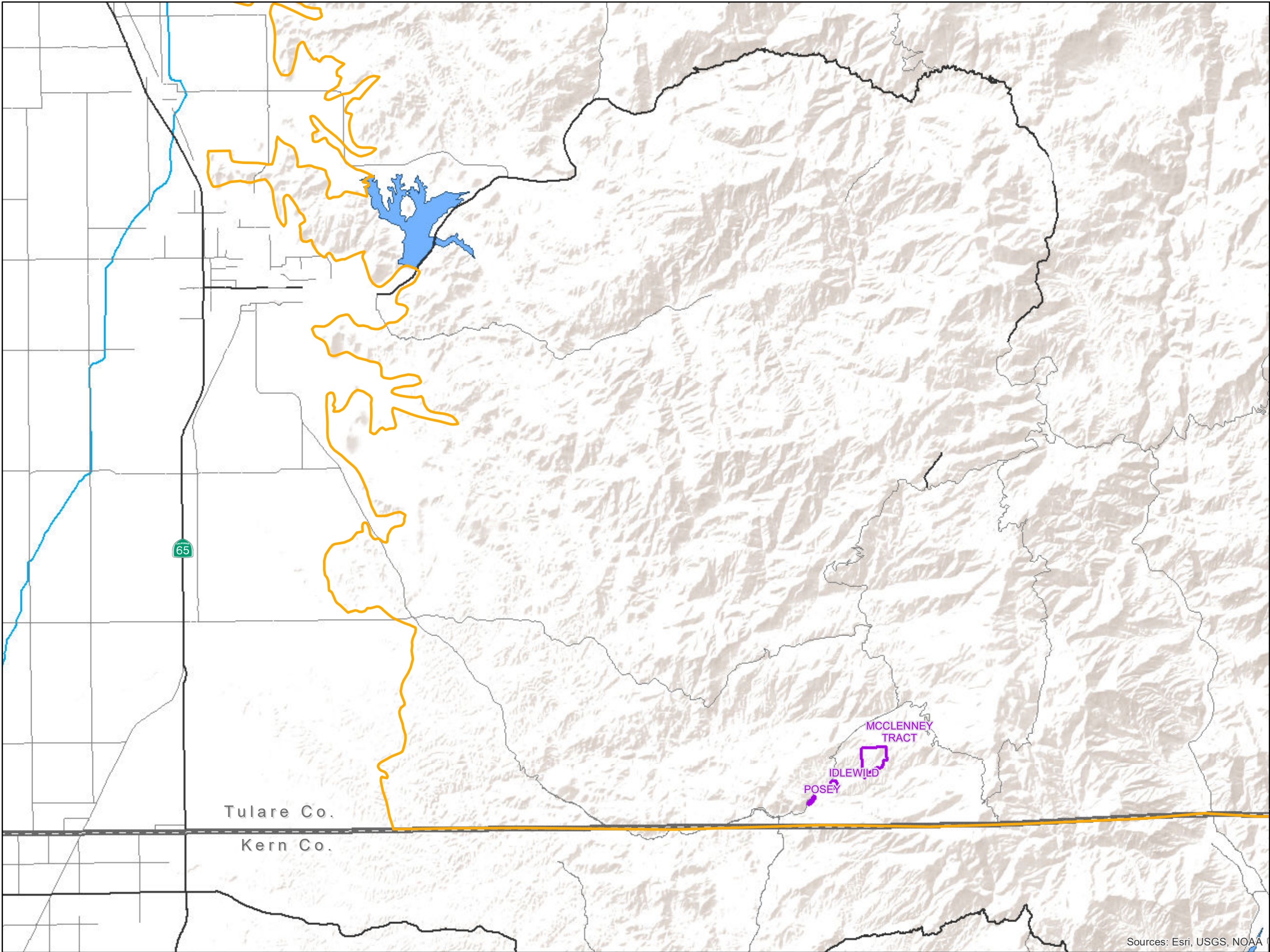
**No Communities That Have Private Wells In This IRWMA*



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Sources: Esri, USGS, NOAA



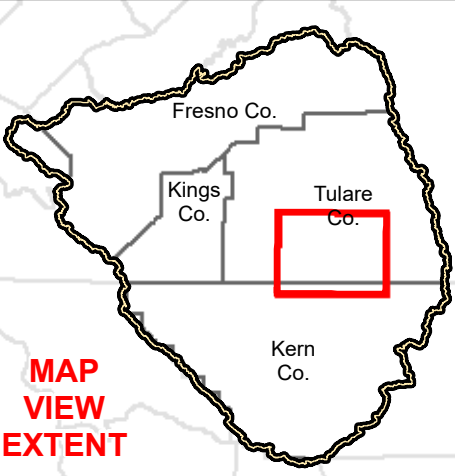
**Tulare Kern Funding Area
Disadvantaged Community
Needs Assessment**

Southern Sierra IRWMA
(South)

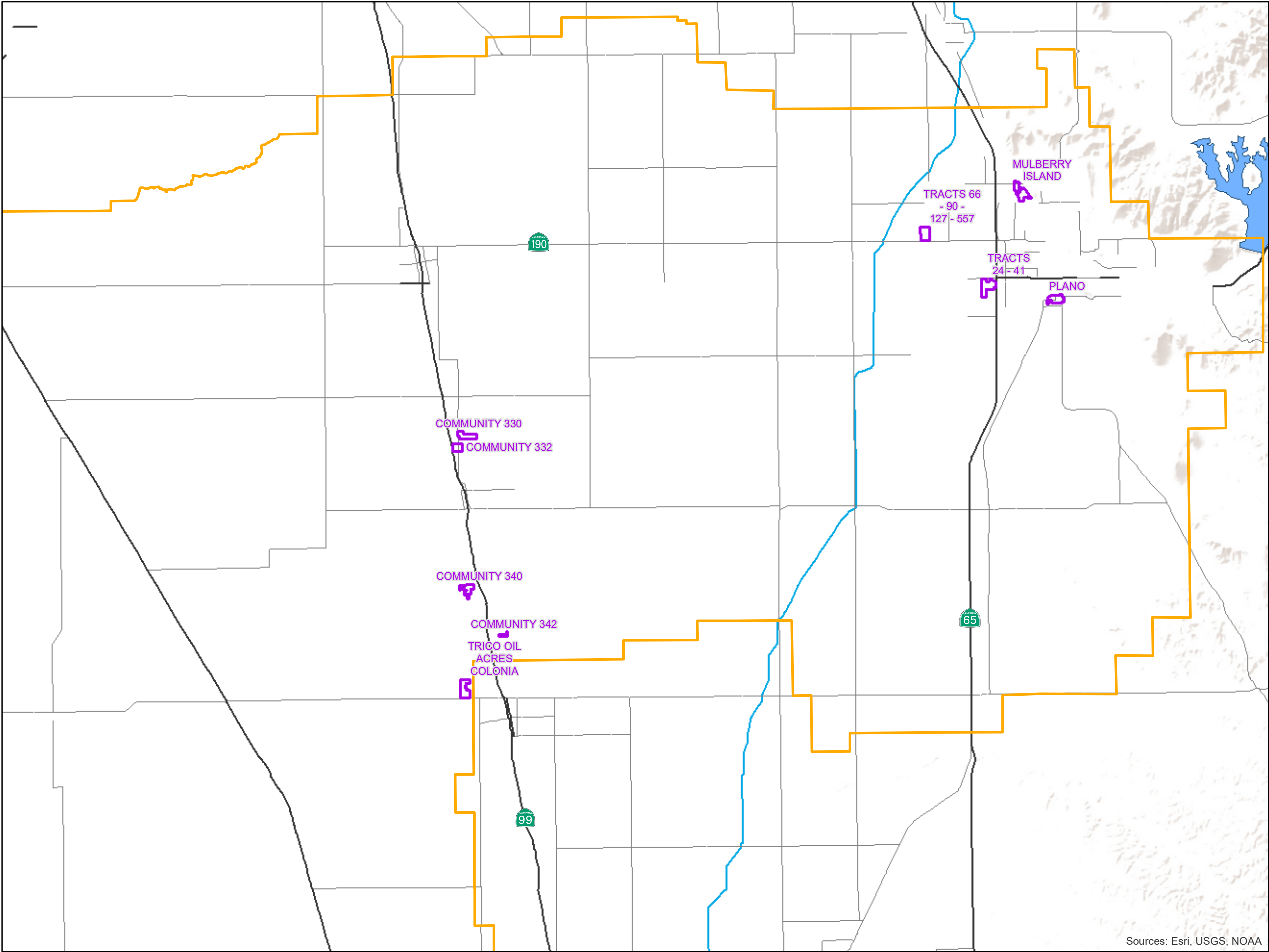
DAC and SDAC
Private Well Communities

FIGURE 11-6

- Legend**
- Prop 1 Funding Area
 - Southern Sierra IRWMA
 - DAC and SDAC Communities
 - County
 - Major Road
 - Highway / Interstate
 - Major Canal



Sources: Esri, USGS, NOAA

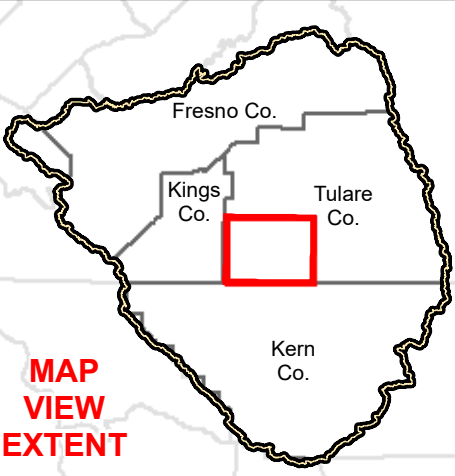


**Tulare Kern Funding Area
Disadvantaged Community
Needs Assessment**

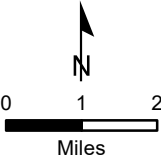
Tule River Basin
IRWMA
DAC and SDAC
Private Well Communities

FIGURE 11-7

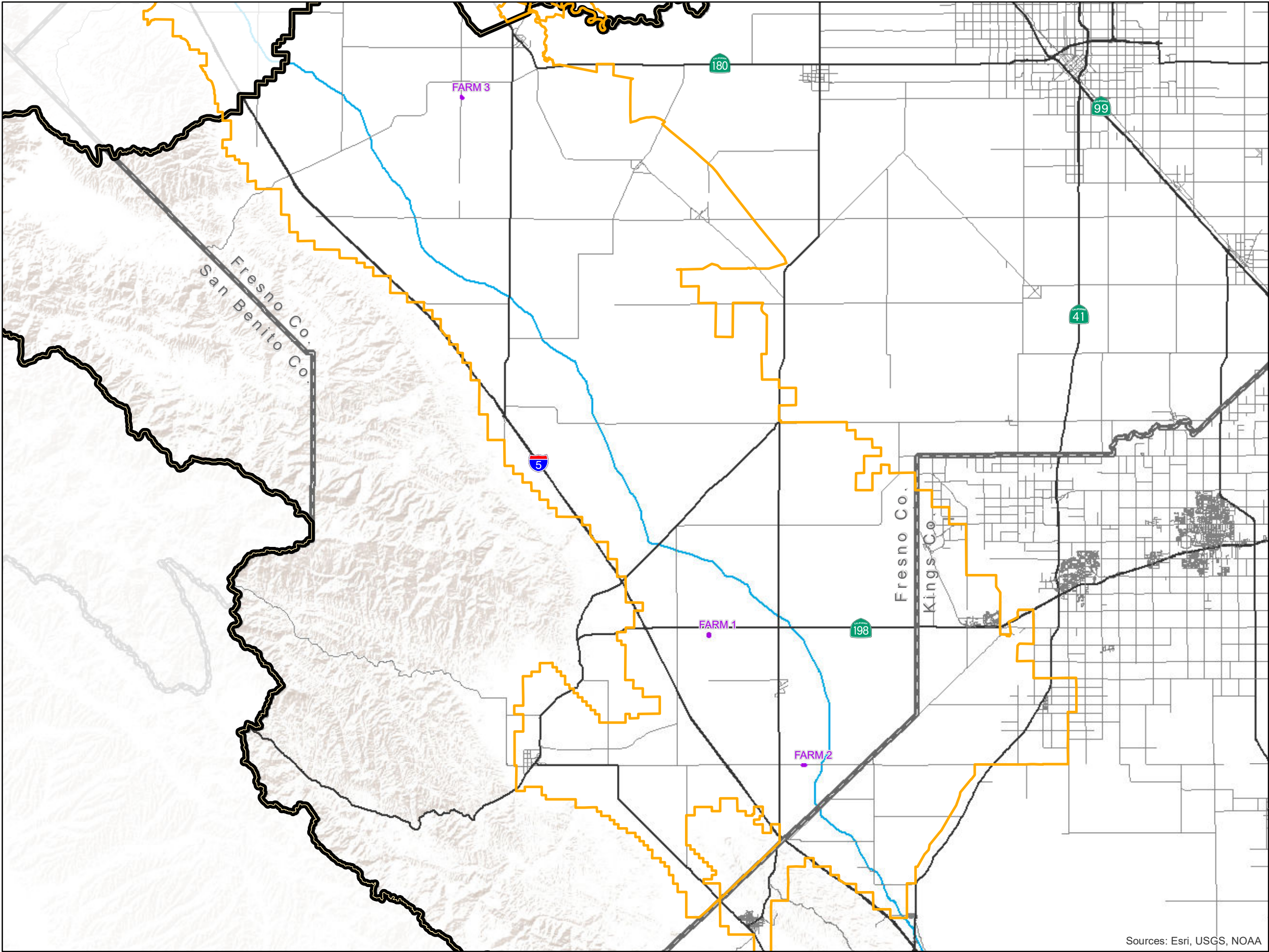
- Legend**
- Prop 1 Funding Area
 - Tule River Basin IRWMA
 - DAC and SDAC Communities
 - County
 - Major Road
 - Highway / Interstate
 - Major Canal



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PROVOST & PRITCHARD
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An Employee Owned Company



Sources: Esri, USGS, NOAA



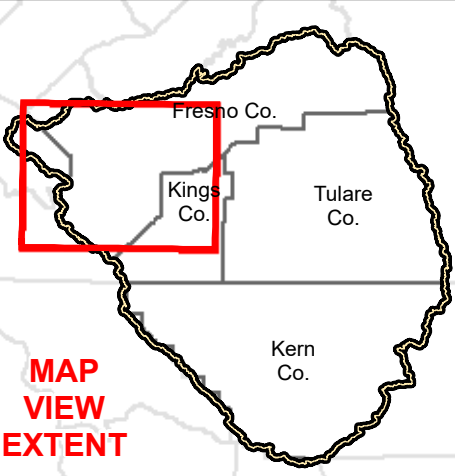
**Tulare Kern Funding Area
Disadvantaged Community
Needs Assessment**

Westside San Joaquin
IRWMA

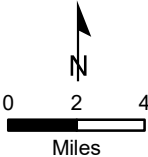
DAC and SDAC
Private Well Communities

FIGURE 11-8

- Legend**
- Prop 1 Funding Area
 - Westside San Joaquin IRWMA
 - DAC and SDAC Communities
 - County
 - Major Road
 - Highway / Interstate
 - Major Canal



**MAP
VIEW
EXTENT**



Sources: Esri, USGS, NOAA

Tulare Kern Funding Area
Disadvantaged Community
Needs Assessment

DAC and SDAC
Private Well Communities
Outside of IRWMA Boundaries

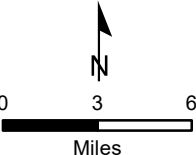
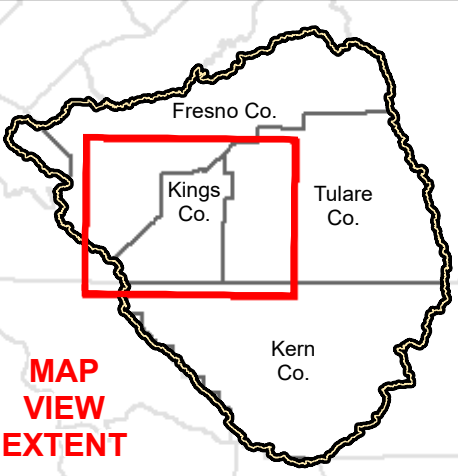
FIGURE 11-9

Legend

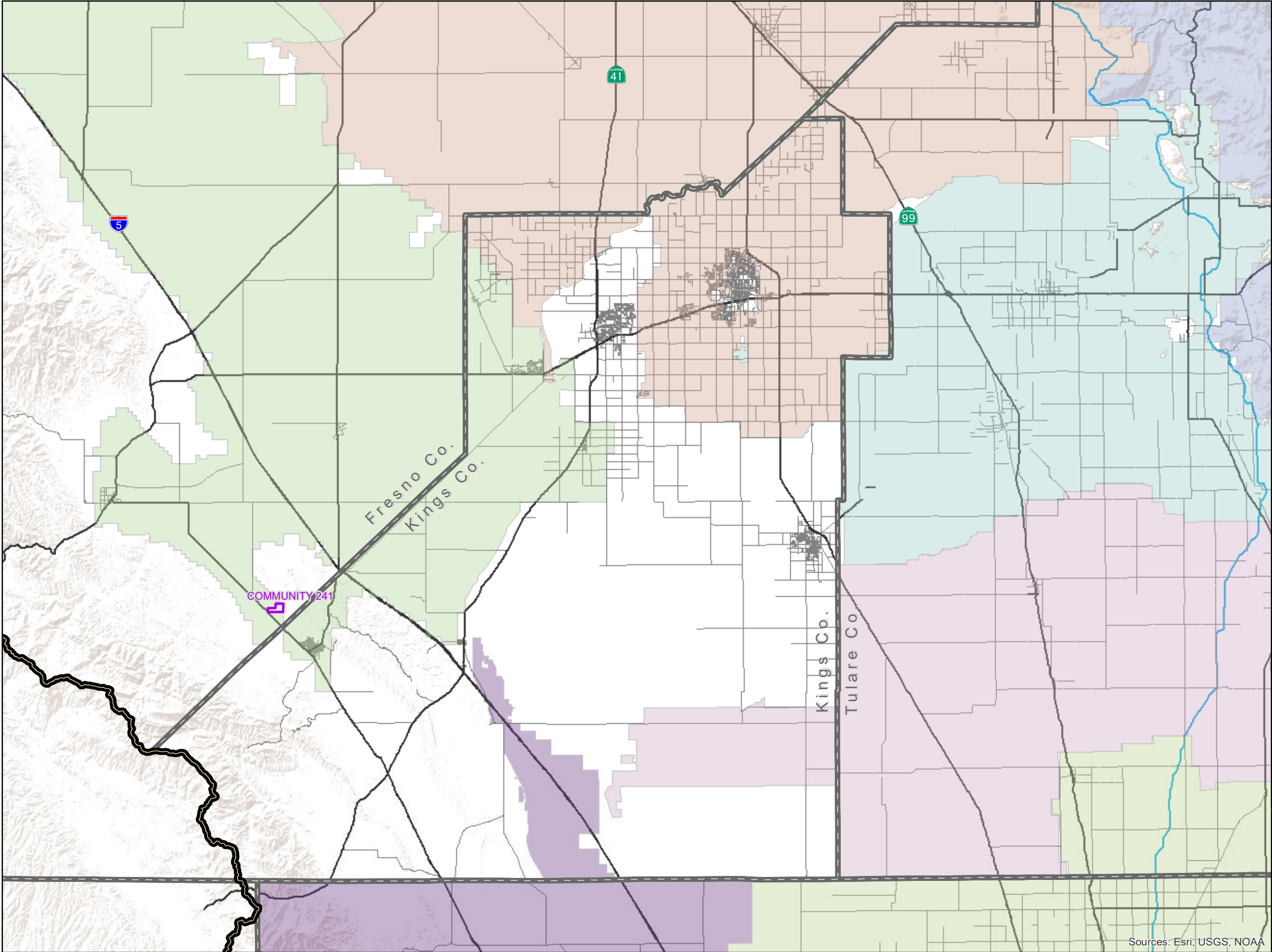
- Prop 1 Funding Area
- DAC and SDAC Communities
- County
- Major Road
- Highway / Interstate
- Major Canal

IRWMA

- Kaweah River Basin
- Kern County
- Kings Basin
- Poso Creek
- Southern Sierra
- Tule
- Westside - San Joaquin



Sources: Esri, USGS, NOAA



12 Septic Systems

Many rural landowners use private on-site septic systems for wastewater treatment and disposal. This includes rural, unincorporated communities, as well as residences on the outskirts of a sewered city of community. Many of these septic systems are old and failing.

A DAC that is not served by an existing wastewater treatment facility is assumed to be relying on septic systems for the purposes of this report. It is assumed that many communities relying on private wells in the TKFA also rely on septic systems.

The counties each have Local Agency Management Programs (LAMPs) for Onsite Wastewater Treatment Systems (OWTS), otherwise referred to as private septic systems. LAMPs are reviewed and approved by the RWQCB. LAMPs vary by county. The County of Kern has a comprehensive list of septic systems, while other counties did not provide specific information.

LAMPs review status is provided on the Central Valley Water Board website link below.
https://www.waterboards.ca.gov/centralvalley/water_issues/owts/lamp_reviews/

A map of Kern County systems, based on address points derived from the Kern County LAMP data, is provided as Figure 12-1.

