

2. Proposed Management Zone

2.1 Proposed Preliminary Boundary

The boundary of the Kings River East/Alta Irrigation District (KRE/AID) Management Zone is the combined boundaries of the Kings River East (KRE) Groundwater Sustainability Agency (GSA) and Alta Irrigation District (AID) (**Figure 2-1**). The Management Zone boundary was determined collaboratively by stakeholders during several meetings (see Section 1.3). The proposed boundary combines the institutional entity of AID with the regional collaboration management entity of the KRE GSA. With the exception of a small area in the southwest portion of the AID, the entire AID lies within the GSA boundary and is the primary water management agency within the proposed Management Zone. Many of the stakeholders involved with GSA or AID would also be participants in the proposed Management Zone.

2.2 Characterization of Proposed Management Zone

The subsections below describe the area encompassed by the proposed Management Zone, including general geographic and hydrologic characteristics, jurisdictions located within the planning area and key planning agencies and utilities. **Table 2-1** describes several key data sources for the Management Zone.

2.2.1 Geography

The eastern edge of the proposed Management Zone aligns with the edge of the alluvial boundary and the edge of the Sierra Nevada foothills. The Kings River enters the proposed Management Zone in the narrow, northernmost section (**Figure 2-2**). Flow into the Management Zone from the Kings River is regulated by the Pine Flat Dam on Pine Flat Reservoir, which is located just outside of the Management Zone. The Kings River travels southwest through the northern portion of the Management Zone, flows south and east forming part of the western edge of the Management Zone boundary, flows south past the western side of Reedley, before then turning southwest towards Kingsburg and eventually flowing out of the Management Zone near its southwestern corner (Figure 2-2). Other natural surface water features associated with the Management Zone include: Wahtoke Lake in the northern portion of the Management Zone; Cottonwood Creek which enters and ends near the Management Zone's southern border (Figure 2-2). In addition to these natural waterways: (a) AID operates 250 miles of open canals and 75 miles of pipelines to supply Kings River water to its district users; and (b) the Friant-Kern Canal runs northwest-southeast near the eastern edge of the Management Zone.