12.1 Density Evaluation

The web mapping tool provides well density information based on DWR well completion reports. Comprehensive septic system information is not readily available. However, it is assumed that many of the areas that are served by private domestic wells and do not have a local WWTF must be served by septic systems.

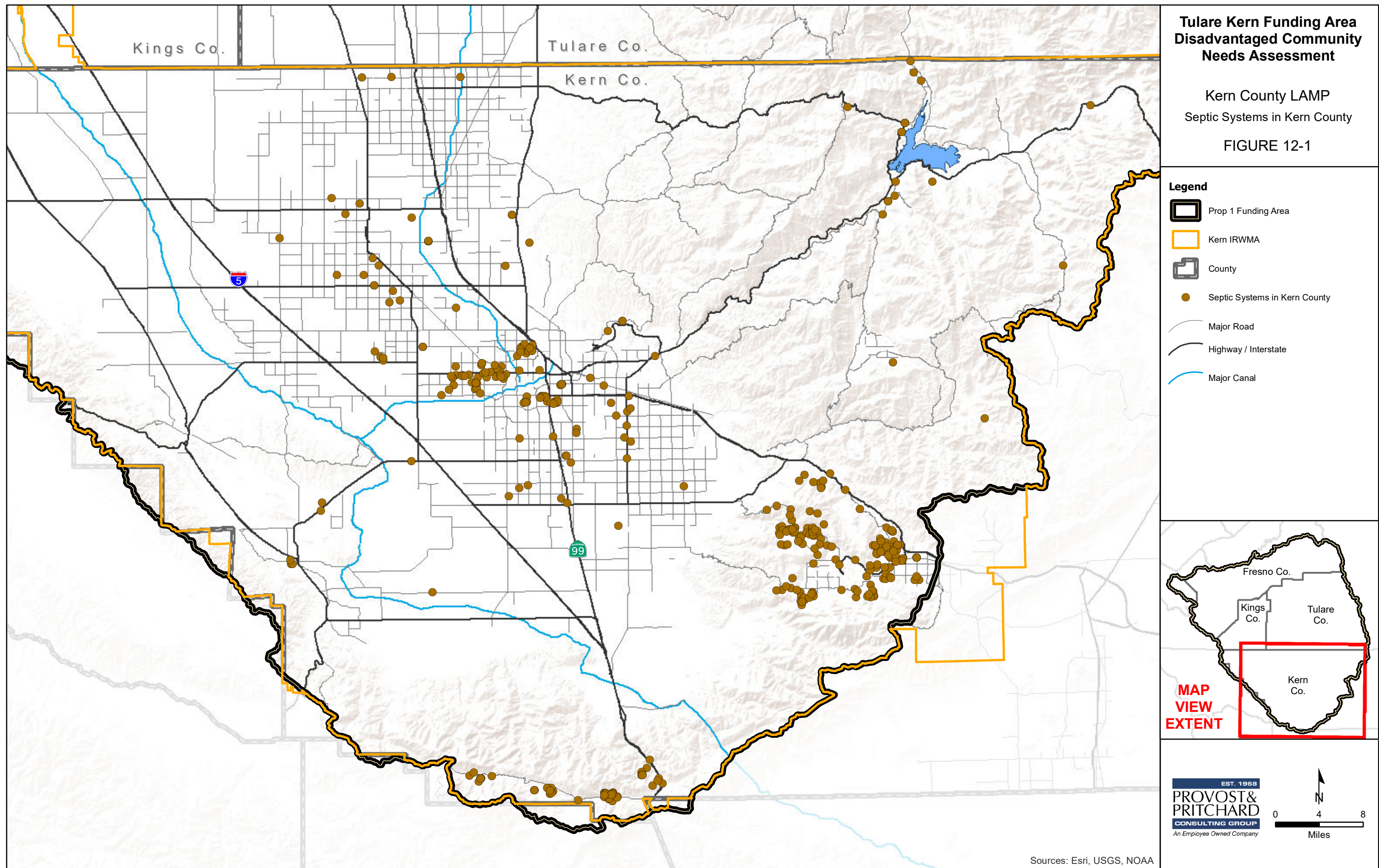
Figure 12-2 presents the DWR well completion report density, known private well communities, and WWTF locations. Based on these known factors, areas have been identified on the same figure that are assumed to be served by individual septic systems.

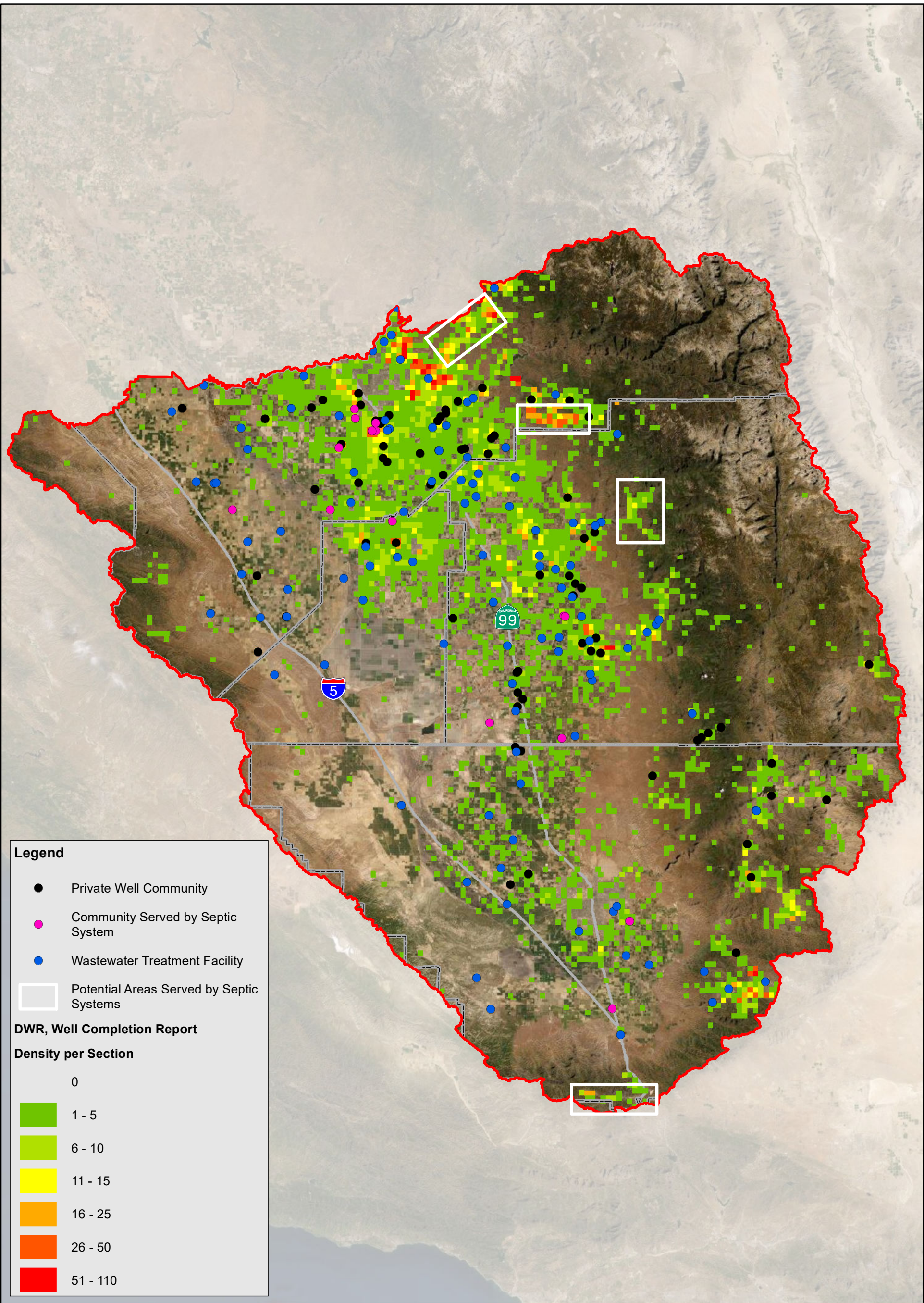
Where there is a high density of wells based on DWR well completion reports, there is likely to be a similarly high density of septic systems.

12.2 Survey

The DAC Engagement and Education Program will also be collecting information on communities relying on individual septic systems. This task is not yet completed.

Through the DACEEP, Self-Help Enterprises will be conducting septic system surveys in Allensworth, Five Points (Fresno County Service Area #49), Hardwick, and the Kern County communities of Athal, Doney Street, and Choate Street. A report on the results of the surveys, including a summary of findings will be provided through the DACEEP.





13 Wastewater Treatment Facilities

13.1 Wastewater Treatment Facilities

In addition to the source water issues faced by DACs in the Funding Area, 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 (WDRs).

Approximately 106 Wastewater Treatment Facilities (WWTFs) have active Waste Discharge Requirements (WDRs) or National Pollutant Discharge Elimination System (NPDES) permits in the TKFA. This includes both DAC and non-DAC communities, cities, and county service areas. Of the active WWTFs, approximately 58 have had violations, and approximately 29 have had enforcement actions in the past five years. A brief description of the violations is provided in Table 13-1. Violations may include the following:

- *Category 1 Pollutant (Effluent Violation for Group 1 Pollutant);*
- *Category 2 Pollutant (CAT2);*
- *Other Effluent Violation (OEV);*
- *Chronic Toxicity (CTOX);*
- *Order Conditions;*
- *Late Report (LREP);*
- *Deficient Monitoring (DMON); or*
- *Deficient Reporting.*

Category 1 pollutants include Group 1 pollutants such as biochemical oxygen demand (BOD), total suspended solids (TSS), and nitrate. A single entry is listed for each violation. For example, for a daily limit, if it is violated three days within the reporting period, three violations are recorded. If there is a monitoring result that exceeds a daily and a weekly limit, two violations would be recorded.

Category 2 pollutants include chlorine, copper, cyanide. Similar to Category 1 pollutants, a single entry is recorded for each violation. Other effluent violations include any constituent-specific effluent limitation not included in Category 1 or Category 2.

Order conditions include violations of prohibitions, provisions, and maintenance-type requirements (e.g., pond freeboard and dissolved oxygen (DO)) contained in the WDRs. Multiple violations of the same permit condition occurring within the same reporting period may be grouped together. For example, if there is a requirement that pond freeboard must be greater than 2 feet at all times and there were three days during which the freeboard was only 1 foot, only one violation will be recorded.

Late reporting violations are used if no report is received, or if the report is received after the due date. Deficient monitoring includes monitoring that is missing or incorrect in some way, such as sample/analysis method, location, quality assurance and quality control criteria not met, or lab is not Environmental Laboratory Accreditation Program certified. Deficient reporting includes incomplete report (missing signature, certification statement, laboratory identification, etc.), or failure to notify the RWQCB regarding a violation in the self-monitoring report.

13.2 CV-SALTS

On May 31, 2018, the Central Valley Regional Water Quality Control Board 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 State Water Resources Control Board approved the Central Valley Salt and Nitrate Control Program on October 16, 2019.

The Salt and Nitrate Management Program (SNMP), developed through the CV-SALTS initiative, proposes the establishment of an overarching framework for managing salt and nitrate in the Central Valley. The SNMP goals are prioritized to recognize the need to focus limited resources on the most important water quality concerns. The goals are as follows:

- Ensure a safe drinking water supply;
- Achieve balanced salt and nitrate loadings; and
- Implement long-term and managed aquifer restoration programs where reasonable, feasible, and practicable.

As a result, dischargers with permits regulating salts will be required to choose between either strict permit limits or contributing to a basin-wide study, called the Prioritization and Optimization Study, which is developing a strategic long-term approach to salt management in the Central Valley.

Dischargers with permits regulating nitrates that are located in a Priority 1 groundwater basin (Chowchilla, Kaweah, Kings, Modesto, Tule, Turlock) will need to choose between individual nitrate requirements or an option to work with neighboring permit holders in a “management zone” to reduce nitrates while providing replacement drinking water to local residents whose wells are impacted by nitrates.

The Central Valley Water Board planned to begin mailing out Notices to Comply with the new regulations starting in May 2020.

Section Thirteen: Wastewater Treatment Facilities
Tulare Kern DACIP Needs Assessment

Table 13-1. Wastewater Treatment Facilities

Facility Name	County	IRWM	WDR Order No.	Design Flow (mgd)	Enforcement Actions within 5 Years (#)	Violations within 5 years (#)	Violation Description ¹
Farmersville WWTF	TULARE	KAWEAH	86-152	1.25	1	154	BOD, Pond DO, Effluent Sample Location, Failure to Maintain Log of Pond Observations, DMON
Ivanhoe WWTF	TULARE	KAWEAH	98-090	0.56	0	0	No Violations
Lindsay WWTF	TULARE	KAWEAH	98-195	1.24	0	0	No Violations
Sierra Shadows WWTF	TULARE	KAWEAH	97-010-DWQ	0.009	0	0	No Violations
Strathmore WWTF	TULARE	KAWEAH	R5-2016-0061	0.4	0	5	LREP
Tulare WWTF	TULARE	KAWEAH	R5-2013-0019	16	0	83	BOD, EC, Nitrogen, Sodium, TDS, TSS, DMON
Linnell Farm Labor Center	TULARE	KAWEAH	82-007	0.13	0	0	No Violations
Lake Kaweah/Terminus Dam	TULARE	KAWEAH	97-010-DWQ	0.02	0	0	No Violations
Visalia WWTF	TULARE	KAWEAH	R5-2018-0046	18	1	7	Total Nitrogen, Undisinfected Wastewater Used for Direct Reuse, Deficient Reporting, LREP, OEV
Woodlake WWTF	TULARE	KAWEAH	R5-2009-0103	1.38	0	0	No Violations
Arvin WWTF	KERN	KERN	00-093	1.45	0	0	No Violations
Bakersfield WWTP #2	KERN	KERN	R5-2009-0122	25	0	14	BOD, TSS, Sanitary Sewer Overflow
Bakersfield WWTP #3	KERN	KERN	R5-2009-0087	16	0	6	Nitrogen, OEV
Bear Valley CSD WWTP	KERN	KERN	R5-2015-0011	0.25	1	5	Deficient Reporting, DMON, OEV
Buttonwillow WWTF	KERN	KERN	R5-2009-0123	0.2	1	100	pH, BOD, Total Nitrogen, TSS, DMON, LREP

¹ Violations may include Category 1 Pollutant (Effluent Violation for Group 1 Pollutant); Late Report (LREP); Deficient Monitoring (DMON); Deficient Reporting; Order Conditions; Other Effluent Violation (OEV); Category 2 Pollutant (CAT2); or Chronic Toxicity (CTOX).

Section Thirteen: Wastewater Treatment Facilities
Tulare Kern DACIP Needs Assessment

Facility Name	County	IRWM	WDR Order No.	Design Flow (mgd)	Enforcement Actions within 5 Years (#)	Violations within 5 years (#)	Violation Description ¹
Golden Hills WWTF	KERN	KERN	81-122	0.046	1	39	EC, DMON, OEV
Kern County CSA 39.8-Reeder Tract	KERN	KERN	88-096	0.04	0	0	No Violations
Kern Sanitation Authority WWTF	KERN	KERN	91-155	7	0	0	No Violations
Lamont WWTF	KERN	KERN	R5-2012-0043	2	0	0	No Violations
Lake Isabella WWTF	KERN	KERN	84-149	0.049	0	0	No Violations
Lost Hills WWTF	KERN	KERN	87-113	0.2	0	44	DO, LREP
Maricopa Wastewater Disposal Facility	KERN	KERN	00-153	0.2	0	37	Deficient Reporting, LREP
Stallion Springs WWTF	KERN	KERN	R5-2014-0127	0.1	3	66	Ammonia, no available O&M Manual, no available Contingency Plan, no available Quality Assurance-Quality Control Program Manual, Expired Calibration for pH and Chlorine meters, DMON, Deficient Reporting, LREP, OEV
Stoco WWTF	KERN	KERN	R5-2007-0153	0.05	0	0	No Violations
Taft WWTF	KERN	KERN	5-00-080 (N15)	1.5	0	3	BOD, DO, EC
Tehachapi WWTF	KERN	KERN	92-047	0.85	0	0	No Violations
Tejon Headquarters WWTF	KERN	KERN	97-010-DWQ	0.02	0	0	No Violations
Armona CSD WWTF	KINGS	KINGS	92-017	0.4	0	0	No Violations
Biola WWTF	FRESNO	KINGS	96-288	0.2	0	0	No Violations
Caruthers WWTF	FRESNO	KINGS	R5-2014-0137	0.37	0	0	No Violations
Clovis WWTF	FRESNO	KINGS	R5-2014-0005	2.8	3	89	Ammonia, Turbidity, UV Disinfection Shutdown from HVAC Failure, CAT2, CTOX, DMON, Deficient Reporting, OEV, CAT2. CTOX

Section Thirteen: Wastewater Treatment Facilities
Tulare Kern DACIP Needs Assessment

Facility Name	County	IRWM	WDR Order No.	Design Flow (mgd)	Enforcement Actions within 5 Years (#)	Violations within 5 years (#)	Violation Description ¹
North Fresno WWRF	FRESNO	KINGS	R5-2014-0162	0.71	0	8	DMON, OEV
Cutler-Orosi WWTF	TULARE	KINGS	R5-2018-0011	1.5	3	45	TSS, Dried Sludge Stored in Unlined Surfaces, No Quality Assurance-Quality Control Program, Effluent Flow Meters Failing, Influent Flow Meter Calibration not Available, DMON, Deficient Reporting, LREP
Del Rey WWTF	FRESNO	KINGS	96-284	0.2	1	83	pH, Freeboard, DO, Violation of Sludge Disposal, Not Maintaining Written Sampling Program, Not Maintaining Calibration Records, Not Maintaining Pond Observation and Sludge Logs
Dinuba WWTF	TULARE	KINGS	95-200	3	0	21	DMON, LREP, OEV
Fresno Regional WWTF	FRESNO	KINGS	5-01-254	88	0	46	EC, Groundwater Violations (Total Coliform, EC, TDS, Ammonia, Chloride, Manganese, Arsenic)
Fresno County #47-Quail Lake WWTF	FRESNO	KINGS	96-120	0.16	0	94	BOD, EC, Flow, Total Coliform, TSS, Deficient Reporting, LREP, OEV
Fresno County #44-D Monte Verde Estates WWTF	FRESNO	KINGS	92-203	0.0325	0	401	BOD, EC, Flow, Total Coliform, Setttable Solids, Deficient Reporting, LREP, OEV
Fresno County Juvenile Justice WWTF	FRESNO	KINGS	R5-2007-0150	0.12	0	8	BOD, TSS
Kerman WWTF	FRESNO	KINGS	R5-2007-0115	1.2	1	3	Spill of Effluent, Failure to Maintaining WWTF in Good Working Order and Missing Staff Gauge for Freeboard Monitoring, Failure to have Written Spill Prevention Plans
Kings River UESD OWTS	TULARE	KINGS	97-010-DWQ	0.010182	0	0	No Violations

Section Thirteen: Wastewater Treatment Facilities
Tulare Kern DACIP Needs Assessment

Facility Name	County	IRWM	WDR Order No.	Design Flow (mgd)	Enforcement Actions within 5 Years (#)	Violations within 5 years (#)	Violation Description ¹
SKF CSD WWTF	FRESNO	KINGS	5-01-255	8	1	2	Not Maintaining Headwork Control System and Alarm System in Good Working Order, Failure to Have Adequate Safeguards for Failed Power at Headworks
Laton WWTF	FRESNO	KINGS	R5-2016-0079	0.2	0	0	No Violations
London WWTF	TULARE	KINGS	R5-2017-0109	0.3	0	0	No Violations
Malaga CWD WWTF	FRESNO	KINGS	R5-2014-0145	1.2	4	31	Settleable Solids, Not Operating and Reporting on Disposal Ponds in Accordance with SOP, Failure to Produce Calibration Records for Flow Meter, DMON, Deficient Reporting, LREP, OEV
Shady Lakes MHP	FRESNO	KINGS	75-079	0.017	3	42	BOD, Settleable Solids, Nuisance Conditions, Failure to Prevent Public Access to Ponds, Deficient Reporting, DMON, LREP
Orange Cove WWTF	FRESNO	KINGS	R5-2004-0008	1	1	47	pH, Failure to Maintain Sampling Program, Storage of Biosolids on Non-Temporary Basis
Parlier WWTF	FRESNO	KINGS	95-103	2	0	0	No Violations
Reedley WWTF	FRESNO	KINGS	R5-2010-0120	5	0	0	No Violations
Riverdale WWTF	FRESNO	KINGS	R5-2018-0028	0.325	0	39	BOD, DO, EC, DMON

Section Thirteen: Wastewater Treatment Facilities
Tulare Kern DACIP Needs Assessment

Facility Name	County	IRWM	WDR Order No.	Design Flow (mgd)	Enforcement Actions within 5 Years (#)	Violations within 5 years (#)	Violation Description ¹
Riverbend Mobile Home Park	FRESNO	KINGS	90-098	0.02	5	34	Bypass of Untreated/Partially Treated Waste, Failure to Maintain Lift Stations, Failure for having Electrical Safeguards for Power Loss, Failure to Maintain WWTF, Failure to Manage Disposal Field for Breeding of Mosquitos, Failure to Preclude Public Contact with Wastewater at Disposal Field, Unauthorized Discharge, Deficient Reporting, LREP
San Joaquin WWTF	FRESNO	KINGS	R5-2007-0100	0.5	0	0	No Violations
Sanger WWTF	FRESNO	KINGS	R5-2014-0004	2.9	0	0	No Violations
Sherwood MHP WWTF	FRESNO	KINGS	94-223	0.015	0	0	No Violations
Tranquility WWTF	FRESNO	KINGS	80-081	0.12	1	66	BOD, DO Sampling Violation, EC, Facilities not in Good Working Order, Deficient Reporting
Sequoia Field WWTF	TULARE	KINGS	98-166	0.081	0	0	No Violations
Delft Colony WWTF	TULARE	KINGS	88-097	0.0572	0	0	No Violations
Traver WWTF	TULARE	KINGS	88-098	0.088	0	0	No Violations
Woodward Bluffs MHP WWTF	FRESNO	KINGS	96-285	0.04	0	0	No Violations
Delano WWTF	KERN	POSO CREEK	R5-2017-0052	7.2	0	10	Pond DO, DMON, OEV
Earlimart WWTF	TULARE	POSO CREEK	98-140	0.6	1	7	BOD, Pond DO
North Shafter Farm Labor Camp	KERN	POSO CREEK	00-049	0.028	0	0	No Violations
McFarland WWTF	KERN	POSO CREEK	R5-2008-0072	1.55	0	7	BOD, TSS, LREP
Shafter - North of River WWTF	KERN	POSO CREEK	2004-0012-DWQ	0	0	21	BOD, TSS, Groundwater Nitrate, LREP

Section Thirteen: Wastewater Treatment Facilities
Tulare Kern DACIP Needs Assessment

Facility Name	County	IRWM	WDR Order No.	Design Flow (mgd)	Enforcement Actions within 5 Years (#)	Violations within 5 years (#)	Violation Description ¹
Richgrove WWTF	TULARE	POSO CREEK	83-088	0.22	0	0	No Violations
Wasco WWTF	KERN	POSO CREEK	R5-2002-0198	1.95	0	0	No Violations
California Hot Springs Water Co WWTF	TULARE	SOUTHERN SIERRA	97-010-DWQ	0.015	2	14	DMON, LREP
Fresno County #40-Shaver Springs WWTF	FRESNO	SOUTHERN SIERRA	97-010-DWQ	0.015	1	43	Overflow of Waste, Failure to Maintain Freeboard, Failure to Maintain Copy of Order, MRP, and NOA, Failure to perform Composite Sampling, DMON, Deficient Reporting
Hartland Christian OWTS	TULARE	SOUTHERN SIERRA	97-010-DWQ	0.026	0	0	No Violations
Kings Canyon MHP	FRESNO	SOUTHERN SIERRA	99-039	0.034	0	0	No Violations
Lemon Cove WWTF	TULARE	SOUTHERN SIERRA	94-348	0.02	1	23	Pond DO, Excessive Weeds, Failure to have Level Marker, DMON, LREP
Sequoia Dawn Apartments	TULARE	SOUTHERN SIERRA	97-010-DWQ	0.045	3	16	Overflow of Waste from Manhole, Failure to Maintain Disposal System to Prevent Surfacing of Sewage
River Island East WWTF	TULARE	SOUTHERN SIERRA	91-111	0.0565	0	3	LREP
Springville WWTF	TULARE	SOUTHERN SIERRA	96-195	0.06	1	91	pH, Total Coliform, DMON, LREP
Deer Creek RV Park WWTF	TULARE	TULE	99-107	0.0078	0	0	No Violations
Lakeside Trailer Park	TULARE	TULE	99-106	0.017	0	0	No Violations
Pixley WWTF	TULARE	TULE	R5-2007-0123	0.2	1	2	LREP
Poplar WWTF	TULARE	TULE	98-214	0.34	0	0	No Violations
Porterville WWTF	TULARE	TULE	R5-2008-0034	8	1	34	TSS, Failure to Prevent Runoff at Reclamation Area, Failure to Maintain Facilities in Good Working Order

Section Thirteen: Wastewater Treatment Facilities
Tulare Kern DACIP Needs Assessment

Facility Name	County	IRWM	WDR Order No.	Design Flow (mgd)	Enforcement Actions within 5 Years (#)	Violations within 5 years (#)	Violation Description ¹
Terra Bella WWTF	TULARE	TULE	95-029	0.1	0	60	BOD, TDS, TSS, pH, Freeboard, DMON, OEV
Tipton WWTF	TULARE	TULE	85-170	0.4	1	1	Failure to Maintain Facilities in Good Working Order
Tooleville WWTF	TULARE	TULE	88-139	0.035	0	0	No Violations
Woodville Farm Labor Center	TULARE	TULE	82-006	0.12	0	0	No Violations
Woodville WWTF	TULARE	TULE	86-108	0.33	0	0	No Violations
Avenal WWTF	KINGS	WESTSIDE SAN JOAQUIN	00-231	1	0	12	BOD, EC, TSS, DMON
Coit Ginning Company WWTF	FRESNO	WESTSIDE SAN JOAQUIN	90-263	0.1	0	0	No Violations
Family Ranch, Inc.	FRESNO	WESTSIDE SAN JOAQUIN	2014-0153-DWQ	0.00216	0	0	No Violations
Fresno County #30-El Porvenir WWTF	FRESNO	WESTSIDE SAN JOAQUIN	90-262	0.045	1	46	EC, pH, Failure to Comply with MRP, Failure to Maintain Facilities in Good Working Order
Fresno County #32-Cantua Creek WWTF	FRESNO	WESTSIDE SAN JOAQUIN	82-062	0.061	0	12	EC
Harris Farms Farm Labor Housing Facility	FRESNO	WESTSIDE SAN JOAQUIN	82-016	0.02	0	0	No Violations
I-5 & Dorris Avenue Rest Stop WWTF	FRESNO	WESTSIDE SAN JOAQUIN	85-159	0.1	1	21	BOD, DO, DMON
Huron WWTF	FRESNO	WESTSIDE SAN JOAQUIN	R5-2014-0163	1	0	0	No Violations
Farming D WWTF	FRESNO	WESTSIDE SAN JOAQUIN	97-056	0.4	0	0	No Violations
I-5 & Jayne Avenue Facility	FRESNO	WESTSIDE SAN JOAQUIN	90-075	0.0743	1	35	BOD, DMON, OEV
Stratford WWTF	KINGS	WESTSIDE SAN JOAQUIN	2014-0153-DWQ	0.15	0	26	BOD, DO, DMON, Deficient Reporting, LREP
Lemoore NAS WWTF	KINGS	WESTSIDE SAN JOAQUIN	R5-2002-0062	4	0	0	No Violations
Cantua Farms Employee Housing	FRESNO	WESTSIDE SAN JOAQUIN	97-010-DWQ	0.02	0	0	No Violations

Section Thirteen: Wastewater Treatment Facilities
Tulare Kern DACIP Needs Assessment

Facility Name	County	IRWM	WDR Order No.	Design Flow (mgd)	Enforcement Actions within 5 Years (#)	Violations within 5 years (#)	Violation Description ¹
Coalinga WWTF	FRESNO	OUTSIDE IRWM	94-184	0.93	0	1	Failure to have Permanent Markers for Pond Freeboard Measurement
Corcoran WWTF	KINGS	OUTSIDE IRWM	91-138	1.45	0	199	BOD, Settleable Solids, TSS, pH, DMON, LREP
Exeter WWTF	TULARE	OUTSIDE IRWM	02-063	1.07	0	1	DMON
Fresno County #44A-Millerton Lake MHV WWTF	FRESNO	OUTSIDE IRWM	85-255	0.0225	0	81	BOD, DO, TSS, DMON, LREP
Hanford WWTF	KINGS	OUTSIDE IRWM	01-153	8	0	11	Settleable Solids, pH, Groundwater Limitations, DMON, OEV
Kettleman City WWTF	KINGS	OUTSIDE IRWM	79-143	0.22	0	26	TSS, DO Sample Frequency Violation, LREP, OEV
Lemoore WWTF	KINGS	OUTSIDE IRWM	96-050	2	1	139	BOD, DO, EC, Total Coliform, DMON, OEV
El Dorado MHP WWTF	KINGS	OUTSIDE IRWM	96-028	0.025	0	0	No Violations
Mendota WWTF	FRESNO	OUTSIDE IRWM	R5-2016-0054	1.28	0	2	Failure to Maintain a Spill Prevention and Control Plan, Failure to Maintain a Written Sampling Program

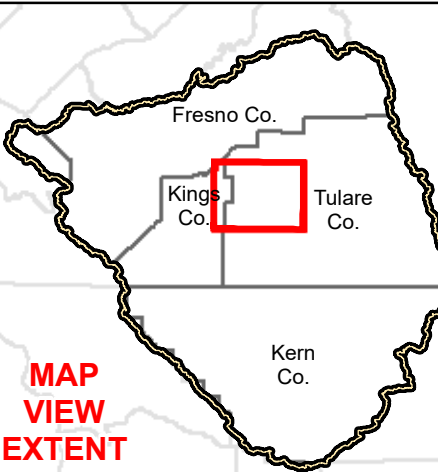
Tulare Kern Funding Area
Disadvantaged Community
Needs Assessment

Kaweah River Basin
IRWMA
Wastewater Treatment Facilities

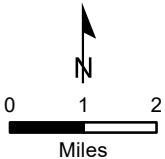
FIGURE 13-1

Legend

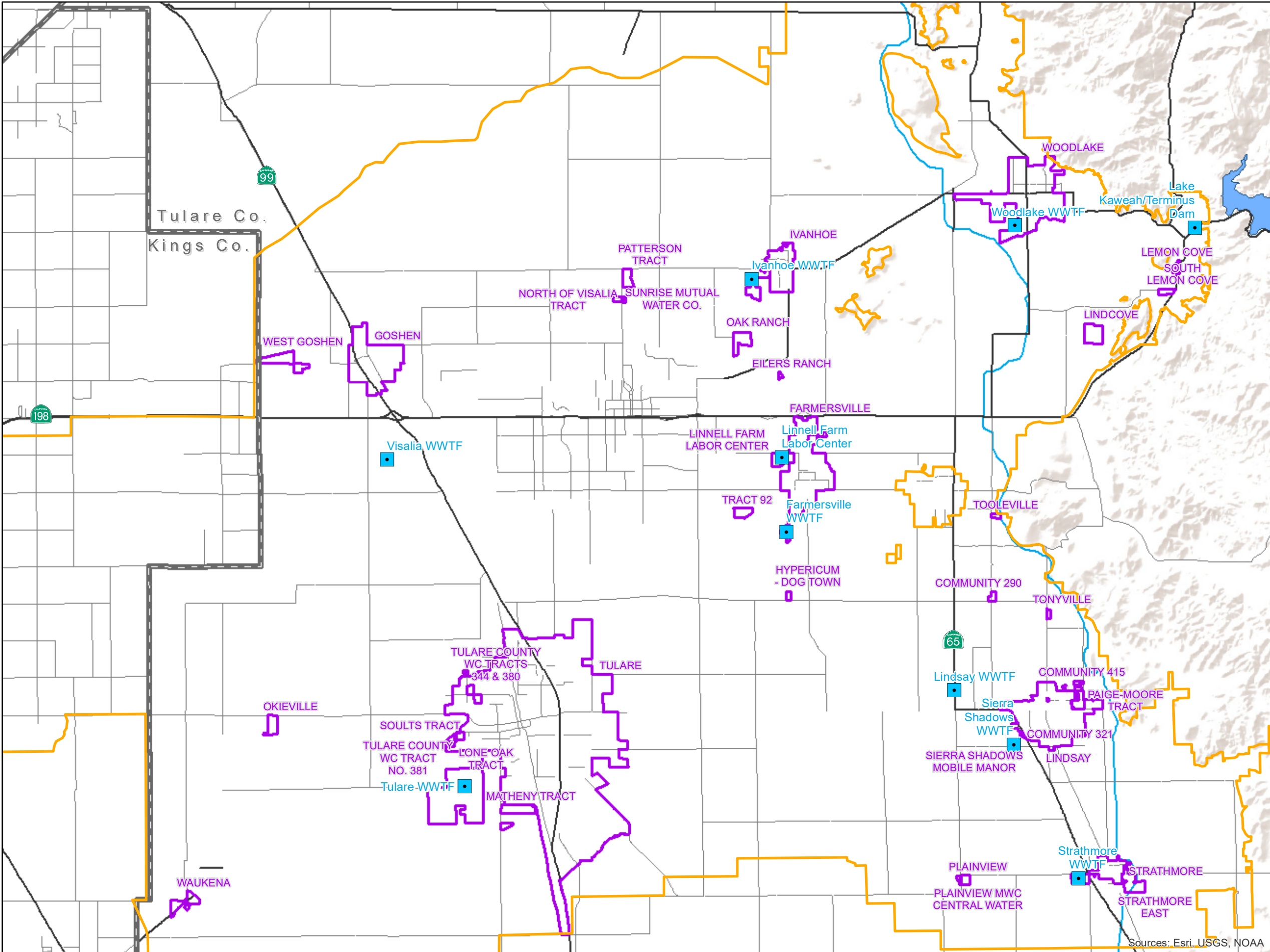
- Prop 1 Funding Area
- Kaweah River Basin IRWMA
- DAC and SDAC Communities
- Wastewater Treatment Facilities
- County
- Major Road
- Highway / Interstate
- Major Canal

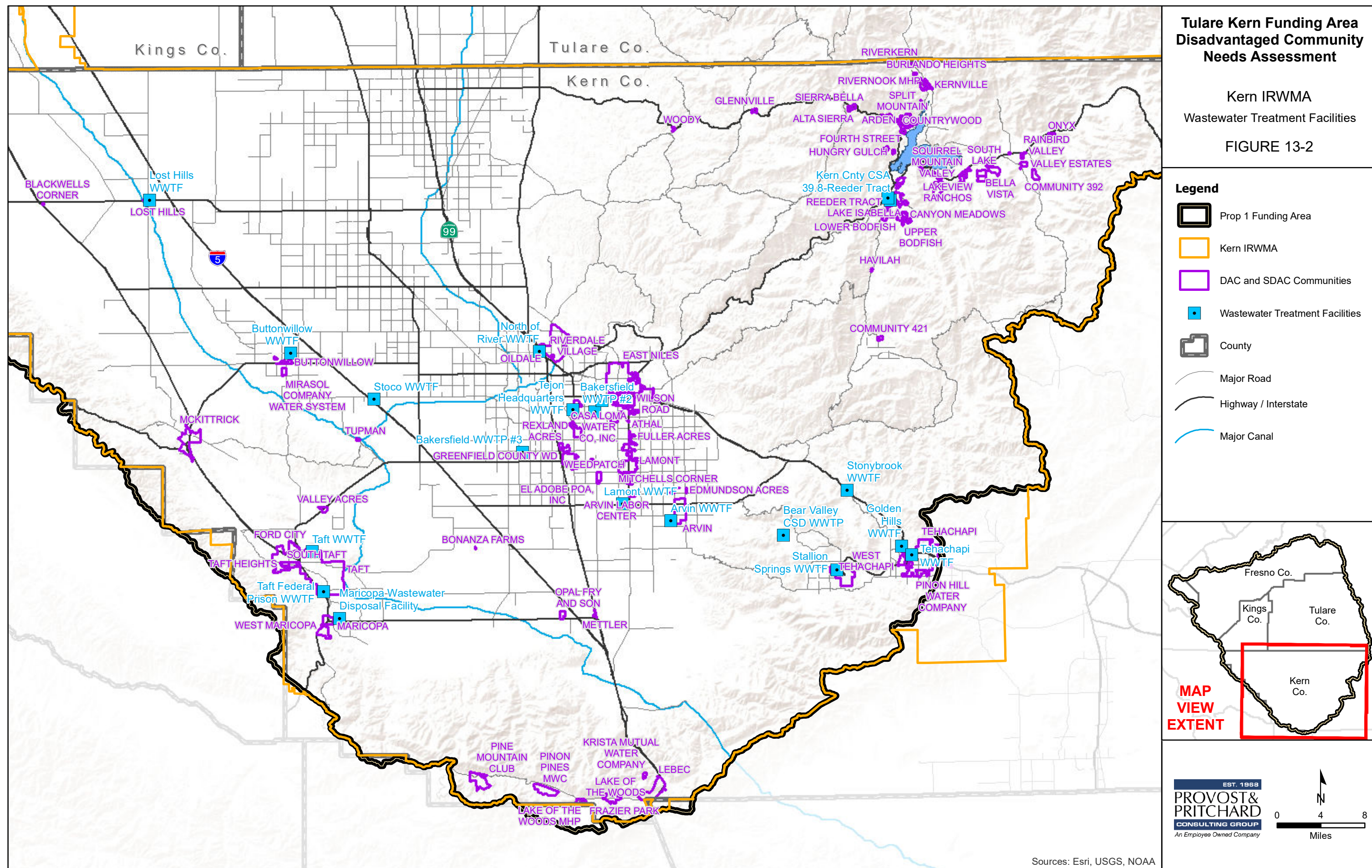


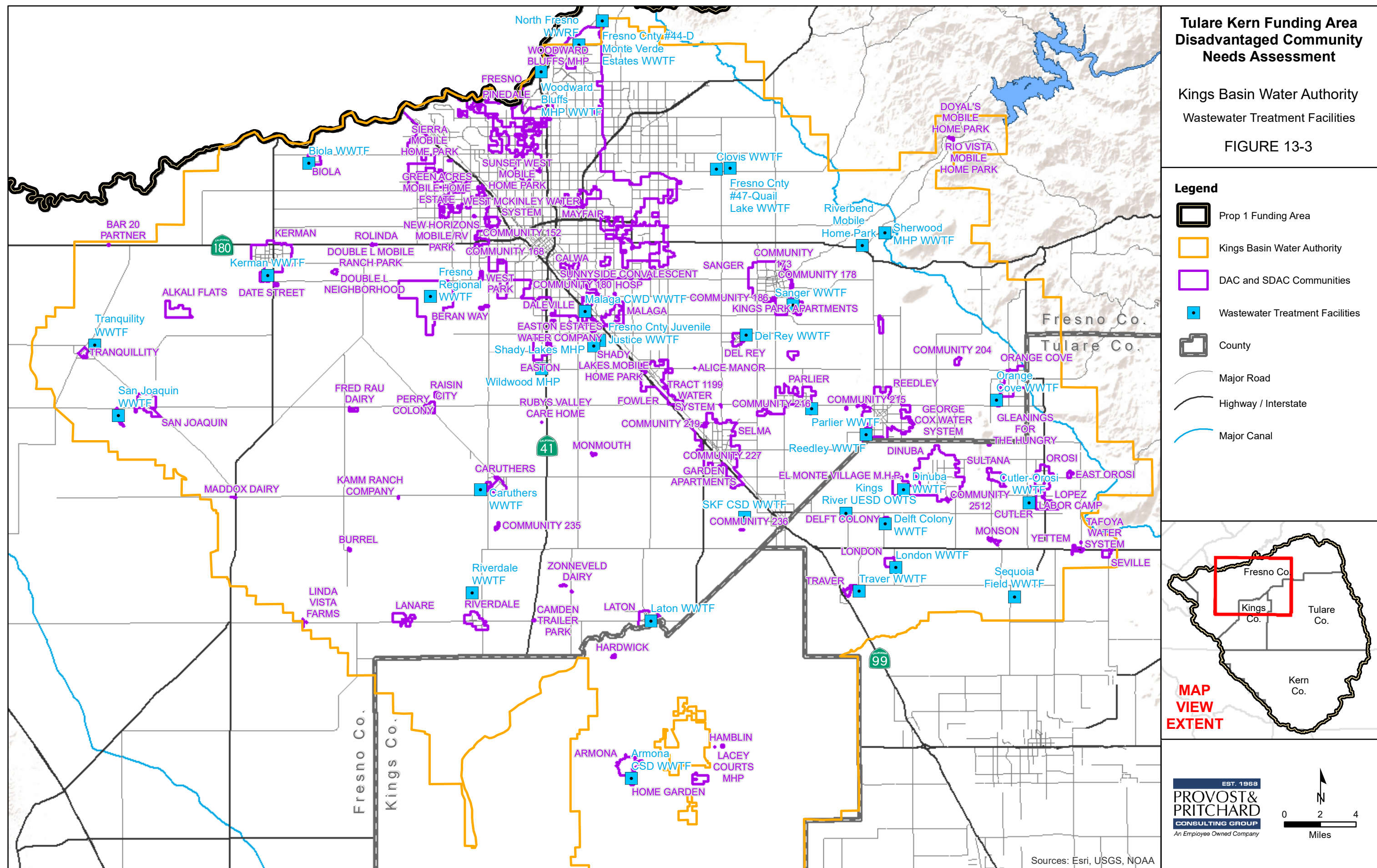
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Sources: Esri, USGS, NOAA







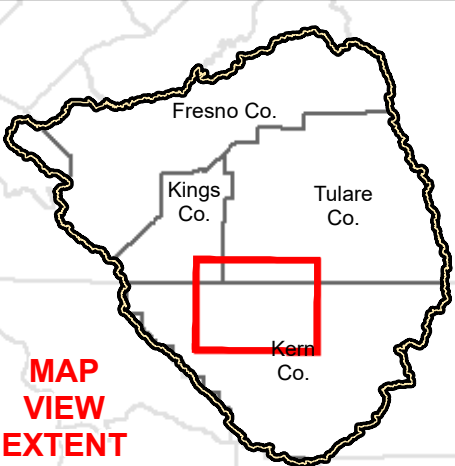
Tulare Kern Funding Area
Disadvantaged Community
Needs Assessment