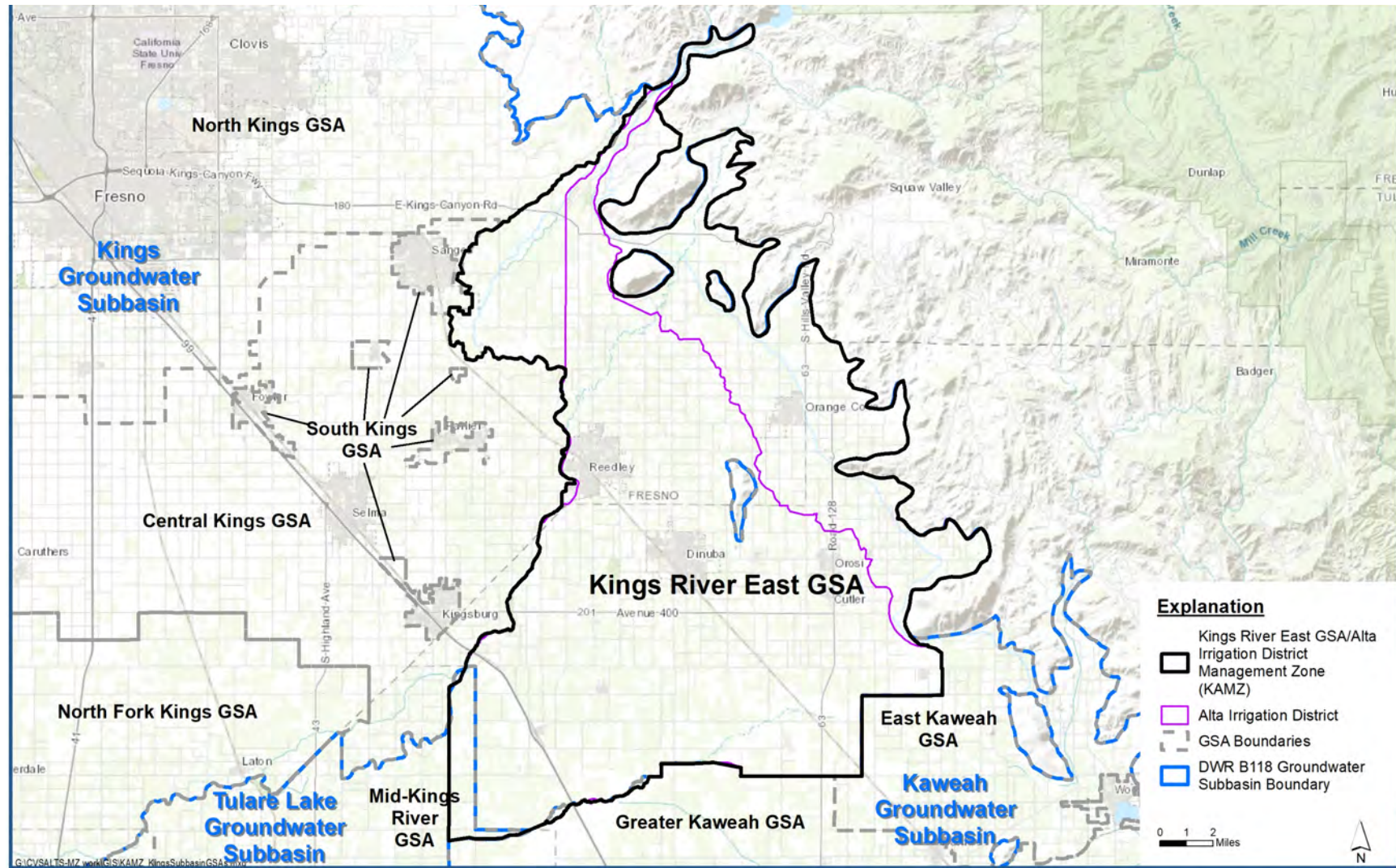


Figure 2-1. Proposed KRE/AID Management Zone Boundary and GSAs within Management Zone Area