Poso Creek IRWMA
Wastewater Treatment Facilities

FIGURE 13-4

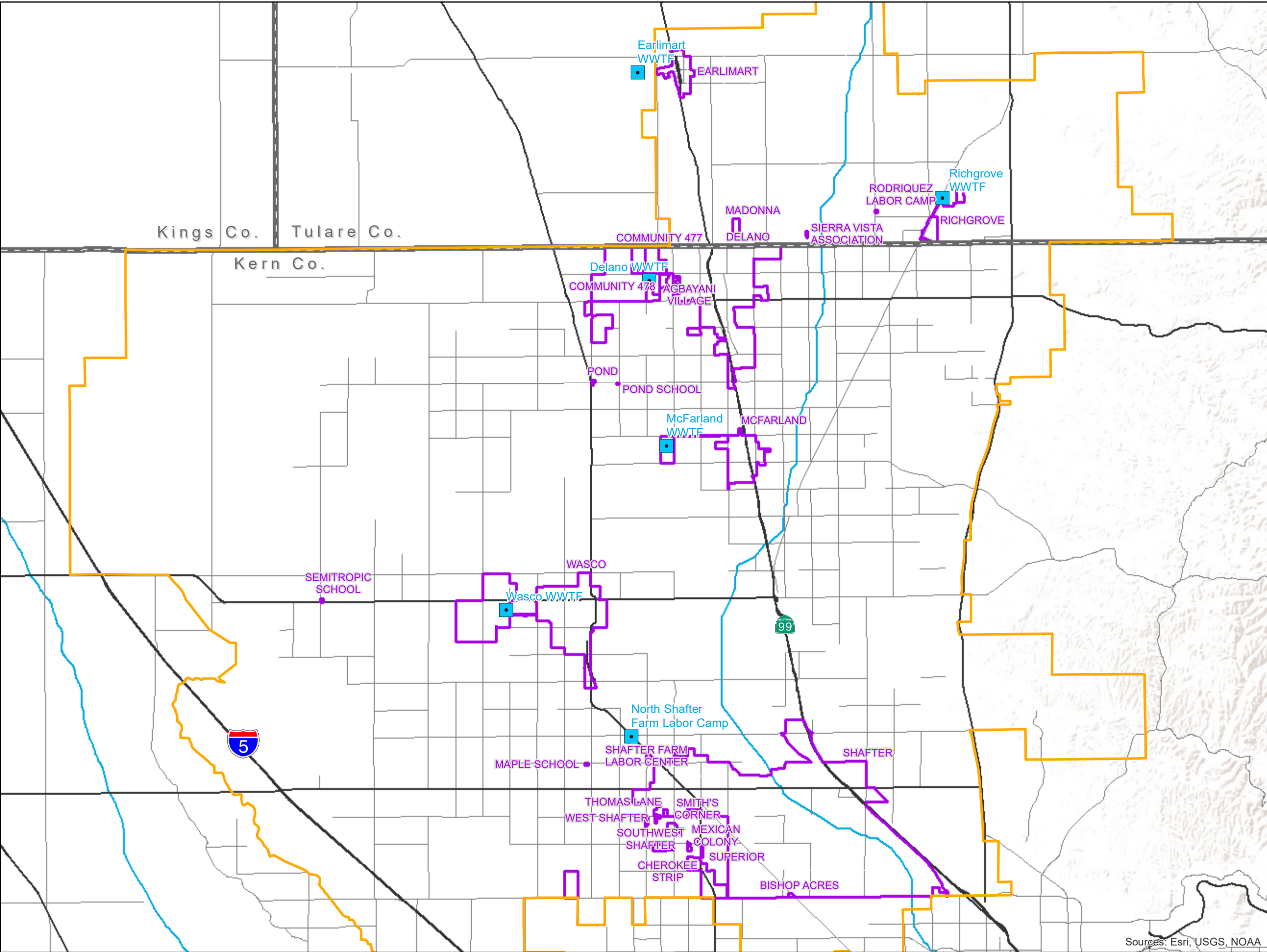
Legend

- Prop 1 Funding Area
- Poso Creek IRWMA
- DAC and SDAC Communities
- Wastewater Treatment Facilities
- County
- Major Road
- Highway / Interstate
- Major Canal

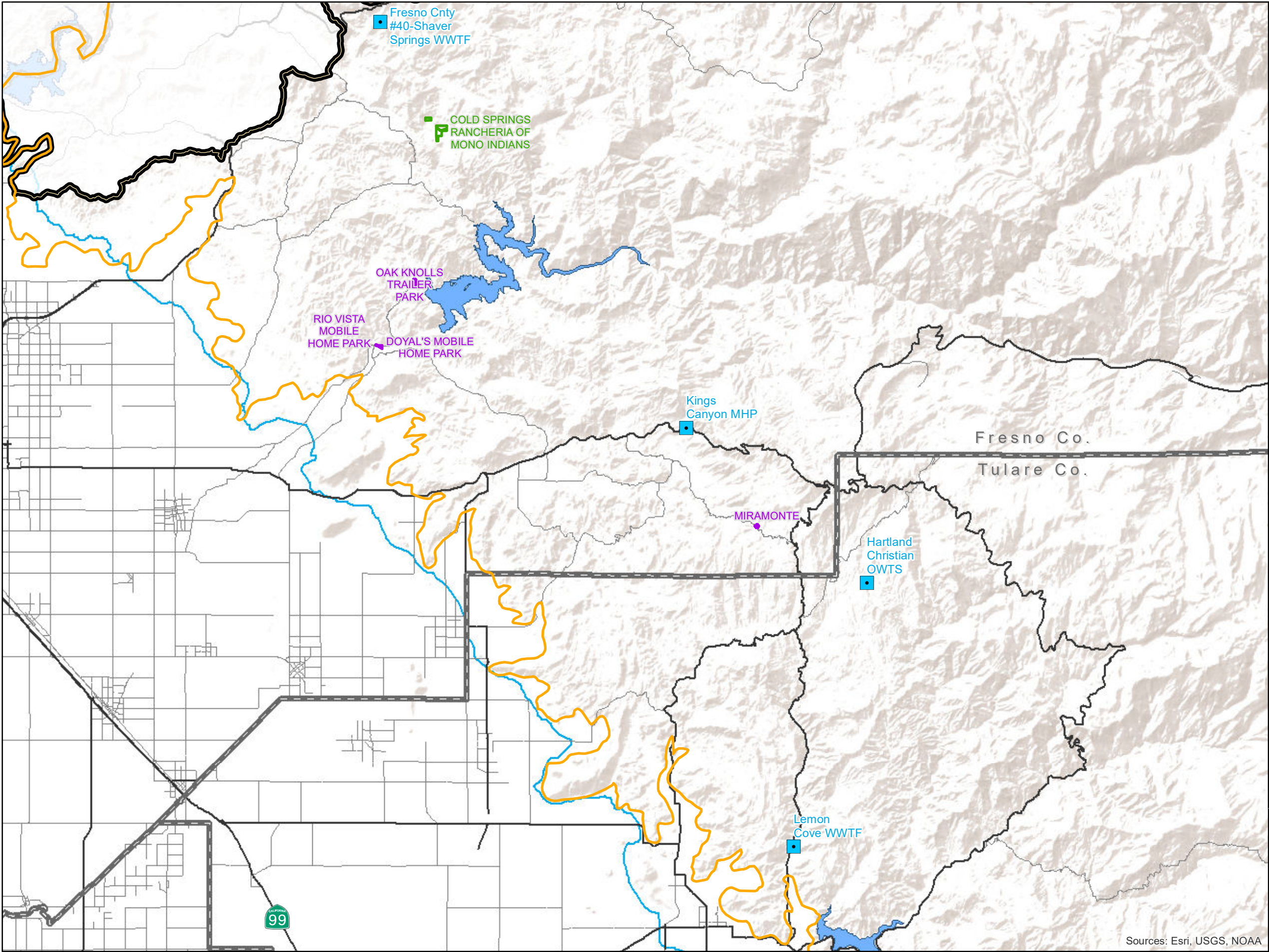


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Sources: Esri, USGS, NOAA



**Tulare Kern Funding Area
Disadvantaged Community
Needs Assessment**

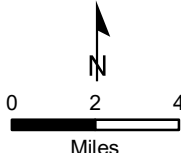
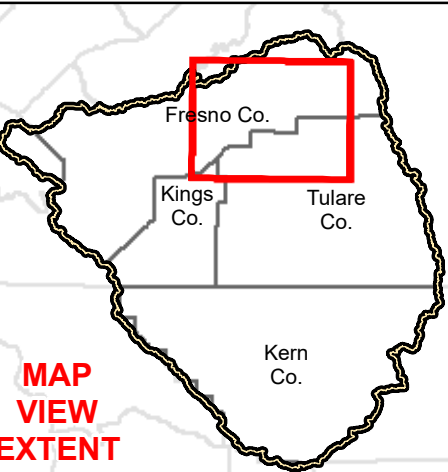
Southern Sierra IRWMA
(North)

Wastewater Treatment Facilities

FIGURE 13-5

Legend

- Prop 1 Funding Area
- Southern Sierra IRWMA
- DAC and SDAC Communities
- Tribe
- Wastewater Treatment Facilities
- County
- Major Road
- Highway / Interstate
- Major Canal



Sources: Esri, USGS, NOAA

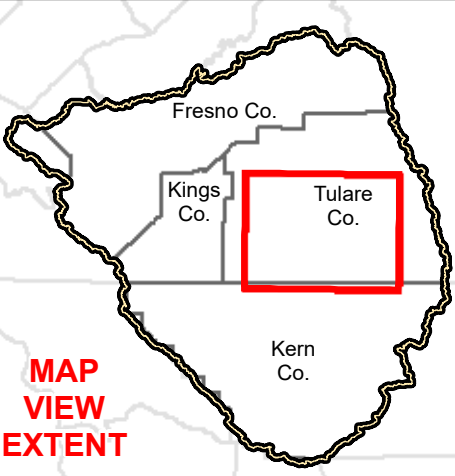
Tulare Kern Funding Area
Disadvantaged Community
Needs Assessment

Southern Sierra IRWMA
(South)
Wastewater Treatment Facilities

FIGURE 13-6

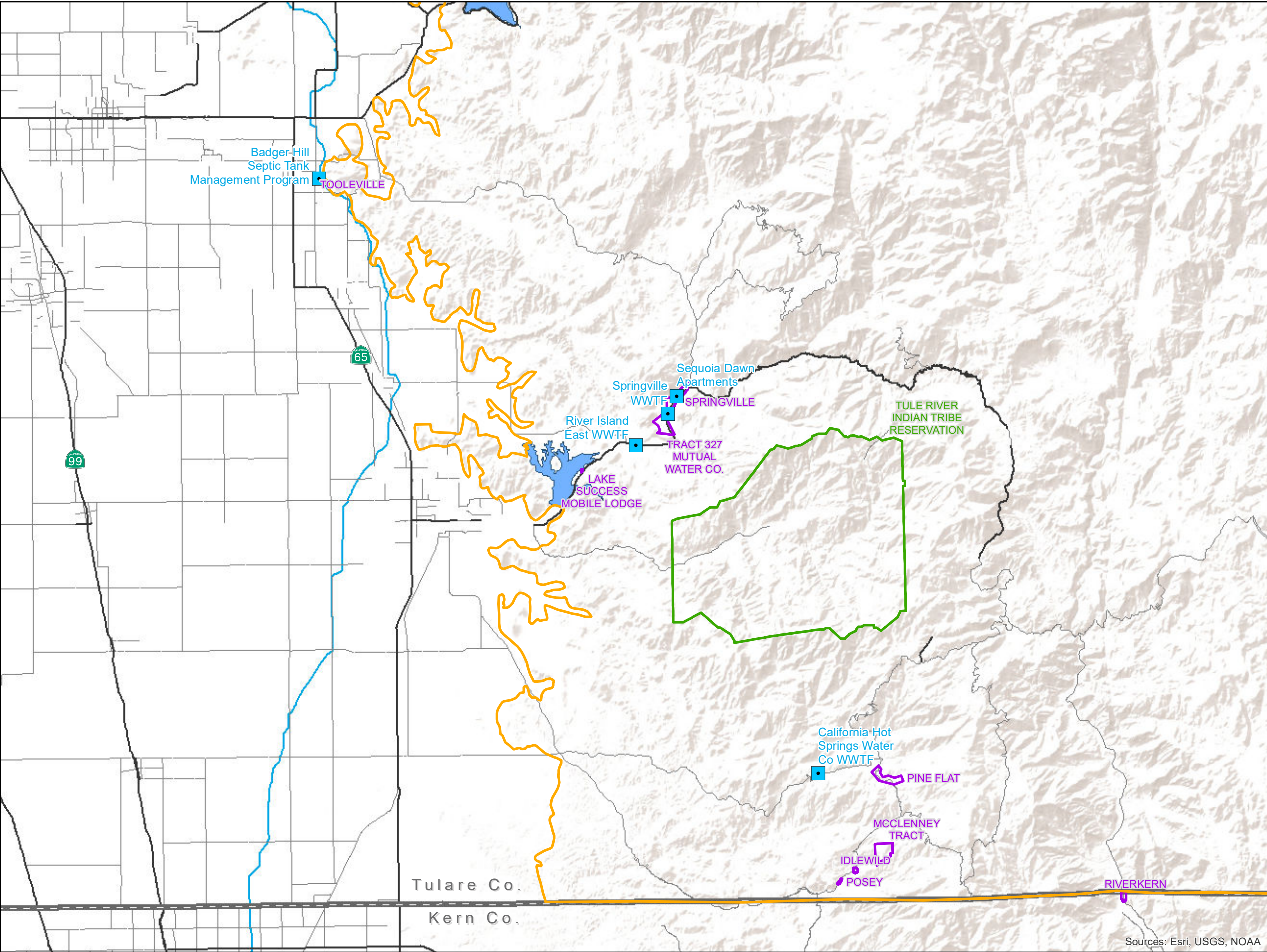
Legend

- Prop 1 Funding Area
- Southern Sierra IRWMA
- DAC and SDAC Communities
- Tribe
- Wastewater Treatment Facilities
- County
- Major Road
- Highway / Interstate
- Major Canal



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Sources: Esri, USGS, NOAA

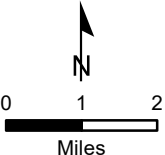
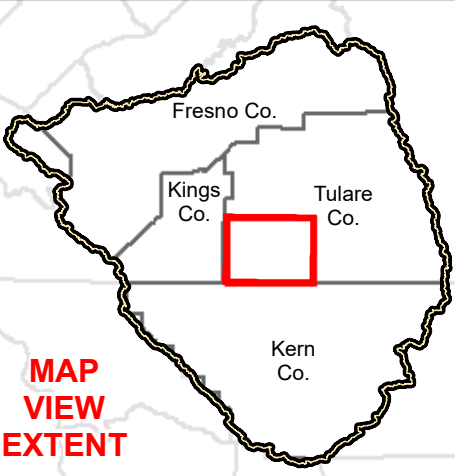
Tulare Kern Funding Area
Disadvantaged Community
Needs Assessment

Tule River Basin
IRWMA
Wastewater Treatment Facilities

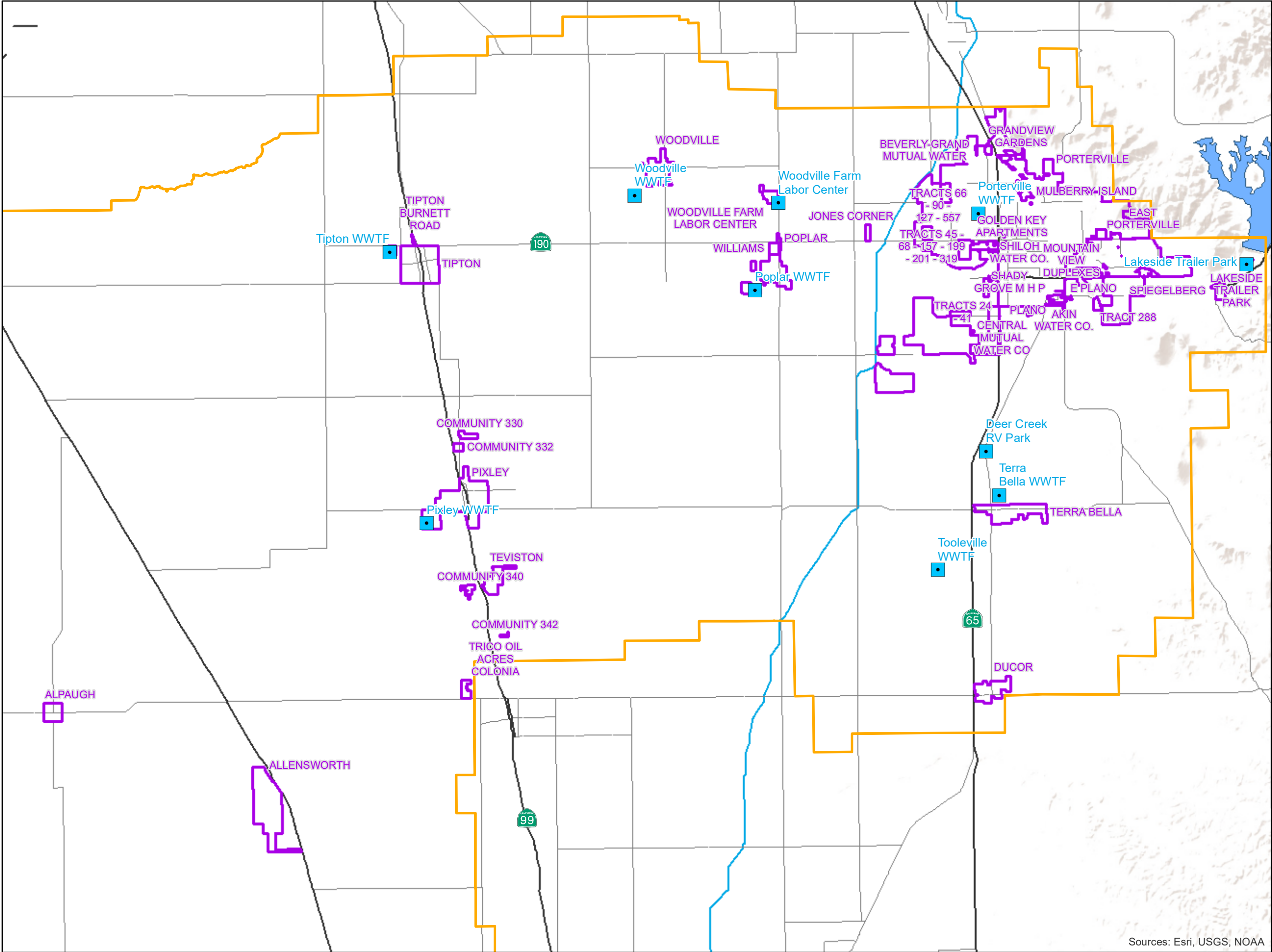
FIGURE 13-7

Legend

- Prop 1 Funding Area
- Tule River Basin IRWMA
- DAC and SDAC Communities
- Wastewater Treatment Facilities
- County
- Major Road
- Highway / Interstate
- Major Canal



Sources: Esri, USGS, NOAA



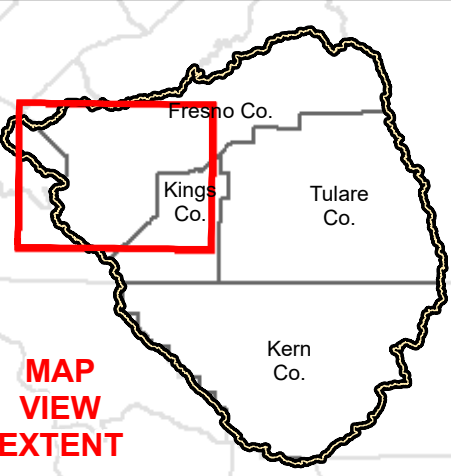
Tulare Kern Funding Area
Disadvantaged Community
Needs Assessment