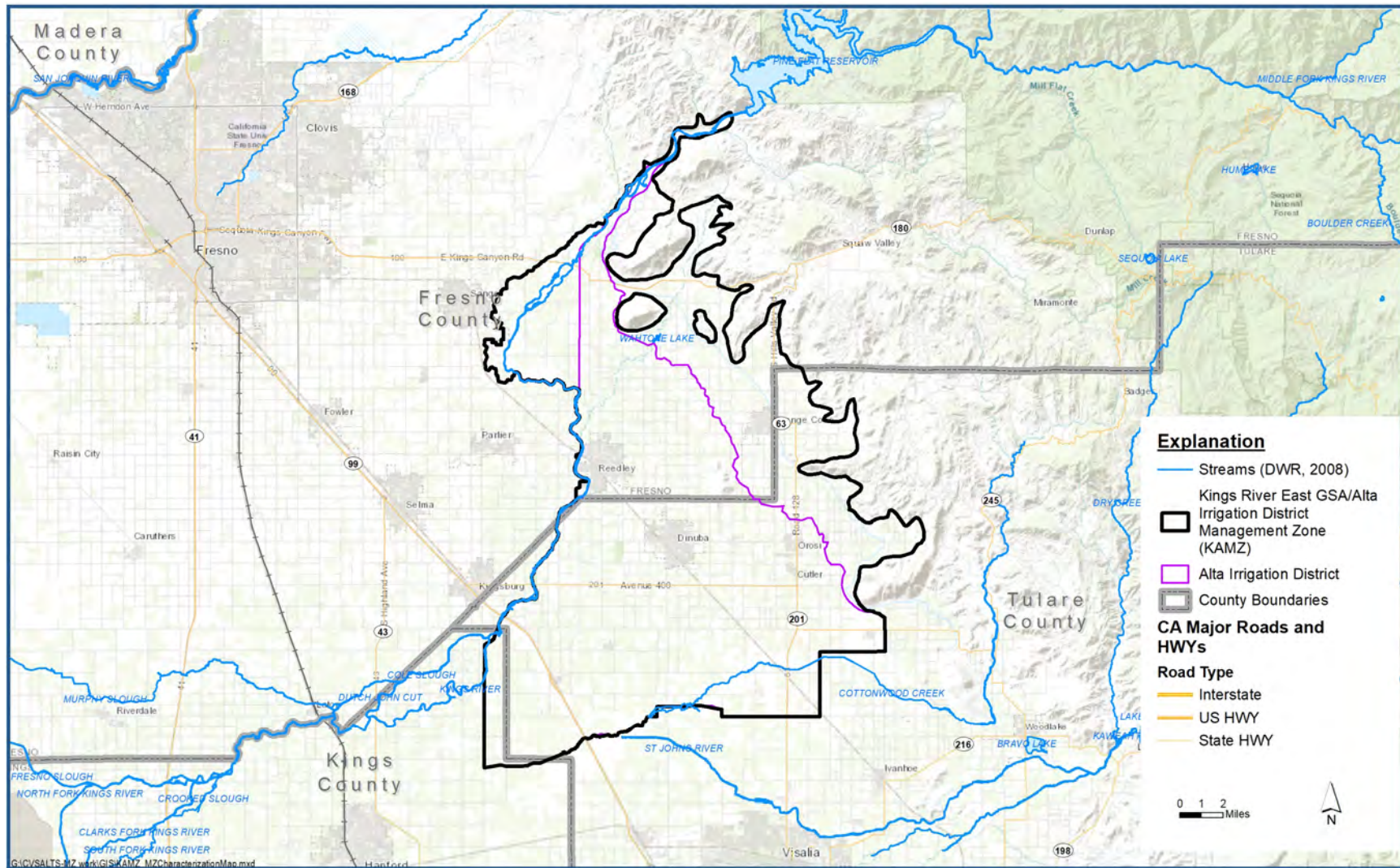


Figure 2-2. Surface Water Characteristics of the Proposed Management Zone

Table 2-1 Key Data Sources to Characterize Proposed Management Zone

Boundary Type	Source for Boundary Data	Comments
Groundwater Sustainability Agency	<ul style="list-style-type: none"> Department of Water Resources (DWR) Map Viewer: https://sgma.water.ca.gov/webgis/index.jsp?appid=gasmaster&rz=true Individual GSA links for finding “Interested Parties”: https://sgma.water.ca.gov/portal/gsa/all 	GSA boundaries, and also a list of GSA “Interested Parties”
Groundwater Basin/Subbasin	<ul style="list-style-type: none"> DWR Bulletin 118: https://water.ca.gov/Programs/Groundwater-Management/Bulletin-118 Basin Boundary GIS file: https://water.ca.gov/-/media/DWR-Website/Web-Pages/Programs/Groundwater-Management/Bulletin-118/Files/Bulletin-118-Groundwater-Basin-Boundary-GIS-Data---v6_1.zip?la=en&hash=D947E7AC9E03D122CC5D707369E581DF41320E50 DWR Basin Boundary Modification Map Viewer: https://sgma.water.ca.gov/basinmod/modrequest/map.jsessionid=658C11952F60F610812069F4F5860BCD 	DWR Bulletin 118 basin and subbasin boundaries, including basin boundary modification
Water Districts	DWR by request from the Geology and Groundwater Investigations Section, or here: https://gis.water.ca.gov/arcgis/rest/services/Boundaries/i03_WaterDistricts/MapServer	Irrigation Districts, water districts, community service areas, and community service districts
Public Water Supply Systems	California Environmental Health Tracking Program (CEHTP): https://trackingcalifornia.org/water-systems/water-systems-landing	Division of Drinking Water
State Small Water Supply Systems (SSWS)	By request from County Environmental Health Departments (Fresno, Kings and Tulare Counties)	Boundary data is typically not available for SSWS (usually just an address)
Disadvantaged Communities (DACs)/ Disadvantaged Unincorporated Communities (DUCs)	<ul style="list-style-type: none"> DACs boundaries available from DWR: https://gis.water.ca.gov/app/dacs/ DUCs boundaries available from PolicyLink by request (https://www.policylink.org/) 	DUC boundaries only available for portions of the San Joaquin Valley

The proposed Management Zone lies within the San Joaquin Valley Groundwater Basin and the Kings Subbasin (Groundwater Basin Number 5-22.08) (DWR 2016) (**Figure 2-3**). While the California Department of Water Resources (DWR) updated the basin boundaries in 2016 a more recent updated basin boundary GIS coverage that contains approved basin boundary modifications became available in February 2019.¹ Recent boundary revisions were based on the following requests:

¹ <https://water.ca.gov/Programs/Groundwater-Management/Bulletin-118>. The actual GIS file was accessed online in February 2019: https://water.ca.gov/-/media/DWR-Website/Web-Pages/Programs/Groundwater-Management/Bulletin-118/Files/Bulletin-118-Groundwater-Basin-Boundary-GIS-Data---v6_1.zip?la=en&hash=D947E7AC9E03D122CC5D707369E581DF41320E50

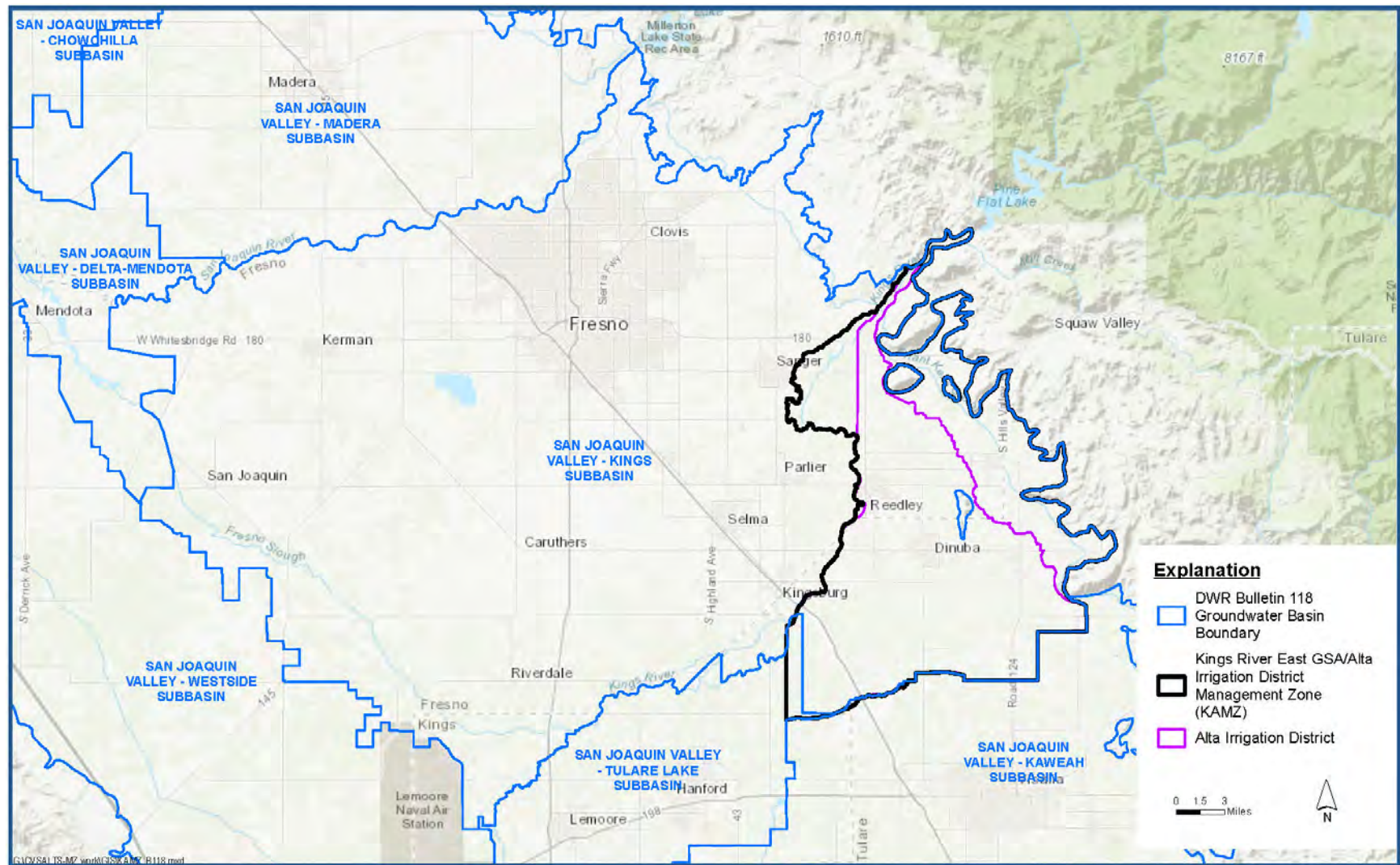


Figure 2-3. Groundwater Subbasins within and adjacent to the Proposed Management Zone