Westside San Joaquin
IRWMA
Wastewater Treatment Facilities

FIGURE 13-8

Legend

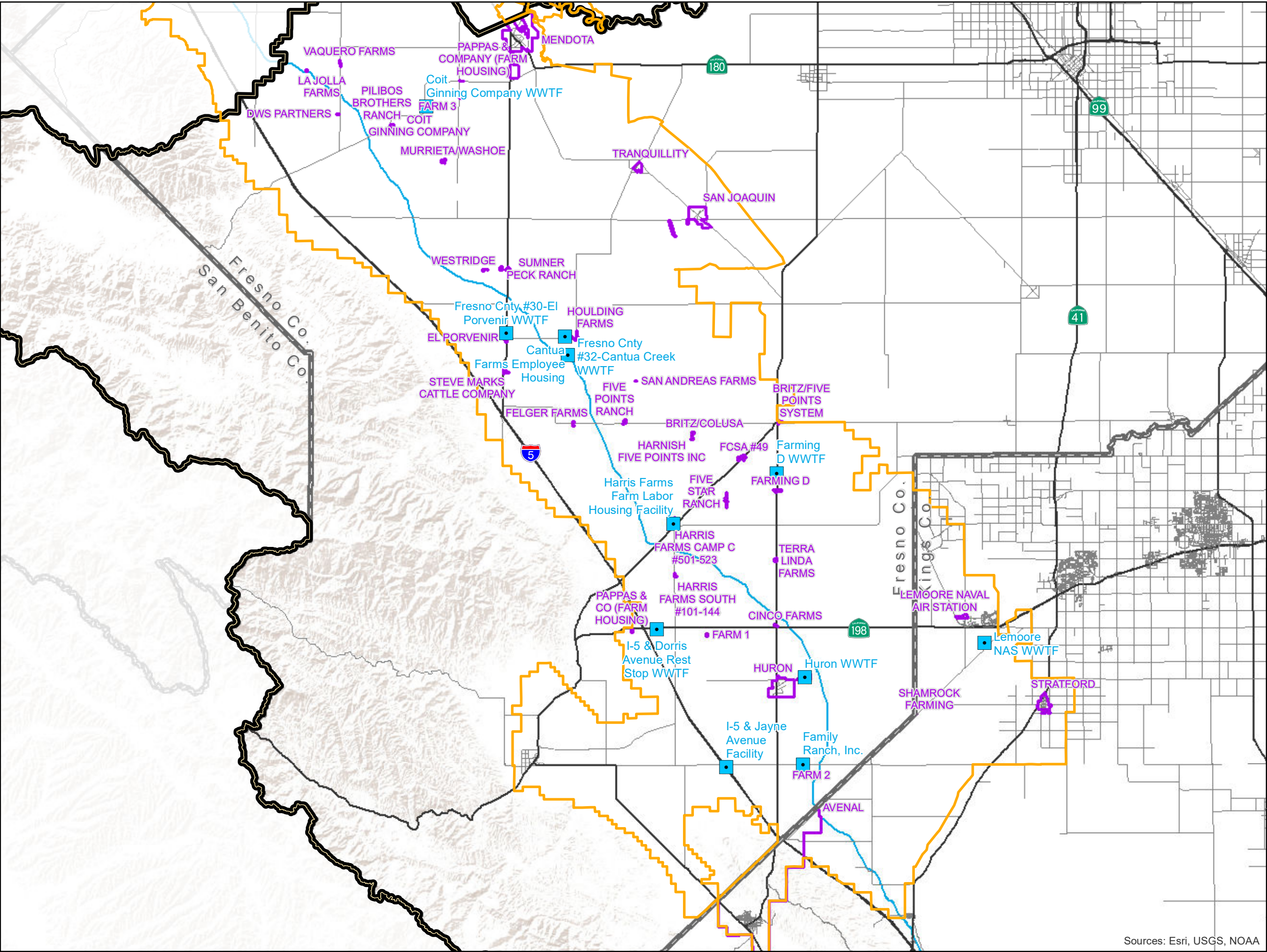
- Prop 1 Funding Area
- Westside San Joaquin IRWMA
- DAC and SDAC Communities
- Wastewater Treatment Facilities
- County
- Major Road
- Highway / Interstate
- Major Canal



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Sources: Esri, USGS, NOAA











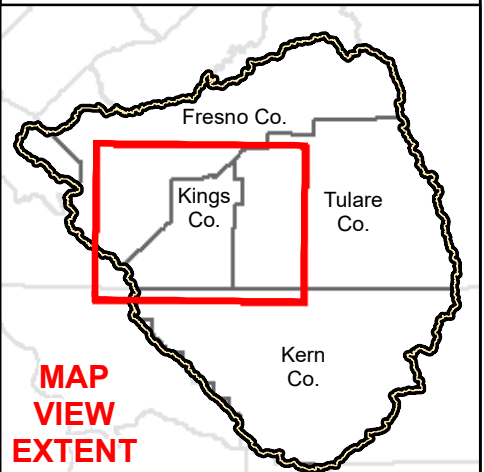
Tulare Kern Funding Area Disadvantaged Community Needs Assessment

DAC and SDAC Communities
Outside of IRWMA Boundaries
Wastewater Treatment Facilities

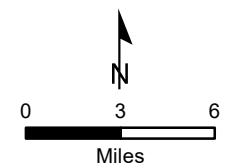
FIGURE 13-9

Legend

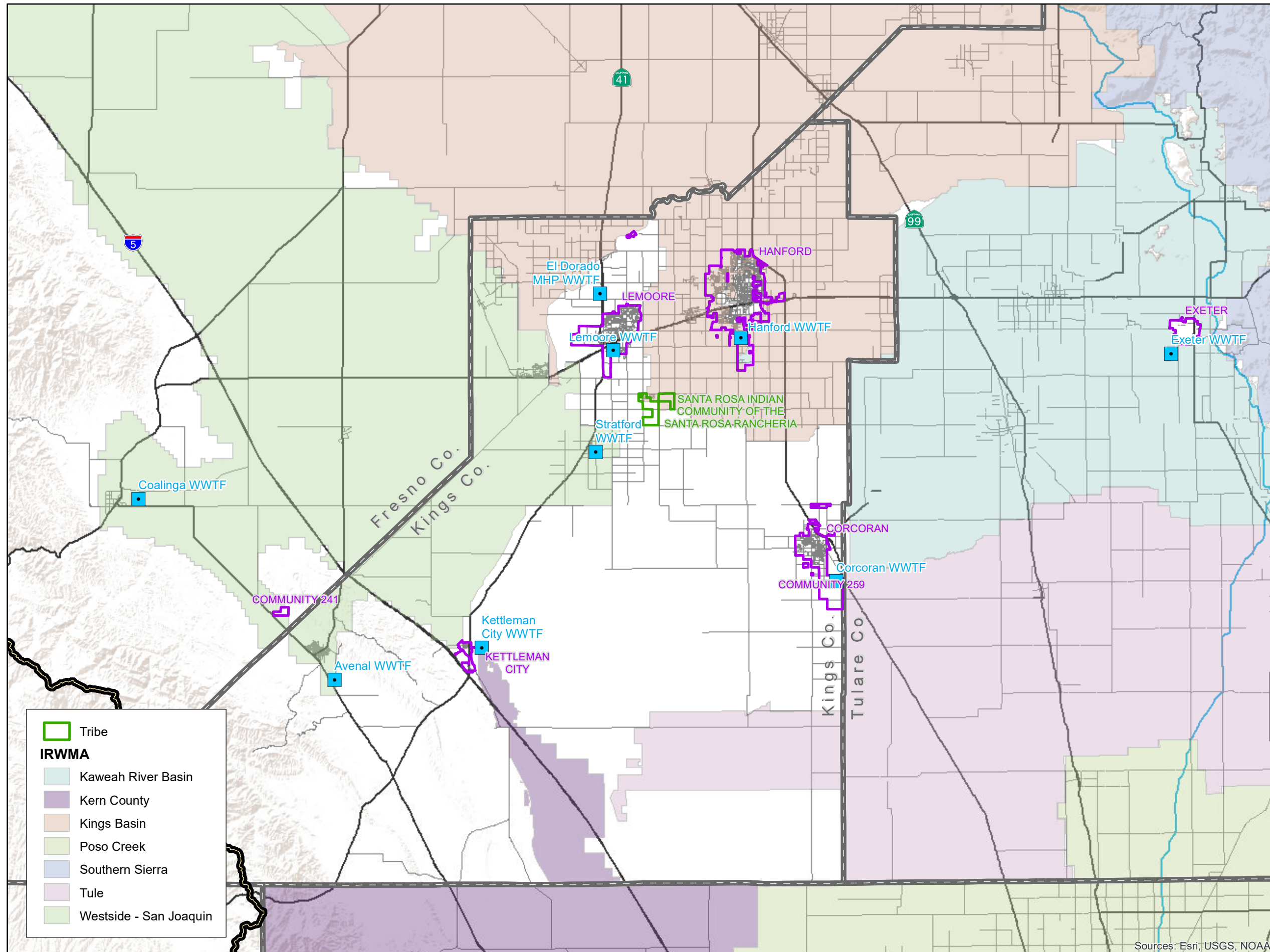
-  Prop 1 Funding Area
-  DAC and SDAC Communities
-  Tribe
-  Wastewater Treatment Facilities
-  County
-  Major Road
-  Highway / Interstate
-  Major Canal











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Sources: Esri, USGS, NOAA



-  Tribe
- IRWMA**
-  Kaweah River Basin
-  Kern County
-  Kings Basin
-  Poso Creek
-  Southern Sierra
-  Tule
-  Westside - San Joaquin

14 Water and Sewer Rates

Water and sewer rates for communities in the TKFA were gathered from the needs assessment survey conducted by SHE, which was a broad survey that was sent out to DACs within the TKFA. Communities that responded and permitted the use of their responses from the survey to be used in the data set are included in the Table 14-2. A summary of the responses is shown below in Table 14-1.

California Legislature declared that the state's residents have a right to "safe, clean, affordable, and accessible water." Affordability is considered the ability to pay a water bill without affecting the ability to pay for other essential goods and services. Water affordability is typically measured by the annual cost of water bills as a percentage of median household income (MHI). Households paying an amount for water that exceeds an affordability threshold are considered to be paying a rate that is not affordable. Various agencies have different affordability thresholds. The California State Water Resources Control Board uses an affordability threshold of 1.5%, meaning that water is generally considered affordable if water rates are less than 1.5% of the MHI for the community. The same affordability criterion is also used for sewer rates.

Based on the respondent information collected, the average water rate in the funding area is approximately \$54.99 per month, with an average percentage of MHI at 1.96%. Approximately 11 out of the 28 respondents (39%) have water rates that are considered affordable. The other 61% of respondents had water rates exceeding the affordability criterion with one having water rates as high as 6.78% of the MHI for the community.

The average sewer rate in the funding area is approximately \$30.02 per month, based on the respondent information collected. The average sewer rate as a percentage of the MHI is 1.09%, which is considered to be affordable. Approximately 48 out of 56 respondents (86%) have sewer rates that are considered affordable. Only 14% of respondents have sewer rates that exceed the affordability criterion.

Table 14-1 Summary of Water and Sewer Rates

Average Sewer Rate	Average Sewer % of MHI	Average Water Rate	Average Water % of MHI
\$30.02	1.09%	\$54.99	1.96%

Table 14-2. Water and Sewer Rates in the TKFA

Community Name	System Name	DAC Status	County	IRWM	DAC MHI	Sewer Rate	Sewer % of MHI	CONSOLIDATED	Water Rate Type	Water Rate	Average Bill	Water % of MHI
FARMERSVILLE	CITY OF FARMERSVILLE	SDAC	TULARE	KAWEAH	\$33,689			NO	Tiered/Variable Rate		\$20.00	0.71%
LINDSAY	CITY OF LINDSAY	SDAC	TULARE	KAWEAH	\$30,317	\$36.00	1.42%	NO				
LONE OAK TRACT	CITY OF TULARE	SDAC	TULARE	KAWEAH	\$34,667	\$43.60	1.51%	YES				
MATHENY TRACT	CITY OF TULARE	SDAC	TULARE	KAWEAH	\$30,776	\$43.60	1.70%	YES				
OKIEVILLE		SDAC	TULARE	KAWEAH	\$26,523			NO	Flat rate	\$38.00		1.72%
PAIGE-MOORE TRACT	CITY OF LINDSAY	SDAC	TULARE	KAWEAH	\$36,739	\$36.00	1.18%	YES				
PATTERSON TRACT	PATTERSON TRACT C.S.D.	DAC	TULARE	KAWEAH	\$39,006			NO	Tiered/Variable Rate		\$23.00	0.71%
SIERRA SHADOWS MOBILE MANOR	CITY OF LINDSAY	SDAC	TULARE	KAWEAH	\$21,066	\$36.00	2.05%	YES				
STRATHMORE	STRATHMORE PUBLIC UTIL DIST	SDAC	TULARE	KAWEAH	\$25,288	\$24.35	1.16%	NO				
TULARE	CITY OF TULARE	DAC	TULARE	KAWEAH	\$47,196	\$43.60	1.11%	NO				
WOODLAKE	WOODLAKE	SDAC	TULARE	KAWEAH	\$34,583	\$57.30	1.99%	NO	Flat rate	\$35.30	\$117.50	1.22%
TOOLEVILLE	TOOLEVILLE WATER CO.	SDAC	TULARE	KAWEAH/SOUTHERN SIERRA	\$28,527			NO	Flat rate	\$40.00		1.68%
ARVIN LABOR CENTER	LAMONT PUBLIC UTILITY DIST	SDAC	KERN	KERN	\$37,269	\$15.40	0.50%	YES				
COUNTRY ESTATES	EAST NILES CSD	DAC	KERN	KERN	\$39,823	\$14.27	0.43%	YES				
EAST NILES	EAST NILES CSD	SDAC	KERN	KERN	\$31,265	\$14.27	0.55%	NO				
FULLER ACRES	FULLER ACRES MWC	SDAC	KERN	KERN	\$32,763			NO	Flat rate	\$70.00		2.56%
GOLDEN HILLS	CSD OF GOLDEN HILLS	NOT DISADVANTAGED	KERN	KERN	\$61,361	\$91.29	1.79%	NO				
KRISTA MUTUAL WATER COMPANY	KRISTA MUTUAL WATER COMPANY	SDAC	KERN	KERN	\$27,000			NO	Flat rate	\$65.00		2.89%
LAKE OF THE WOODS	LAKE OF THE WOODS MWC	DAC	KERN	KERN	\$45,333			NO	Flat rate	\$68.90		1.82%
LAMONT	LAMONT PUBLIC UTILITY DIST	SDAC	KERN	KERN	\$34,421	\$15.40	0.54%	NO	Tiered/Variable Rate		\$70.00	2.44%
LEBEC	LEBEC COUNTY WATER DISTRICT	SDAC	KERN	KERN	\$27,000			NO	Flat rate	\$40.01		1.78%
LOST HILLS	LOST HILLS UTILITY DISTRICT	SDAC	KERN	KERN	\$30,583	\$24.25	0.95%	NO	Tiered/Variable Rate		\$107.00	4.20%
METTLER	METTLER	SDAC	KERN	KERN	\$38,036			NO	Flat rate	\$35.00	\$52.00	1.10%
PINEBROOK	PINEBROOK COMMUNITY WATER WELL	SDAC	KERN	KERN	\$34,167			NO	Flat rate	\$45.00		1.58%
RAINBIRD VALLEY	RAINBIRD VALLEY MWC	SDAC	KERN	KERN	\$33,333			NO	Flat rate	\$55.00		1.98%
WINI MUTUAL WATER COMPANY	WINI MUTUAL WATER COMPANY	DAC	KERN	KERN	\$39,823			NO	Flat rate	\$225.00		6.78%
BIOLA	BIOLA CSD	SDAC	FRESNO	KINGS BASIN	\$34,911	\$43.90	1.51%	NO				
CARUTHERS	CARUTHERS COMM SERV DIST	SDAC	FRESNO	KINGS BASIN	\$36,000	\$35.00	1.17%	NO				
CLOVIS	CITY OF CLOVIS	NOT DISADVANTAGED	FRESNO	KINGS BASIN	\$64,640	\$21.53	0.40%	NO				

Community Name	System Name	DAC Status	County	IRWM	DAC MHI	Sewer Rate	Sewer % of MHI	CONSOLIDATED	Water Rate Type	Water Rate	Average Bill	Water % of MHI
COMMUNITY 2512	CITY OF DINUBA	DAC	TULARE	KINGS BASIN	\$48,304	\$26.63	0.66%	YES				
CUTLER	CUTLER PUD	SDAC	TULARE	KINGS BASIN	\$29,655	\$33.40	1.35%	NO				
DATE STREET	CITY OF KERMAN	SDAC	FRESNO	KINGS BASIN	\$31,048	\$31.61	1.22%	YES				
DEL REY	DEL REY COMMUNITY SERV DIST	SDAC	FRESNO	KINGS BASIN	\$25,809			NO	Flat rate	\$17.19		0.80%
DELFT COLONY	DELFT COLONY WATER	DAC	TULARE	KINGS BASIN	\$46,122	\$51.00	1.33%	NO				
DINUBA	CITY OF DINUBA	SDAC	TULARE	KINGS BASIN	\$38,008	\$26.63	0.84%	NO				
KERMAN	CITY OF KERMAN	DAC	FRESNO	KINGS BASIN	\$42,046	\$31.61	0.90%	NO				
MALAGA	MALAGA COUNTY WATER DISTRICT	DAC	FRESNO	KINGS BASIN	\$42,250	\$43.72	1.24%	NO	Tiered/Variable Rate		\$19.59	0.56%
PARLIER	CITY OF PARLIER	SDAC	FRESNO	KINGS BASIN	\$30,556	\$27.50	1.08%	NO				
PINEDALE	PINEDALE COUNTY WATER DISTRICT	DAC	FRESNO	KINGS BASIN	\$41,842			NO	Flat rate	\$23.84		0.68%
REEDLEY	CITY OF REEDLEY	DAC	FRESNO	KINGS BASIN	\$43,907	\$49.35	1.35%	NO				
RIVERDALE	RIVERDALE PUD	SDAC	FRESNO	KINGS BASIN	\$35,000	\$39.00	1.34%	NO				
SANGER	CITY OF SANGER	DAC	FRESNO	KINGS BASIN	\$42,771	\$39.86	1.12%	NO				
SEVILLE	SEVILLE WATER CO. - TULARE COUNTY RECIEVER	SDAC	TULARE	KINGS BASIN	\$23,000			NO	Tiered/Variable Rate		\$65.00	3.39%
SULTANA	SULTANA C.S.D.	SDAC	TULARE	KINGS BASIN	\$25,486			NO	Flat rate	\$45.85		2.16%
SAN JOAQUIN	SAN JOAQUIN	SDAC	FRESNO	KINGS BASIN/WESTSIDE SJ	\$24,234			NO	Flat rate	\$44.93		2.22%
BISHOP ACRES	CITY OF SHAFTER	SDAC	KERN	POSO CREEK	\$24,024	\$22.00	1.10%	YES				
CHEROKEE STRIP	CITY OF SHAFTER	SDAC	KERN	POSO CREEK	\$24,024	\$22.00	1.10%	YES				
EARLIMART	EARLIMART PUD	SDAC	TULARE	POSO CREEK	\$23,561	\$14.25	0.73%	NO	Flat rate	\$19.00		0.97%
MAPLE SCHOOL	CITY OF SHAFTER	SDAC	KERN	POSO CREEK	\$24,024	\$22.00	1.10%	YES				
MCFARLAND	CITY OF MCFARLAND	SDAC	KERN	POSO CREEK	\$33,687	\$26.14	0.93%	NO				
MEXICAN COLONY	CITY OF SHAFTER	SDAC	KERN	POSO CREEK	\$22,639	\$22.00	1.17%	YES				
POND	POND MWC	DAC	KERN	POSO CREEK	\$45,989			NO	Flat rate	\$75.00		1.96%
RICHGROVE	RICHGROVE COMMUNITY SERVICES DISTRICT	SDAC	TULARE	POSO CREEK	\$29,875	\$18.00	0.72%	NO				
SHAFTER	CITY OF SHAFTER	SDAC	KERN	POSO CREEK	\$24,024	\$22.00	1.10%	NO				
SHAFTER FARM LABOR CENTER	CITY OF SHAFTER	SDAC	KERN	POSO CREEK	\$24,024	\$22.00	1.10%	YES				
SMITH'S CORNER	CITY OF SHAFTER	SDAC	KERN	POSO CREEK	\$24,024	\$22.00	1.10%	YES				
SOUTHWEST SHAFTER	CITY OF SHAFTER	SDAC	KERN	POSO CREEK	\$24,024	\$22.00	1.10%	YES				
THOMAS LANE	CITY OF SHAFTER	SDAC	KERN	POSO CREEK	\$24,024	\$22.00	1.10%	YES				
WASCO	CITY OF WASCO	DAC	KERN	POSO CREEK	\$39,559			NO	Tiered/Variable Rate		\$28.60	0.87%
WEST SHAFTER	CITY OF SHAFTER	SDAC	KERN	POSO CREEK	\$24,024	\$22.00	1.10%	YES				
SPRINGVILLE	SPRINGVILLE PUD	SDAC	TULARE	SOUTHERN SIERRA	\$29,423	\$58.97	2.41%	NO				
DUCOR	DUCOR CSD	SDAC	TULARE	TULE	\$30,288			NO	Flat rate	\$65.00		2.58%
EAST PORTERVILLE	CITY OF PORTERVILLE	SDAC	TULARE	TULE	\$32,715	\$26.87	0.99%	NO				
PIXLEY	PIXLEY PUBLIC UTIL DIST	SDAC	TULARE	TULE	\$32,845	\$36.55	1.34%	NO	Flat rate	\$29.00		1.06%

Community Name	System Name	DAC Status	County	IRWM	DAC MHI	Sewer Rate	Sewer % of MHI	CONSOLIDATED	Water Rate Type	Water Rate	Average Bill	Water % of MHI
POPLAR	POPLAR COMM SERVICE DIST	SDAC	TULARE	TULE	\$21,890	\$25.00	1.37%	NO				
PORTERVILLE	CITY OF PORTERVILLE	DAC	TULARE	TULE	\$39,763	\$26.87	0.81%	NO				
TIPTON	TIPTON COMMUNITY SERVICES DIST	SDAC	TULARE	TULE	\$32,895	\$21.50	0.78%	NO				
TIPTON BURNETT ROAD TRACTS 45 - 68 - 157 - 199 - 201 - 319	TIPTON COMMUNITY SERVICES DIST	DAC	TULARE	TULE	\$45,707	\$21.50	0.56%	YES				
	CITY OF PORTERVILLE	SDAC	TULARE	TULE	\$38,270	\$26.87	0.84%	YES				
WOODVILLE	WOODVILLE PUBLIC UTILITY DIST	SDAC	TULARE	TULE	\$31,375	\$19.25	0.74%	NO				
HURON	HURON	SDAC	FRESNO	WESTSIDE SJ	\$25,321	\$26.00	1.23%	NO				
MENDOTA	CITY OF MENDOTA	SDAC	FRESNO	WESTSIDE SJ	\$26,094	\$37.00	1.70%	NO				
COMMUNITY 259	CITY OF CORCORAN	SDAC	KINGS	Outside of IRWM	\$37,628	\$18.25	0.58%	YES				
CORCORAN	CITY OF CORCORAN	SDAC	KINGS	Outside of IRWM	\$35,531	\$18.25	0.62%	NO				
EXETER	CITY OF EXETER	DAC	TULARE	Outside of IRWM	\$42,590	\$20.91	0.59%	NO	Tiered/Variable Rate		\$35.00	0.99%
HANFORD	CITY OF HANFORD	SDAC	KINGS	Outside of IRWM	\$31,733	\$22.90	0.87%	NO				
KETTLEMAN CITY	KETTLEMAN CITY CSD	SDAC	KINGS	Outside of IRWM	\$27,000			NO	Tiered/Variable Rate		\$75.00	3.33%

15 Storm Water Facilities

Most cities have storm water collection and storage facilities. However, many smaller unincorporated communities do not have storm water facilities. In general, storm water is not included in the powers of most unincorporated communities, and they have no funding mechanism in place to support such facilities. In those cases, the responsibility for storm water facilities lies with the counties, but it is often not a high priority, as it is not associated with a direct health and safety issue.