- Kings River Conservation District – Modify the boundary to correct small segments that divide various local jurisdictions in the south and southeast.
- Madera County – Modify boundary along its northern border to provide an updated representation of the Madera County boundary.
- San Luis & Delta-Mendota Water Authority – Modify the boundary to accommodate bifurcated jurisdictional entities along the northwestern border.

Water users in the proposed Management Zone use both surface water and groundwater to meet the water demands of the area; users rely more heavily on groundwater during periods of drought. The reliance on groundwater has resulted in a decline in groundwater levels from the early 1900s when the distance from the ground surface to the groundwater table averaged less than 10 feet (AID 2010). The area is dependent on the highly variable snowpack that occurs in the Sierra Nevada Mountain Range to the east. Irrigation water demands are met by conjunctive use of groundwater and surface water supplies, but all domestic water demands are met by groundwater.

2.2.2 Jurisdictions

The proposed Management Zone includes portions of southern Fresno County, northern Tulare County and a very small area within Kings County (see Figure 2-2). Key communities within each of these areas include:

- Fresno County: Reedley and Orange Cove (incorporated)
- Tulare County: Dinuba (incorporated) and Orosi, Cutler, and Traver (unincorporated)

2.2.3 Groundwater Sustainability Agencies

Groundwater Sustainability Agencies (GSAs), established under the Sustainable Groundwater Management Act (SGMA), are comprised of water users in the area. GSAs are required to list interested parties, including irrigation districts, public water supply systems, coalitions, etc. that are involved with the management of groundwater resources in the area. As required by SGMA, GSAs are required to prepare Groundwater Sustainability Plans (GSP) which requires each GSA to develop its own Hydrogeologic Conceptual Model (HCM), determine groundwater conditions in the area (including water quality), and estimate water budget components including annual groundwater pumping. Each of these GSP elements is useful with regards to the management of nitrate.

DWR, which oversees the development of GSPs for GSAs in the State of California, has established a web-based Portal for GSA documentation.² GSAs are located within and around the proposed Management Zone include (see Figure 2-1):

² GSA boundaries: <https://sgma.water.ca.gov/webgis/index.jsp?appid=gasmaster&rz=true>

- Within the proposed Management Zone, there is one exclusive GSA, the KRE GSA³
- Adjacent to the Kings River East GSA, there are six GSAs:
 - North Kings GSA – To the northwest in the Kings Subbasin
 - Central Kings GSA – To the west in the Kings Subbasin
 - South Kings GSA – Bordering a small portion of the western border in the Kings Subbasin
 - Mid-Kings River GSA – To the southwest in the Tulare Lake Subbasin
 - Greater Kaweah GSA – To the south in the Kaweah Subbasin
 - East Kaweah GSA – To the southeast in the Kaweah Subbasin

Attachment B to this Preliminary Management Zone Proposal provides a summary of resource management agencies associated with the development of GSAs in and around the proposed Management Zone.

2.2.4 Water Management Entities

Water management-related districts include irrigation districts (ID), water districts (WD), water service areas (WSA), and community service districts (CSD). The following water management-related districts are located in the proposed Management Zone (**Figure 2-4**): AID, City of Dinuba WSA, City of Orange Cove, City of Reedley WSA, Cutler Public Utilities District, Hills Valley ID, Kaweah Delta Water Conservation District, Kings County WD, Kings River WD, Orange Cove ID, Sultana Community CSD, and Tri-Valley WD.

2.2.5 Drinking Water Systems

Table 2-2 summarizes how residential water systems are classified in California. Systems are categorized by use, connections and duration of service over a period of a year. Residential water systems are distinguished by the total number of service connections, e.g., Local Small Water Systems (LSWS) serve 2 to 4 household connections, State Small Water Systems (SSWS) serve 5 to 14 household connections, and residential Public Water Systems (PWS) serve more than 14 household connections. The following subsections provide additional information regarding each of these types of water systems within the proposed Management Zone. Residential PWS are termed Community Systems. The PWS designation also includes non-residential water systems, such as Transient Non-Community Systems (rest stops, retailers, gas stations, markets, parks, etc.), and Non-Transient Non-Community Systems (churches, schools, non-retail companies, etc.).