In Fresno County, the County is a co-permittee with Fresno Metropolitan Flood Control District (FMFCD), City of Fresno, City of Clovis, and California State University Fresno for a regional Municipal Separate Storm Sewer System (MS4) permit. Within the urban area, the co-permittees are responsible for maintaining their storm drainage pipes/culverts. FMFCD serves as the flood basin maintenance and reporting entity.

In the rural areas of Fresno County, the Fresno County Road Maintenance and Operations Division cleans and maintains the storm drainpipes that transmit stormwater from one side of a road to another or otherwise off the paved travel surface. The purpose is to keep the roads safe and traversable by the motoring public.

Some unincorporated communities in Fresno County have a partial storm water system. They include Caruthers, Riverdale, Tranquillity, Laton, and Biola. The County has some copies of storm drain master plans; although in many of the communities, the master plans are not fully built out. The County does not necessarily maintain these communities' storm water systems.

Most of the unincorporated communities in Kings County do not have a comprehensive storm system, as such, and due to the disadvantaged community status, they receive an annual waiver for the Phase II MS4 permit. The only storm water system is in Stratford; other communities such as Armona and Kettleman City have segregated storm drain components but no comprehensive system.

The needs assessment survey conducted through the DACEEP asked about storm water issues. However, most respondents did not respond to the storm water questions, and there was insufficient data provided in the responses to analyze storm water issues in the communities.

16 Funding Status

There are funding assistance programs that provide funding assistance for drinking water or wastewater projects. Many of these funding assistance programs provide grant funds for DACs. The Department of Water Resources, State Water Resource Control Board, and United States Department of Agriculture have historically provided the bulk of public funds available for drinking water infrastructure improvements. Funding assistance alternatives that may be available to DACs would generally include grants, loans, and rate adjustments to increase revenues. Specific sources of funding assistance may include:

- *Drinking Water State Revolving Fund (DWSRF)*
- *Clean Water State Revolving Fund (CWSRF)*
- *State of California Bond Measures, such as Proposition 1 and Proposition 84*
- *SWRCB – Small Community Wastewater Grant Program*
- *Community Development Block Grant (CDBG)*
- *United States Department of Agriculture (USDA) – Rural Utilities*
- *Department of Water Resources (DWR) – Integrated Regional Water Management Planning Program*

Some DACs in the TKFA are shown to have a water supply or wastewater related issue, but they may already be on track to address those issues. It often takes several years from project conception to completion. A project could be at various phases, including:

1. *Funding application for planning has been submitted and is being reviewed by the Funding Agency.*
2. *Planning funds have been awarded and project planning/ design are in progress.*
3. *Funding application for construction has been submitted and is being reviewed by the Funding Agency.*
4. *Construction funds have been awarded and construction is in progress.*
5. *Project is complete, and system is returned to compliance.*

Until the final step is completed, and the system is returned to compliance, the system will show in the database to be out of compliance. It is therefore of interest to understand where projects may be in the process, and which communities are still in need of assistance to develop a project. The Drinking Water State Revolving Fund (DWSRF) and Clean Water State Revolving Fund (CWSRF) post updated lists of funded projects, which are summarized in the paragraphs below.

The DACEEP is reviewing projects included in IRWMPs, which will be referenced herein when complete.

In addition, several communities within the TKFA were able to utilize SWRCB Cleanup and Abatement Account (CAA), SB103 Interim Replacement Drinking Water Program funds, and AB 91 Interim Emergency Drinking Water Program funds to provide interim water supplies such as:

- *Bottled Water*
- *Well Repair, Well Rehabilitation, and Replacement*
- *Vending Machines*
- *Point of Use Devices*
- *Hauled Water*
- *Emergency Interties*
- *Treatment Systems*

Most of the funding assistance for interim supplies was allocated between 2014-2016. Funding lists are included in **Appendix G**. Some of the systems have been able to implement a permanent solution since that time, while others are still out of compliance and in need of assistance.

16.1 Drinking Water State Revolving Fund

The State of California Drinking Water State Revolving Fund Intended Use Plan for State Fiscal Year 2019-20 includes a list of fundable projects likely to receive funding during the subject fiscal year. The DWSRF State Fiscal Year 2019-2020 Fundable List includes both planning and construction projects from all communities that are targeted for an executed financing agreement by June 30, 2020. There are approximately thirty-eight (38) communities in the TKFA that are on the Fundable List for the DWSRF program, as shown in Table 16-1. Many of these have already executed financing agreements.

Projects for small DACs are automatically included on the Fundable List without any further scoring or assessment of its readiness to proceed to a financing agreement. All other projects have been ranked for potential placement on the Fundable List in accordance with the DWSRF Policy.

Section Sixteen: Funding Status
Tulare Kern DACIP Needs Assessment

Table 16-1. DWSRF TKFA Fundable List (State Fiscal Year 2019-20 Intended Use Plan)

Community Name	Applicant	Project Name	Project Type	Agreement Date	Estimated Total Financing	County	IRWM	DAC Status
ARVIN	Arvin Community Services District	Arsenic Mitigation Project - Phase II	Construction	TBD	\$14,348,616	Kern	Kern	SDAC
ARVIN	Arvin Community Services District	123 TCP Treatment for Well No. 8 and Well No. 13	Construction	TBD	\$3,115,350	Kern	Kern	SDAC
BIOLA	Biola Community Services District	Biola CSD Water System Distribution System Upgrades	Construction	TBD	\$3,239,000	Fresno	Kings Basin	SDAC
CARUTHERS	Caruthers Community Services District	Installation of Arsenic Treatment Facility and Water Meters	Construction	7/22/2019	\$4,311,120	Fresno	Kings Basin	SDAC
CUTLER	Cutler Public Utility District	Water Supply Improvements Project	Planning	TBD	\$406,900	Tulare	Kings Basin	SDAC
DEL ORO RIVER ISLAND SERV TERR #1	Del Oro Water Company	River Island Water Treatment Plant	Construction	9/23/2019	\$5,189,176.00	Tulare	Southern Sierra	Not Disadvantaged
DEL REY	Del Rey Community Services District	Water Meter Installation Project	Construction	TBD	\$905,472	Fresno	Kings Basin	SDAC
E PLANO, GRANDVIEW GARDENS	Del Oro Water Company	Consolidation of Grandview Gardens & East Plano to City of Porterville	Planning	TBD	\$347,900	Tulare	Tule	DAC
EAST NILES	East Niles Community Services District	North Weedpatch Hwy Water System Consolidation Project	Construction	TBD	\$15,289,500	Kern	Kern	SDAC
FRAZIER PARK, LAKE OF THE WOODS	Frazier Park Public Utility District	Frazier Park/Lake of the Woods Regional Consolidation Planning Project	Planning	8/1/2019	\$1,014,892.00	Kern	Kern	SDAC
FRESNO	Fresno, City of	Fresno NE SWTF Finished Water Reservoir	Construction	12/17/2019	\$14,000,000.00	Fresno	Kings Basin	DAC
HARDWICK	Hardwick Water Company	Hardwick Water Company Meter and Main Replacement	Construction	TBD	\$1,086,690	Kings	Kings Basin	SDAC

Section Sixteen: Funding Status
Tulare Kern DACIP Needs Assessment

Community Name	Applicant	Project Name	Project Type	Agreement Date	Estimated Total Financing	County	IRWM	DAC Status
HOME GARDEN	Home Garden Community Services District	Home Garden System Deficiencies Planning Project	Planning	TBD	\$350,000	Kings	Kings Basin	SDAC
HURON	Huron, City of	Domestic Water Well Planning Project	Planning	TBD	\$280,000	Fresno	Westside SJ	SDAC
HURON	Huron, City of	Water Treatment Plant Improvement Project	Construction	7/30/2019	\$7,700,000.00	Fresno	Westside SJ	SDAC
KERNVILLE	California Water Service Company	Secondary Treatment at Kernville Surface Water Plant	Construction	TBD	\$1,000,000	Kern	Kern	SDAC
LAMONT	Lamont Public Utility District	Lamont PUD Arsenic Treatment	Planning	TBD	\$457,000	Kern	Kern	SDAC
LAMONT, EL ADOBE POA, INC	Lamont Public Utility District	Lamond PUD and El Adobe POA Consolidation Project	Construction	TBD	\$6,760,000	Kern	Kern	SDAC
LONDON	London Community Services District	1,2,3-TCP Compliance Improvements	Planning	TBD	\$500,000	Tulare	Kings Basin	SDAC
LONDON	London Community Services District	Water System Reliability Project	Construction	TBD	\$4,974,655	Tulare	Kings Basin	SDAC
LOST HILLS	Lost Hills Utility District	Well Number Three	Construction	TBD	\$1,732,039	Kern	Kern	SDAC
MENDOTA	Mendota, City of	Water Supply Planning Project	Planning	TBD	\$500,000	Fresno	Westside SJ	SDAC
MENDOTA	Mendota, City of	Mendota AMR	Construction	TBD	\$3,074,561	Fresno	Westside SJ	SDAC
ORANGE COVE	Orange Cove, City of	City of Orange Cove Water Supply Reliability Project	Planning	TBD	\$481,000	Fresno	Kings Basin	SDAC
ORANGE COVE	Orange Cove, City of	Emergency Lining of Source Water Retention Basins	Construction	TBD	\$3,000,000	Fresno	Kings Basin	SDAC
PARLIER	Parlier, City of	1,2,3-TCP Removal Treatment Systems	Construction	TBD	\$17,322,726	Fresno	Kings Basin	SDAC

Section Sixteen: Funding Status
Tulare Kern DACIP Needs Assessment

Community Name	Applicant	Project Name	Project Type	Agreement Date	Estimated Total Financing	County	IRWM	DAC Status
PINEDALE	Pinedale County Water District	Pinedale County Water District - Water Meter Project	Planning	TBD	\$500,000	Fresno	Kings Basin	DAC
PORTERVILLE, AKIN WATER CO.	Porterville, City of	Consolidation of Akin Water Co (5401038)	Construction	TBD	\$3,387,000	Tulare	Tule	DAC
R.S. MUTUAL WATER COMPANY	R.S. Mutual Water Company	R.S. Mutual Water Company Consolidation Project	Construction	TBD	\$538,000	Kern	Kern	SDAC
REEDLEY, GEORGE COX WATER SYSTEM	Reedley, City of	George Cox - Reedley Consolidation Project	Construction	TBD	\$165,720	Fresno	Kings Basin	DAC
SAN JOAQUIN	San Joaquin, City of	Well #3 and Well #5 Manganese Removal System	Construction	TBD	\$3,000,000	Fresno	Kings Basin/ Westside SJ	SDAC
SEVILLE, YETTEM	Tulare, County of	Seville Water Co. Consolidation with Yettem Water System	Construction	TBD	\$7,878,776	Tulare	Kings Basin	SDAC
SULTANA, MONSON	Sultana Community Services District	Sultana - Monson Safe Drinking Water Project	Construction	12/3/2019	\$4,908,221.00	Tulare	Kings Basin	SDAC
TERRA BELLA	Terra Bella Irrigation District	Disinfection Byproducts Compliance Project	Construction	TBD	\$1,186,200	Tulare	Tule	SDAC
TRANQUILLITY	Tranquillity Irrigation District	TID Ag Well 19B Treatment	Construction	TBD	\$4,237,000	Fresno	Kings Basin/ Westside SJ	SDAC
TRANQUILLITY	Tranquillity Irrigation District	TID Rural Water System Improvement Project	Construction	TBD	\$4,700,000	Fresno	Kings Basin/ Westside SJ	SDAC
TRANQUILLITY	Tranquillity Irrigation District	Tranquillity Irrigation District Water Meters Project	Construction	TBD	\$1,400,000	Fresno	Kings Basin/ Westside SJ	SDAC
TULARE	Tulare, City of	Consolidation of City of Tulare, Pratt, and Souls Mutual Water Systems	Construction	TBD	\$2,000,000	Tulare	Kaweah	DAC

16.2 Clean Water State Revolving Fund

The State of California Clean Water State Revolving Fund Intended Use Plan for State Fiscal Year 2019-20 includes a list of fundable projects likely to receive funding during the subject fiscal year. The CWSRF State Fiscal Year 2019-2020 Fundable List includes both planning and construction projects from all communities that are targeted for an executed financing agreement by June 30, 2020. The Clean Water State Revolving Fund program includes funding assistance available from CWSRF, Proposition 1 and the Small Community Grant program. There are approximately eighteen (18) DACs in the TKFA are on the Fundable list for the CWSRF program, as shown in Table 16-2.

Table 16-2. CWSRF TKFA Fundable List (State Fiscal Year 2019-20 Intended Use Plan)

Community Name	Applicant	Project Name	Agreement Date	Estimated Total Financing	County	IRWM	DAC Status
ALLENSWORTH	Allensworth Community Services District	Allensworth Wastewater Collection, Treatment, and Disposal Project	2/10/2020	\$500,000.00	Tulare	Tule	SDAC
AVENAL	Avenal, City of	Solar Photovoltaic Generation System at WWTP	TBD	\$4,815,000	Kings	Westside SJ	SDAC
BIOLA	Biola Community Services District	Improvements at Wastewater Treatment Plant	TBD	\$5,850,000	Fresno	Kings Basin	SDAC
BUTTONWILLOW	Buttonwillow County WD	Buttonwillow Wastewater Collection Lines Project	TBD	\$500,000	Kern	Kern	SDAC
EARLIMART	Earlimart Public Utility District	Interceptor and Sewer Relief Pipelines Project	TBD	\$500,000	Tulare	Poso Creek	SDAC
KERMAN	Kerman, City of	Sewer Collection System and WWTP Improvements	TBD	\$500,000	Fresno	Kings Basin	DAC
KETTLEMAN CITY	Kettleman City Community Services District	Kettleman City Waste Water Improvement Project	TBD	\$500,000	Kings	Outside of IRWM	SDAC
LANARE	Lanare Community Services District	Lanare Wastewater Collection, Treatment, and Disposal Project	TBD	\$370,000	Fresno	Kings Basin	SDAC
LOST HILLS	Lost Hills Utility District	Wastewater Treatment Plant Expansion	TBD	\$401,500	Kern	Kern	SDAC
MARICOPA	Maricopa, City of	Sewer Collection System	TBD	\$5,500,000	Kern	Kern	SDAC

Community Name	Applicant	Project Name	Agreement Date	Estimated Total Financing	County	IRWM	DAC Status
		Improvements Project					
MCFARLAND	McFarland, City of	City of McFarland Wastewater Treatment Plant Expansion	TBD	\$6,000,000	Kern	Poso Creek	SDAC
ORANGE COVE	Orange Cove, City of	Orange Cove WWTP Tertiary Treatment & Recycled Water Project	TBD	\$7,300,000	Fresno	Kings Basin	SDAC
PARLIER	Parlier, City of	WWTP Improvements Project	TBD	\$5,704,013	Fresno	Kings Basin	SDAC
RIVERDALE	Riverdale Public Utility District	Wastewater Treatment Plant Improvement Project	TBD	\$5,500,000	Fresno	Kings Basin	SDAC
SHAFTER	Kern, County of	South Shafter Sewer Project - Private Laterals and Septic Abandonment	TBD	\$3,397,320	Kern	Poso Creek	SDAC
STRATFORD	Stratford Public Utility District	Wastewater Facilities Improvement Project	TBD	\$5,500,250	Kings	Westside SJ	SDAC
SULTANA, MONSON	Sultana Community Services District	Sultana and Monson Wastewater Management Project	3/18/2020	\$500,000	Tulare	Kings Basin	SDAC
WOODLAKE	Woodlake, City of	The City of Woodlake Sewer Improvements	TBD	\$5,500,000	Tulare	Kaweah	SDAC

16.3 Integrated Regional Water Management Planning Program

Integrated Regional Water Management groups include projects in their IRWMPs. The project lists as included in the most recent IRWMPs are attached in **Appendix H**.

16.4 TKFA Project Development Funds

The Project Development activity included establishing guidelines for project applications and developing an application package that was distributed to DACs and IRWMAs.

Twenty-five (25) projects are currently being conducted by eight (8) different consultants, as funded through this DAC Involvement Program, Project Development activity. A project list is included in **Appendix I**,

along with the project development guidelines and project application form that were used to solicit projects for this funding assistance.

16.4.1 Program and Priorities

The IRWM Implementation Grant Program provides funding assistance for implementation projects that meet the intent of Proposition 1, Chapter 7 - Regional Water Security, Climate and Drought Preparedness. The intent of the TKFA DACIP project development is to prepare projects to be competitive in the IRWM Implementation Grant Program. The Project Development funding must directly benefit a DAC or a Tribe.

Preferences from Proposition 1 Legislation include the following:

- *Prioritize projects that leverage funding or produce the greatest public benefit.*
- *Provide special consideration for new or innovative technology or practices.*
- *Prioritize projects that cover a greater portion of the watershed.*
- *Continue multi-benefit projects.*

Proposition 1, Chapter 7 is intended to:

- *Help water infrastructure systems adapt to climate change.*
- *Provide incentives for collaboration on managing water resources and setting water infrastructure priorities.*
- *Improve regional water self-reliance.*

AB 1249 (2013-2014) – CWC Section 10541(e)(14):

- *Address nitrate, arsenic, perchlorate, or hexavalent chromium contamination in IRWM plans; include these projects in grant applications or explain why they were not included.*
- *DWR shall consider projects that address contaminants, including small DAC projects (<10,000 year-round population).*

AB 685 Human Right to Water:

- *Every human being has the right to safe, clean, affordable, and accessible water adequate for human consumption, cooking, and sanitary purposes.*

The TKFA DACIP Preliminary Needs Assessment included the following:

- *Identify specific DACs facing water supply, water quality, or wastewater challenges.*

Project Development funds were intended to focus on those DACs identified with a need in the Preliminary Needs Assessment. If the need was not identified in the Preliminary Needs Assessment, justification must be provided for the project need.

16.4.2 Guidelines

A complete Project Application Form submitted by a DAC was required to be considered for Project Development Funds. Each IRWM Region then selected the top projects in its region. The top-ranking project(s) from each IRWM received funding assistance for the Project Development activities described in the application, up to the maximum funding amount (\$250,000 per IRWM). The PAC reviewed the project selections made by the IRWM Regions and made recommendations for funding to the County of Tulare in

accordance with the selections. Once the top-ranked projects were recommended for funding assistance, the PAC reviewed the remaining applications for possible funding with remaining Project Development funds. This review was based upon the Project Development funds still available after the IRWM region allocations (\$250,000) and was a competitive selection process.

The County of Tulare reviewed all applications recommended for award of Project Development funds to ensure the applications were consistent with the intent of this program. Projects required approval from the County of Tulare (as the grantee) prior to allocation of funds.

Project Development activities vary depending on the needs of the project. The projects include, but are not limited to, the following types of activities:

- *Prepare Feasibility Study Report.*
- *Conduct Community Outreach and Engagement Activities for a specific project.*
- *Conduct Preliminary Design Activities.*
- *Prepare CEQA/NEPA Documents.*
- *Coordinate with IRWM Regions/DWR.*
- *Prepare Funding Applications (IRWM Implementation Funding), which may include reasonable and proportional contribution to application development costs as required by an IRWM for inclusion in an Implementation/Construction application to DWR.*

16.4.3 Selection Process

The PAC reviewed two categories of projects: 1) projects requesting application preparation cost for Round One IRWM Implementation Grant funding, and 2) projects requesting funding assistance for project development activities. IRWM Regions submitted projects requesting application preparation costs in March 2019 that are ready for Round One IRWM Implementation Grant funding. Additional projects requesting application preparation costs for the IRWM Implementation Grants were accepted in June 2019.

IRWM Regions submitted projects for Project Development activities in either June 2019 or August 2019 with the intent that they would have the project ready for future IRWM Implementation funding rounds. IRWM Regions reviewed and ranked projects and made recommendations to the PAC. Additional project applications were accepted in October 2019 and January 2020 for remaining IRWM region funds. Project Development activities must be completed by August 31, 2020.

Each of the seven (7) IRWM Regions selected project(s) from its region for a maximum of \$250,000 in Project Development funding. Additional \$250,000 funding was dedicated for additional projects to be awarded on a competitive basis. Projects for the competitive pot of funding were selected in August 2019 with additional selections in October 2019.

17 Community Needs Ranking

In order to assess the needs of DACs within the TKFA, community needs ranking criteria were developed based on some of the vulnerabilities discussed previously in this report. It was important that the criteria be definable by data that is readily available, so it can be repeatable.

Within the web mapping tool, the community needs ranking dashboard is dynamic and automatically updated whenever updates are made. Minimizing the need for manual manipulation of the data for the evaluation is important so that the tool can remain useful beyond the life of the project.

The community needs assessment ranking provides scoring based on the level of need for each community. The community needs ranking is shown in Figure 17-1 through Figure 17-9, with color coding as follows:

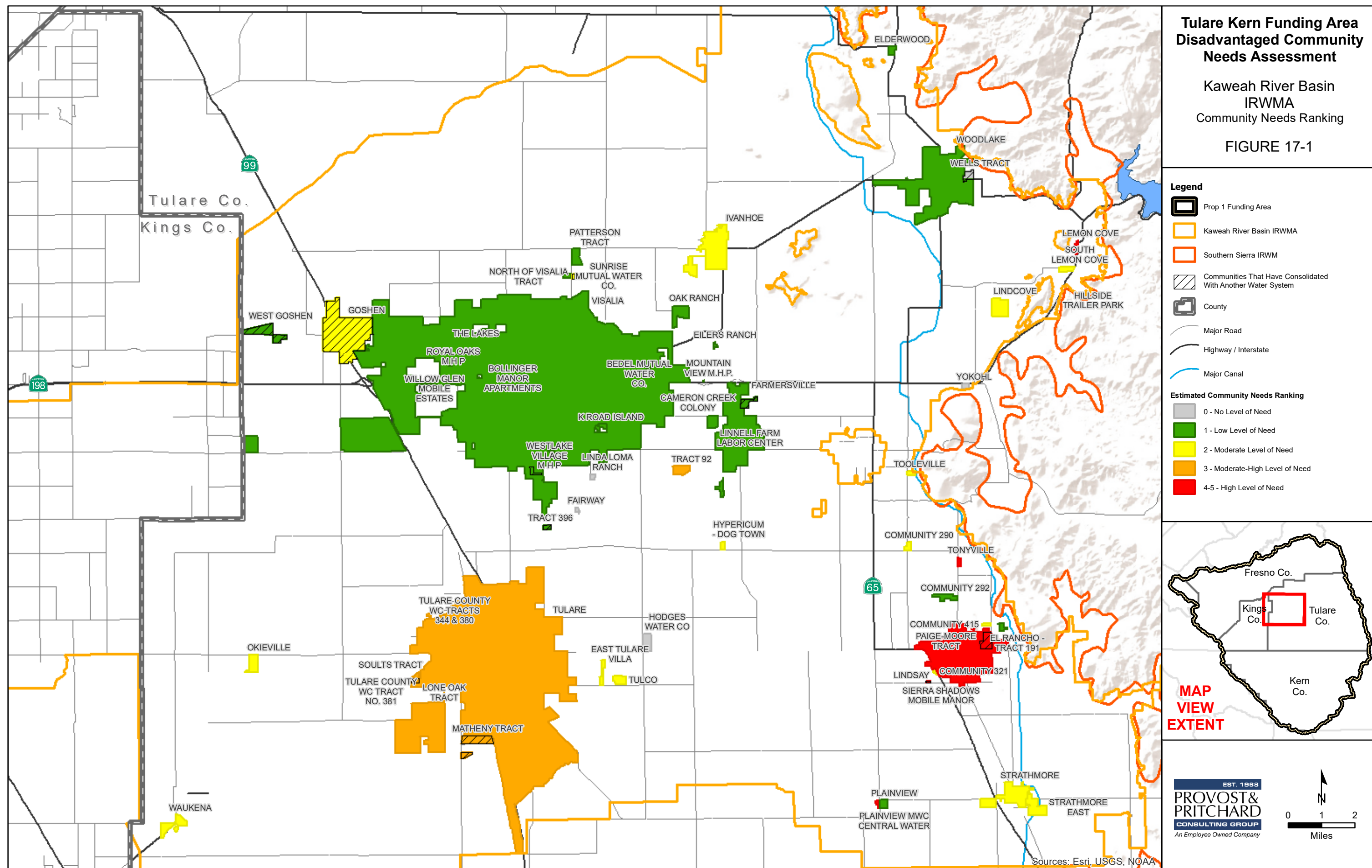
Score	Assessment	Color Code
0	No Level of Need	Grey
1	Low Level of Need	Green
2	Moderate Level of Need	Yellow
3	Moderate-High Level of Need	Orange
4-5	High Level of Need	Red

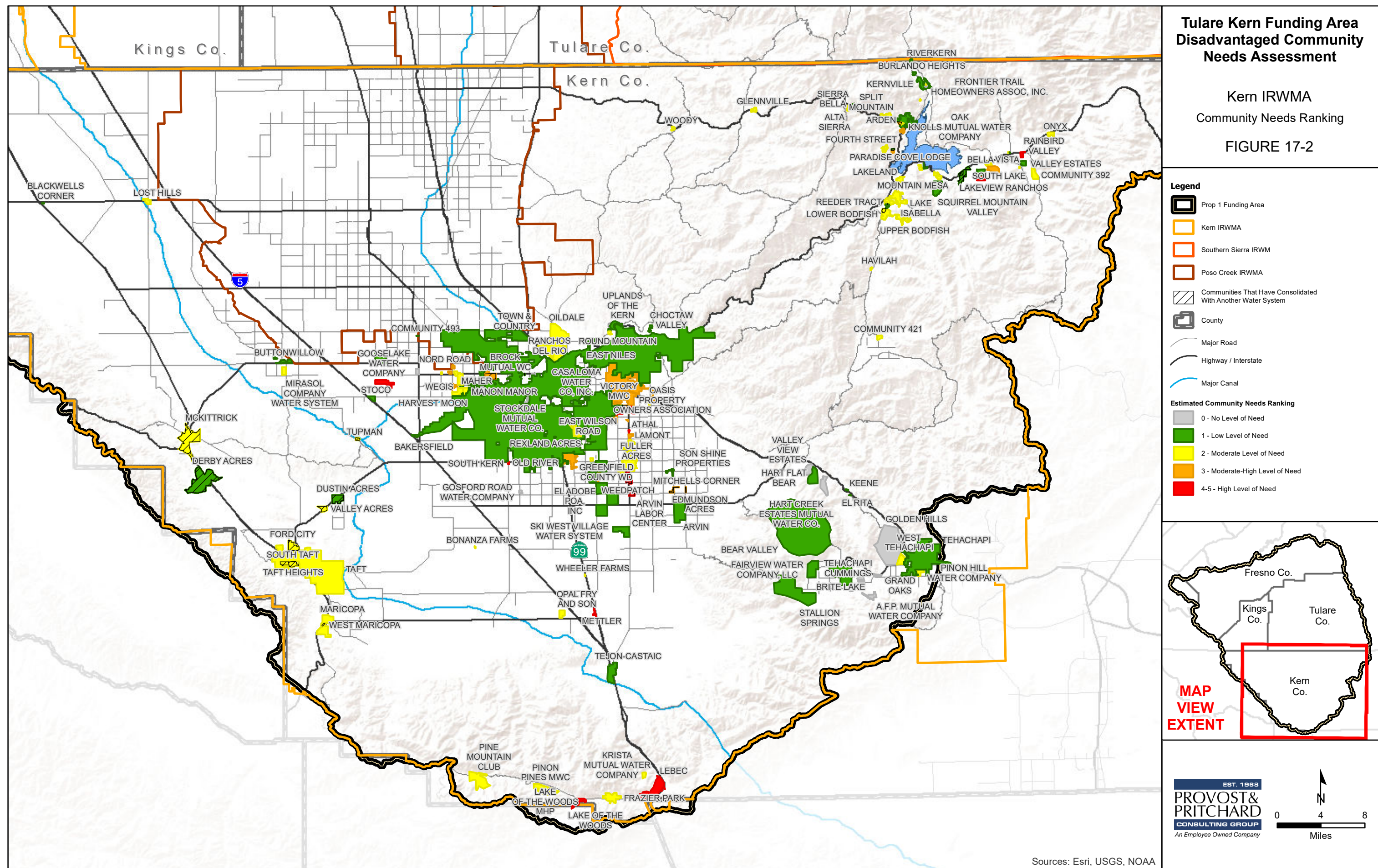
Needs assessment scores for each community are based on four main criteria, with the total score being the sum of the scores from each of the four criteria.

1. *DAC Status Score*
 - Score a total between 0-1 based on MHI community status
 - 1 point = community with status of Disadvantaged, Severely Disadvantaged, or Tribe
 - 0 point = community with status of Not Disadvantaged
2. *Source of Supply Score*
 - Score a total between 0-1 based on source of water
 - 1 point for communities with a single water source or private wells.
 - 0 point for communities with multiple water sources
3. *Water Quality Score*
 - Score a total between 0-3 points based on water quality compliance
 - 3 points = 2+ contaminant compliance orders issued
 - 2 points = 1 contaminant compliance order issued
 - 1 point = Maximum contaminant level (MCL) exceedance, but no compliance orders issued
 - 0 point = No water quality issue identified
4. *Funding Score*
 - 0 point = communities with no funded project on the funding list
 - 2 points subtracted = communities with current funding, based on SWRCB Prop 1 Drinking Water Project funding list
[\[https://www.waterboards.ca.gov/water_issues/programs/grants_loans/proposition1/drinking_water_proj_locations.shtml\]](https://www.waterboards.ca.gov/water_issues/programs/grants_loans/proposition1/drinking_water_proj_locations.shtml)

Figure 17-1 through Figure 17-9 illustrate the community needs throughout the TKFA. Community summaries by IRWM region are provide in **Appendix B**. Individual community reports showing the scores for each criterion are available through the web mapping tool.

Based on this evaluation, there are approximately 46 communities in the TKFA with a score of 4 or 5, indicating that they have a high level of need.

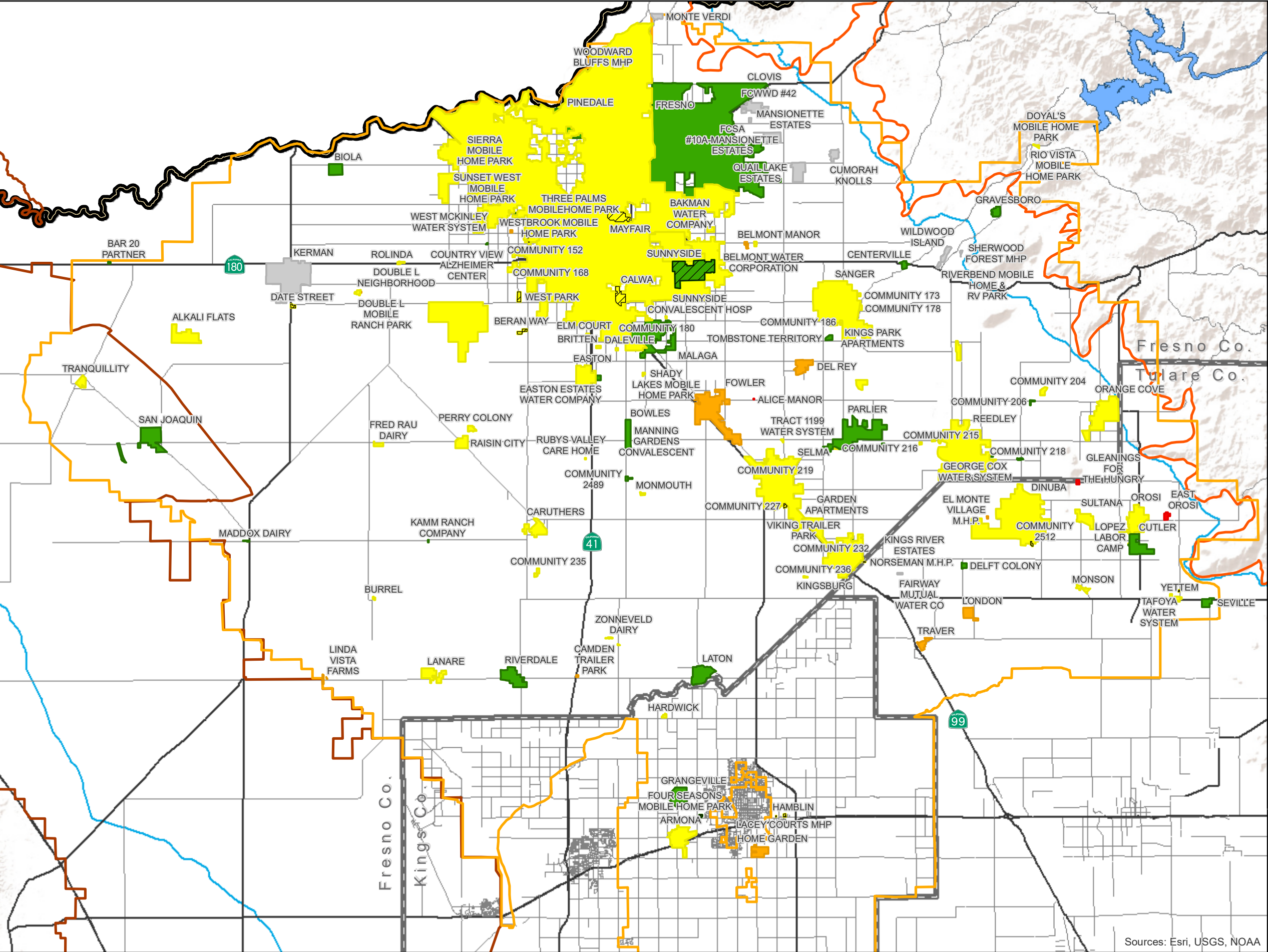




Tulare Kern Funding Area
Disadvantaged Community
Needs Assessment

Kings Basin Water Authority
Community Needs Ranking

FIGURE 17-3

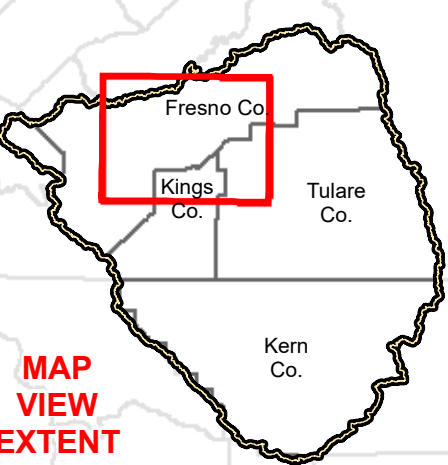


Legend

- Prop 1 Funding Area
- Kings Basin Water Authority
- Southern Sierra IRWM
- Westside San Joaquin IRWM
- Communities That Have Consolidated With Another Water System
- County
- Major Road
- Highway / Interstate
- Major Canal

Estimated Community Needs Ranking

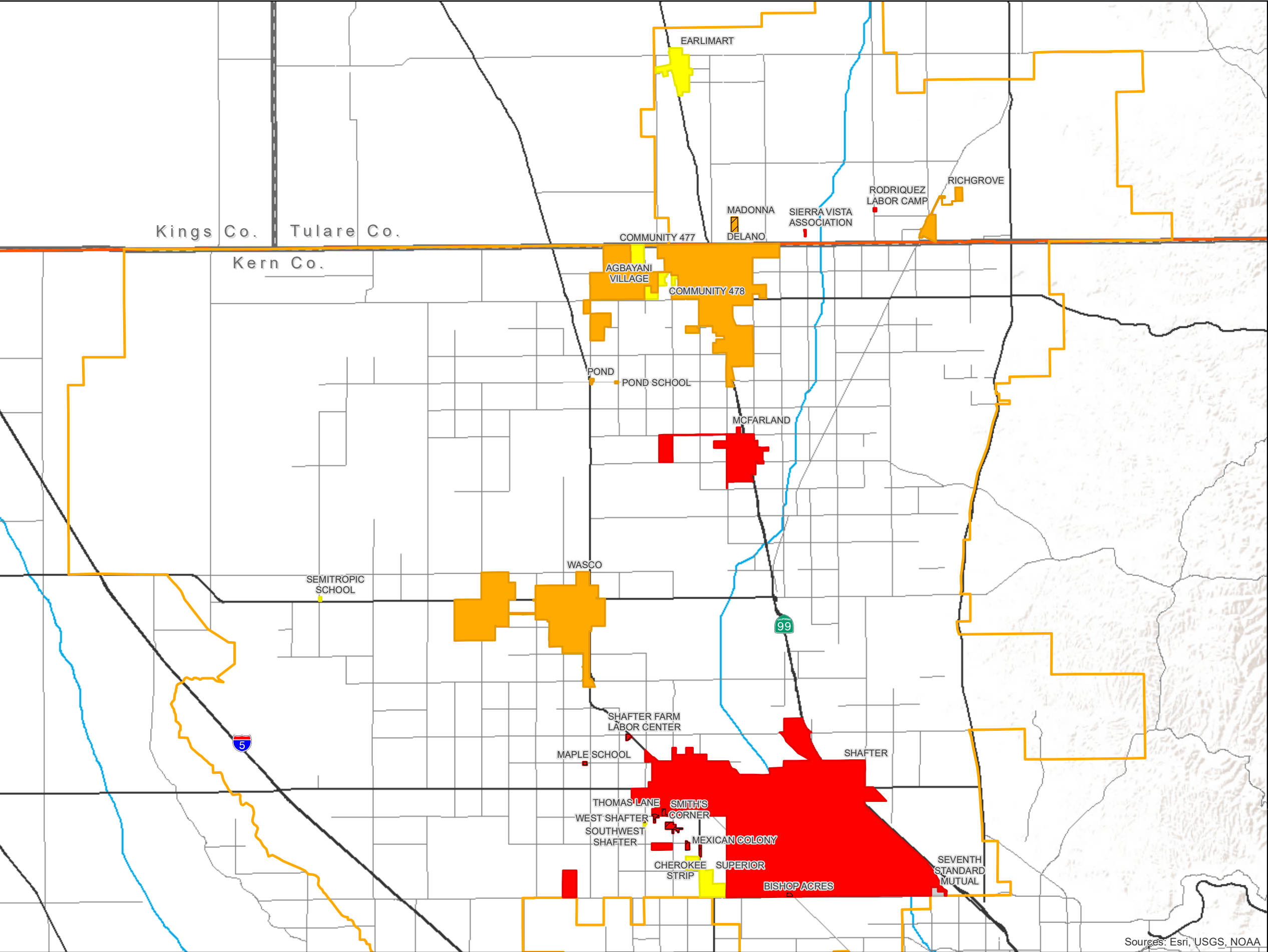
- 0 - No Level of Need
- 1 - Low Level of Need
- 2 - Moderate Level of Need
- 3 - Moderate-High Level of Need
- 4-5 - High Level of Need



EST. 1968
PROVOST & PRITCHARD
CONSULTING GROUP
An Employee Owned Company

0 2 4
Miles

Sources: Esri, USGS, NOAA



**Tulare Kern Funding Area
Disadvantaged Community
Needs Assessment**

Poso Creek IRWMA
Community Needs Ranking

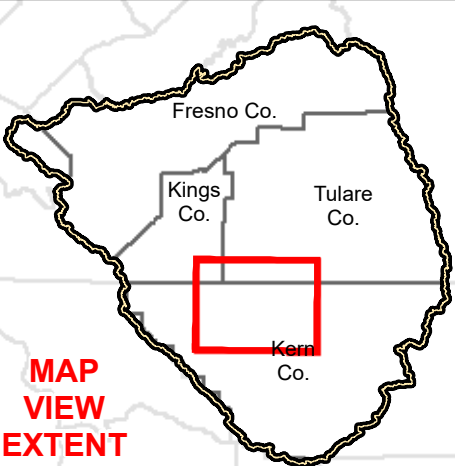
FIGURE 17-4

Legend

- Prop 1 Funding Area
- Poso Creek IRWMA
- Kern IRWMA
- Communities That Have Consolidated With Another Water System
- County
- Major Road
- Highway / Interstate
- Major Canal

Estimated Community Needs Ranking

- 0 - No Level of Need
- 1 - Low Level of Need
- 2 - Moderate Level of Need
- 3 - Moderate-High Level of Need
- 4-5 - High Level of Need