³ <https://sgma.water.ca.gov/portal/gsa/print/225>

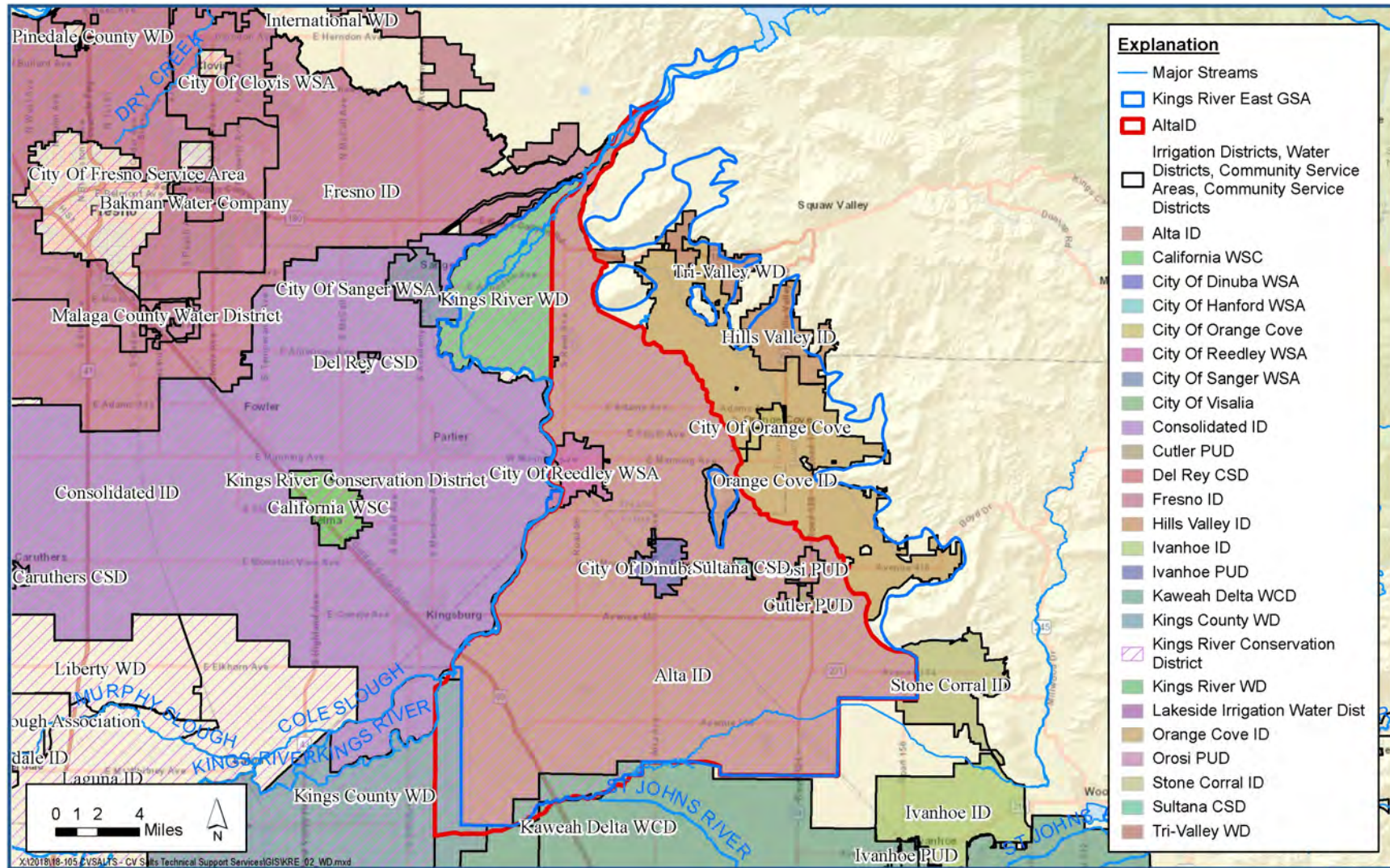


Figure 2-4. Water Management Entities Located within and adjacent to the Proposed Management Zone.