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An Employee Owned Company

0 2 4
Miles

Sources: Esri, USGS, NOAA

Tulare Kern Funding Area
Disadvantaged Community
Needs Assessment

Southern Sierra IRWMA
(South)
Community Needs Ranking

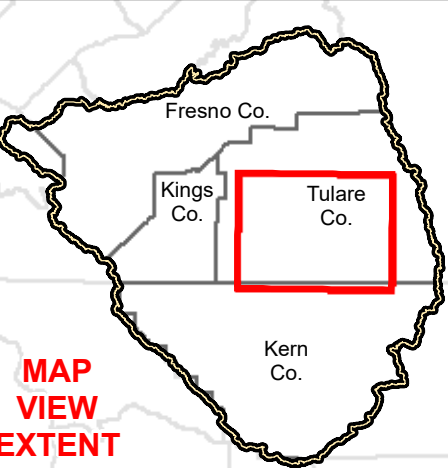
FIGURE 17-6

Legend

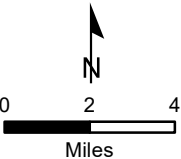
- Prop 1 Funding Area
- Southern Sierra IRWMA
- Kaweah IRWM
- Kern IRWM
- Communities That Have Consolidated With Another Water System
- County
- Major Road
- Highway / Interstate
- Major Canal

Estimated Community Needs Ranking

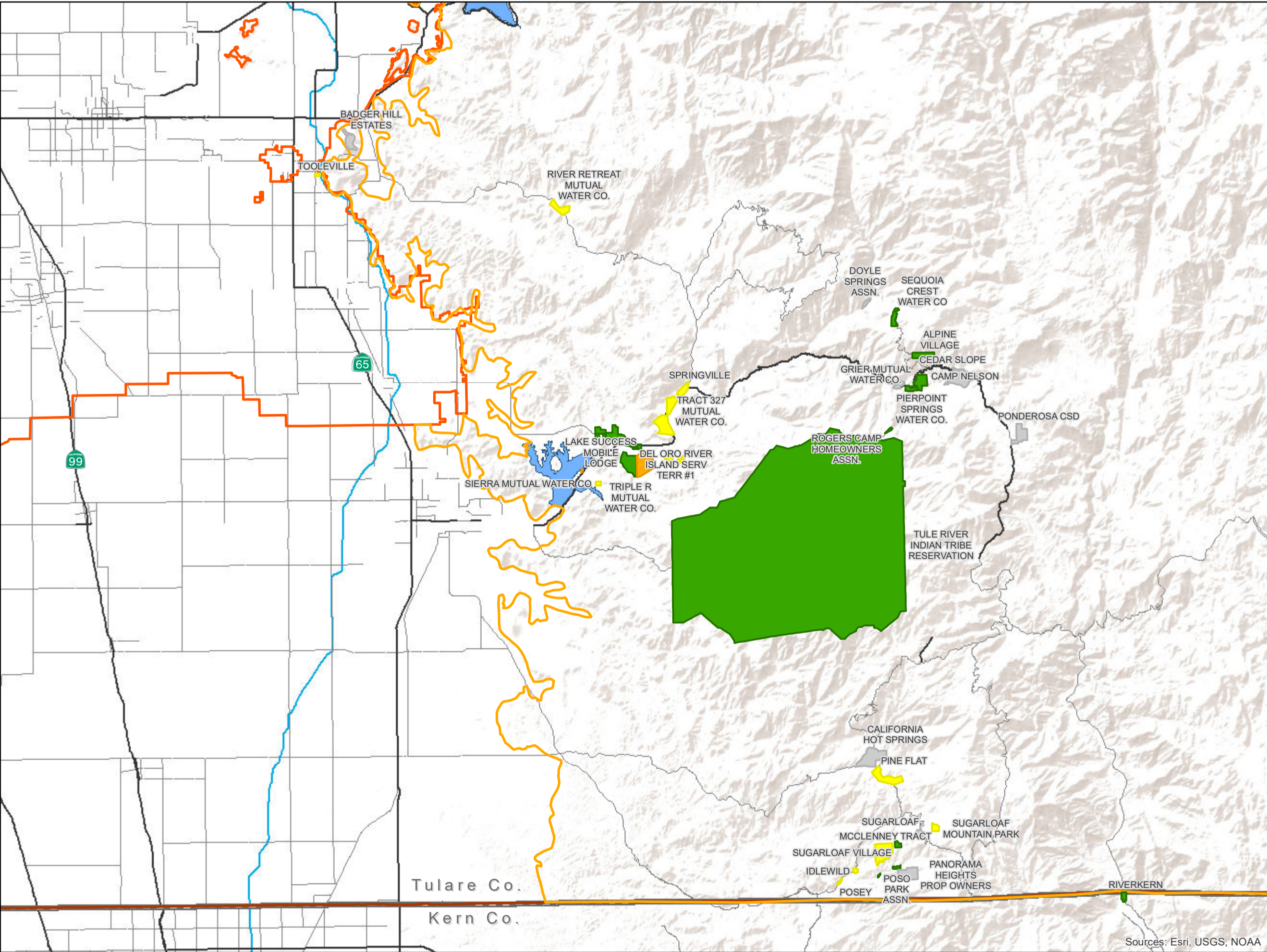
- 0 - No Level of Need
- 1 - Low Level of Need
- 2 - Moderate Level of Need
- 3 - Moderate-High Level of Need
- 4-5 - High Level of Need

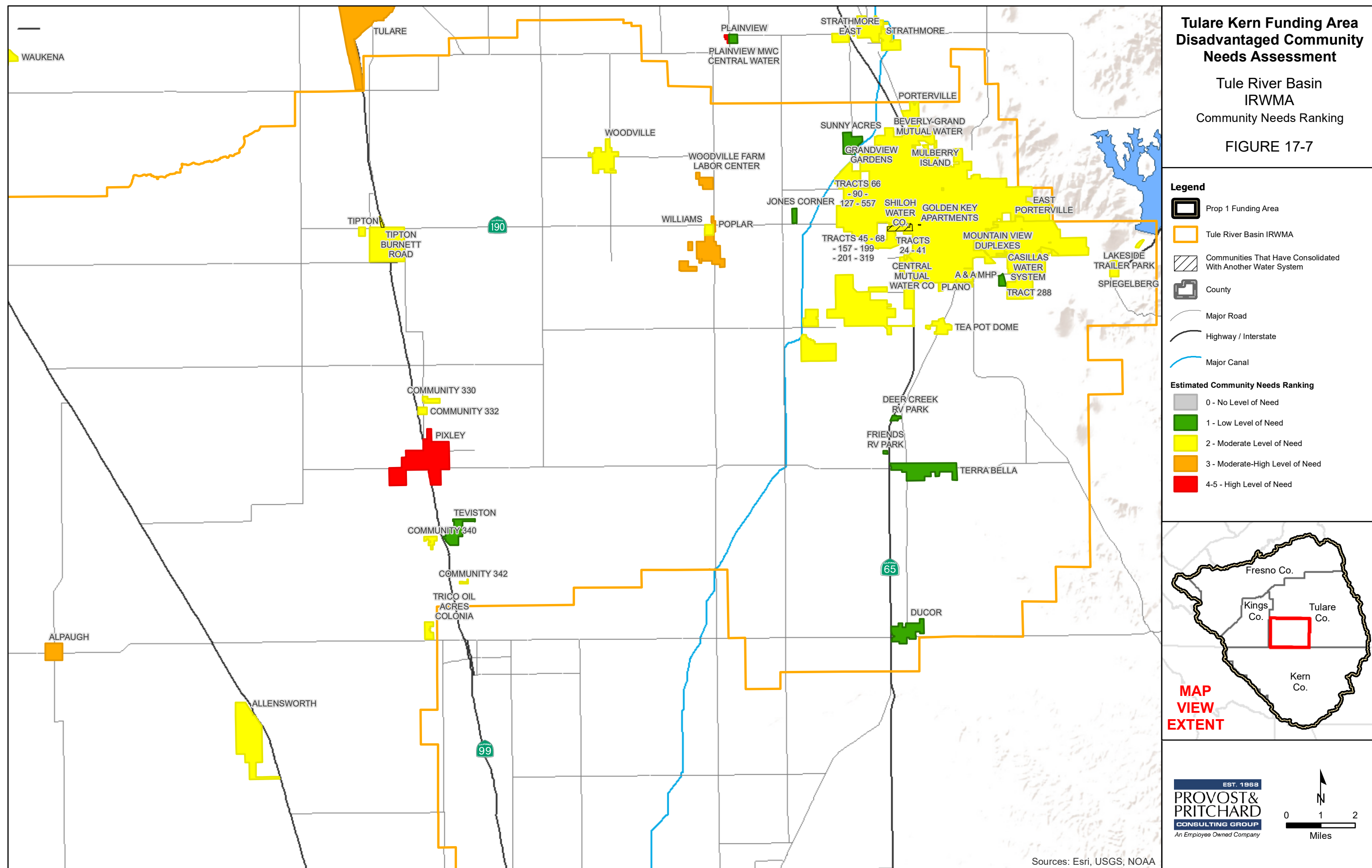


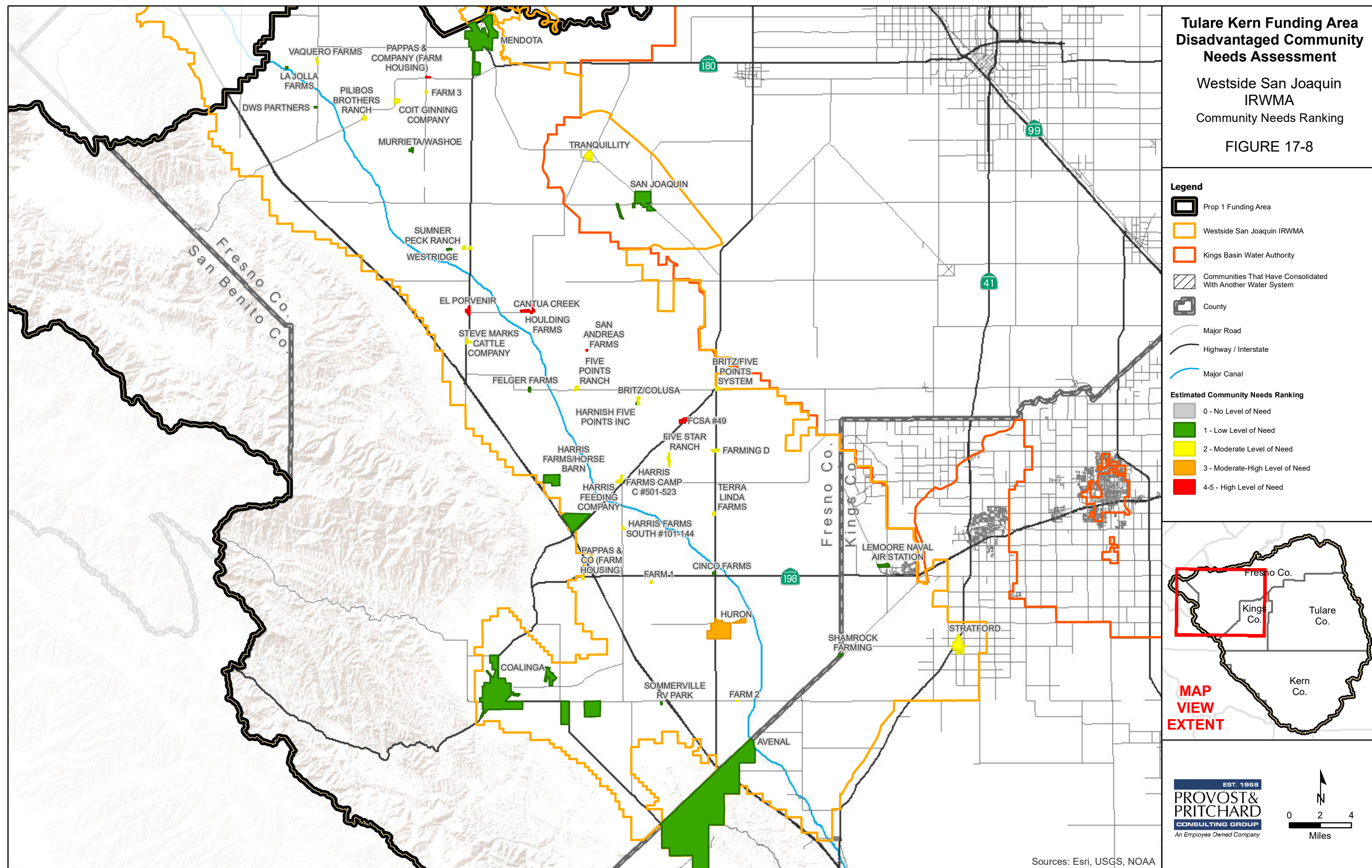
EST. 1968
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CONSULTING GROUP
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Sources: Esri, USGS, NOAA







Tulare Kern Funding Area
Disadvantaged Community
Needs Assessment

Community Needs Ranking
Outside of IRWMA Boundaries

FIGURE 17-9

Legend

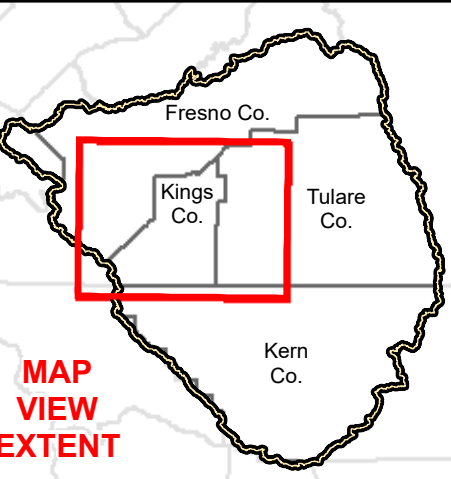
- Prop 1 Funding Area
- Communities That Have Consolidated With Another Water System
- County
- Major Road
- Highway / Interstate
- Major Canal

IRWMA

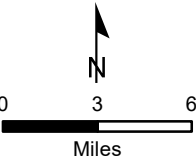
- Kaweah River Basin
- Kern County
- Kings Basin
- Poso Creek
- Southern Sierra
- Tule
- Westside - San Joaquin

Estimated Community Needs Ranking

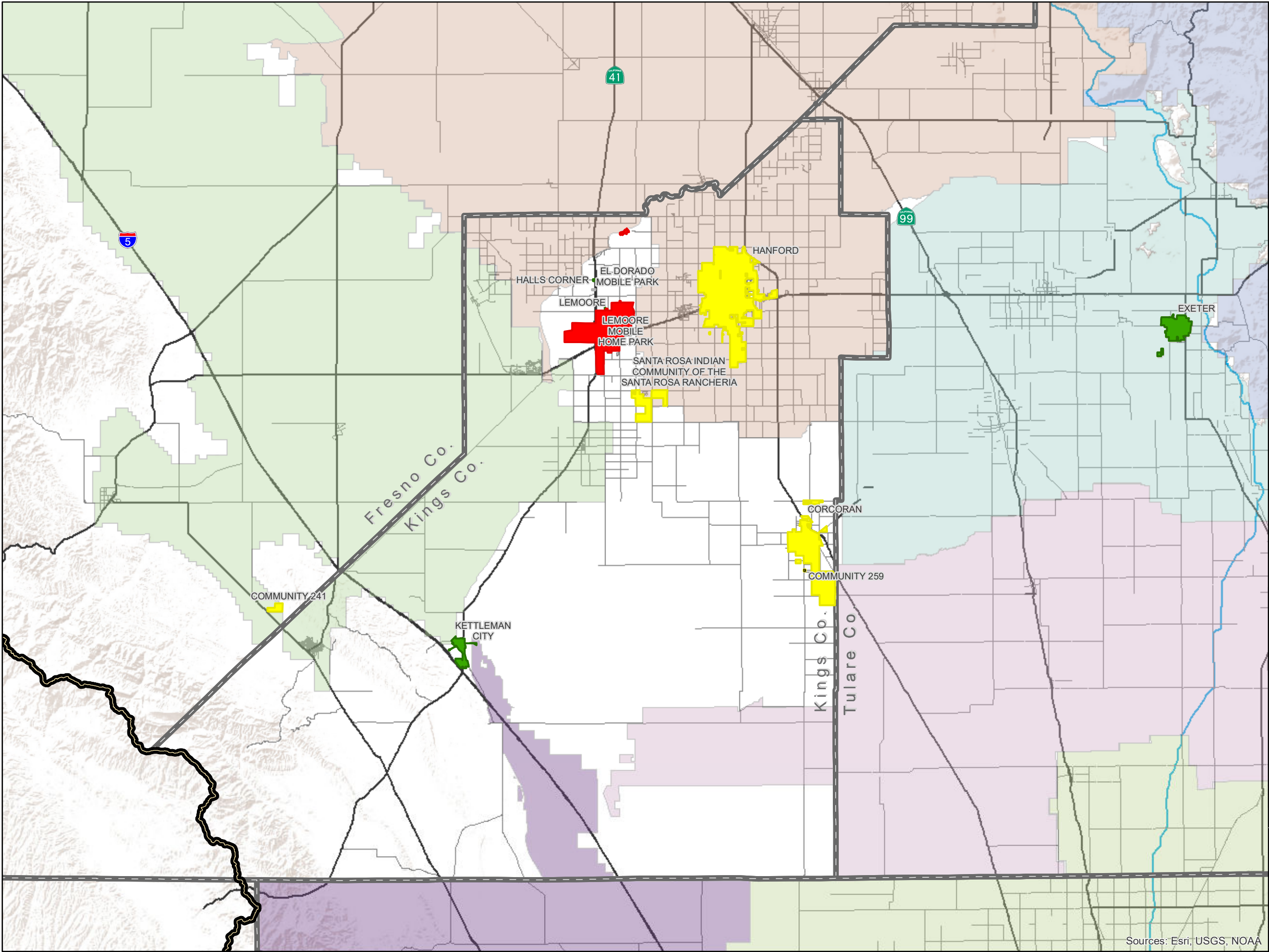
- 0 - No Level of Need
- 1 - Low Level of Need
- 2 - Moderate Level of Need
- 3 - Moderate-High Level of Need
- 4-5 - High Level of Need



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Sources: Esri, USGS, NOAA



18 Conclusions and Recommendations

18.1 Summary of Findings

The purpose of this Needs Assessment is to provide a better understanding of the water management needs of DACs in the Funding Area. The Needs Assessment was presented in two phases: Preliminary Needs Assessment and Final Needs Assessment. The Preliminary Needs Assessment was utilized to help direct Project Development funding through the DACIP.

This Final Needs Assessment provides information related to DAC needs that can be used for future IRWM or other funding assistance efforts. A web portal was developed through the Needs Assessment activity. The web portal provides a consolidated source of information for use by communities, counties, IRWMAs, the State, and others. This section summarizes some of the needs that have been highlighted through this Needs Assessment.

Many communities throughout the TKFA are vulnerable due to limited water supply reliability. Communities that rely on a single water source are vulnerable to the failure of the one source. Similarly, communities that rely on private wells are vulnerable. If an individual well fails or goes dry, the residents relying on that well do not have another supply. In total, 162 (45%) DACs in the funding area rely on either a single water source or private wells.

Water quality issues are prevalent throughout the funding area as well. While many communities are able to get new sources of water or treatment to remove contaminants, these projects often take several years to implement. Several communities are still trying to achieve compliance for arsenic or other contaminants, which now are also having to deal with the newly regulated TCP. Currently, 64 (18%) DACs in the funding area have a compliance order for at least one regulated drinking water contaminant.

Many of these communities have water rates that exceed the affordability threshold of 1.5% of the MHI, as discussed in Section 14. In addition, the Needs Assessment survey resulted in several comments about aging infrastructure. This is not easily definable and relies on specific knowledge of a water system. While there is not currently a database that details the age and condition of infrastructure, this is a real issue that will persist.

The findings of the Needs Assessment are summarized in Table 18-1. In the TKFA, 46 (13%) DACs have been identified as having a high level of need based on the scoring criteria described in Section 17.

Table 18-1. Summary of Findings

	DACs, SDACs and Tribes
Count	358
Incorporated	30
Unincorporated	328
Population	1,437,069
Connections	486,714
Single Source	94
Out of Compliance (Water Quality)¹	64
Communities using Private Wells	56
WWTFs with Enforcement Actions (includes Non-DACs)	43
High Level of Need (based on scoring criteria described in Section 17)	46

1. Number of water systems that are out of compliance. A water system may serve multiple communities.

18.2 Recommendations

The web mapping tool generated through this program should continue to be maintained and updated on a regular basis, as discussed in Section 0. This is a valuable tool to allow communities, counties, IRWMAs, and the State track and understand the needs of DACs. As needs change, either because they have been resolved or because new issues or new regulations emerge, the web mapping tool will be a resource for the various interested parties and public to be able to track the current status of needs within a community. The information provided in the web mapping tool can be useful in developing funding assistance applications through IRWM or other funding assistance programs.

The State should continue to provide funding opportunities for communities with water supply, water quality, water or sewer infrastructure, and wastewater treatment related needs. Communities and technical assistance providers should continue to seek these funding sources.

Initiatives at the state level should continue to encourage consolidations for both water and sewer services. As found in previous studies, the lack of economies of scale in some of these small communities makes it challenging to properly operate and maintain the water and sewer infrastructure. Consolidating with a neighboring larger community or city may help resolve some of these challenges.

IRWMAs should continue to engage DACs in the planning processes. In addition, DACs should become more involved as information and resources, as well as opportunities for funding, can be shared.

Appendix A

Needs Assessment Survey

Appendix B

Needs Ranking Summary

Appendix C

Project Advisory Committee Framework

Appendix D

Web Mapping Tool Source Data Update Guidelines

Appendix E

DAC Engagement in IRWM

Appendix F

White Area Recommendations

Appendix G

Interim Drinking Water Supply Funding List

Appendix H

IRWM Project Lists

Appendix I

Project Development