Table 2-2. Classification of Drinking Water Systems by Constituency, Connections, and Duration of Service per Year (adapted from Boyle et al. 2012)

Duration of Service	Connections:		< 5	5 +	< 15	15 +	< 200	200 +
	Persons Served:		< 25			25+		
N/A	Small Water System (SWS) ¹	Classification Defined By	Connections					
< 60 days/year	Local Small Water System		Connections & (persons, duration)					
< 60 days/year	State Small Water System (Connections & (persons, duration)				
≥ 60 days/year	Community Public Water System ²					Connections or (persons, duration)		

¹ Classification as a SWS does not preclude classification as any of the other types. SWS may be regulated by DDW or by Local Primary Agency county.

² A PWS is a system for the provision of water for human consumption that has 15 or more service connections OR regularly serves at least 25 individuals at least 60 days per year.

2.2.5.1 Public Water Systems

PWS are defined as systems that provide drinking water to: (1) at least 15 households for Community systems; or (2) at least 25 people 60 days or more per year for non-Community systems (see Table 2-2). PWS, which are regulated by the State Water Resources Control Board (State Water Board) Division of Drinking Water (DDW), are required to submit water samples of their raw and delivered water for a broad suite of regulated constituents on various schedules that depend on the constituent and the source water context. All PWS data on water quality, source locations, service areas, and historical data are publicly available on the State Water Board website.⁴

The California Environmental Health Tracking Program (CEHTP) maintains a dataset of PWS boundaries in California.⁵ These data are provided to CEHTP by the water systems. Some quality control measures are observed by CEHTP, but the data do contain errors, including boundary errors, e.g., overlapping, misplaced boundaries or duplicated boundaries. The data are hosted as a shapefile with attributes for the PWS ID, system name, the number of connections and number of persons served, and the water system type.

The PWS ID and system name are reliable except in the few cases where system boundaries are entirely mis-located. When the connections and population served numbers are compared with those same datapoints in the Safe Drinking Water Information System (SDWIS) database maintained by the State Water Board's DDW, these values appear to either be lacking quality control procedures or are not updated. It is unclear if these numbers are reported by the systems or added by CEHTP based on other data. However, many PWS are wholesalers, thus some populations may inadvertently be counted twice.

⁴ <https://data.ca.gov/dataset/drinking-water-public-water-system-information>

⁵ <https://trackingcalifornia.org/water-systems/water-systems-landing>

Figure 2-5 provides the locations of PWS boundaries within the proposed Management Zone. A few unexplained overlaps are present; these overlaps are most likely the result of overlap between wholesalers and retail water purveyors.

2.2.5.2 State Small Water Systems

SSWS are defined as systems serving at least five but not more than 14 residential households. Mutual Water Companies are frequently classified as a SSWS. Typically, SSWS are regulated by county environmental health departments; regulatory oversight of these systems varies by county. Typically, counties require submission of water quality samples annually (at most) for a smaller set of constituents than monitored by a PWS.

SSWS data are public; however, most counties do not have these data compiled in any easily accessible format (many counties require a fee for data retrieval for these systems). Typically, a county will have hard-copy files of the original permit filed for the SSWS, and an annual record of water quality data collected for compliance with county regulations (although such data collection may be sporadic and only for a few constituents). The permit typically includes information on the construction of the water source (well) and the street where service is provided. Most counties do not have maps of SSWS service areas; in most cases, the only way to locate the service area of a SSWS is to use the address recorded on the permit. Some SSWS are included in the PWS boundary data maintained by CEHTP, described above, but this is irregular.

Fresno, Kings and Tulare Counties were contacted to obtain SSWS data for the proposed Management Zone Area. The following information has been obtained to date:

- The Fresno County provided a list of 23 SSWSs located in the County. Fresno County also has a website that includes a utility for gathering available images of documents related to SSWSs, which may include water quality, well construction and service area data.⁶
- Kings County Environmental Health provided a list of seven SSWS and available electronic documents related to each system. These documents included some water quality data, locations of wells, and construction information for most of the wells.
- Tulare County Environmental Health provided addresses of well locations for 30 SSWSs; 25 of those systems had nitrate measurements: one of those systems is located within the Management Zone (Quintero Water System); one is located approximately one mile outside of the Management Zone boundary (Kingsburg Flats). Tulare County information also includes numbers of people and connections served by each SSWS.

⁶ <https://www.co.fresno.ca.us/departments/public-health/environmental-health>

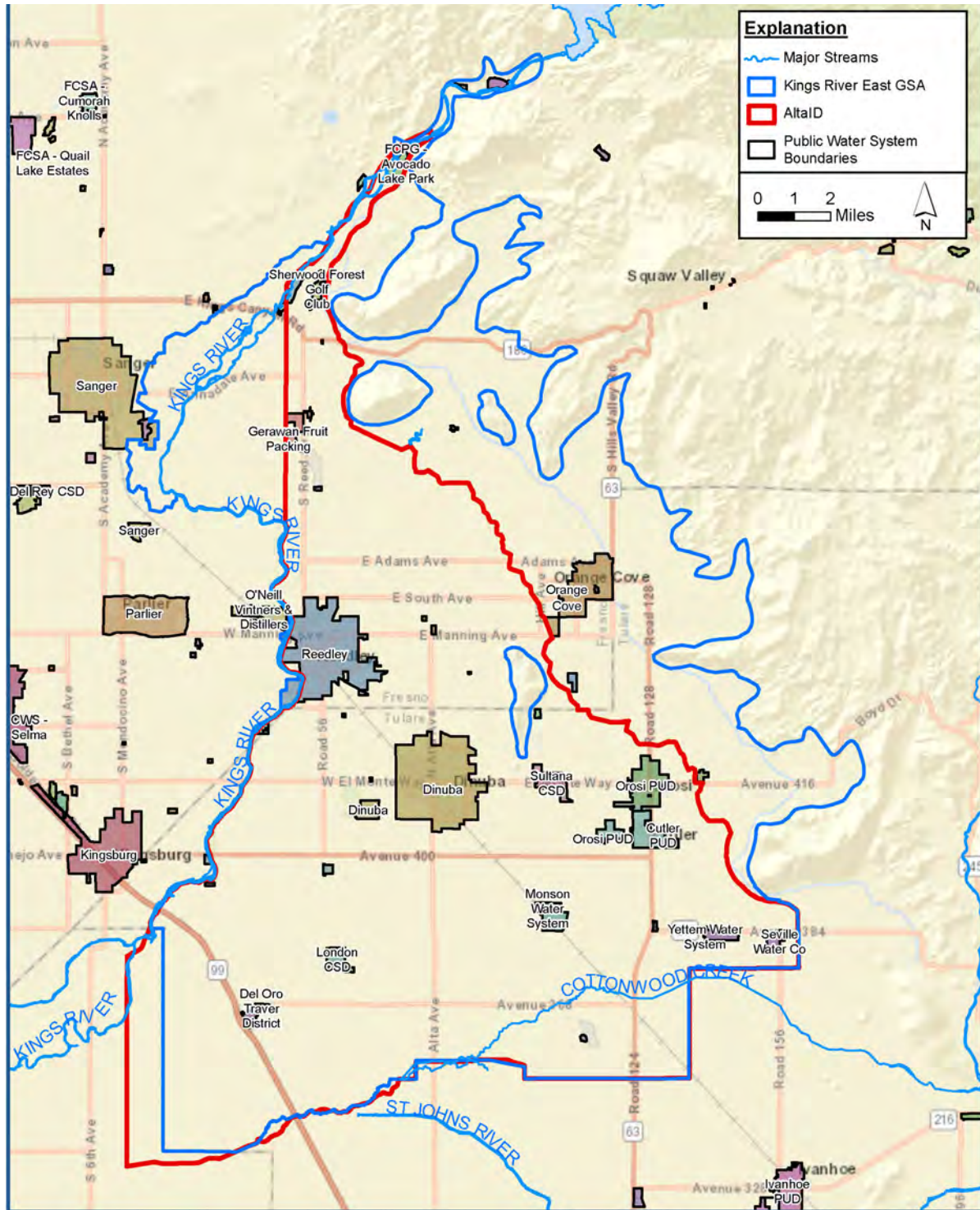


Figure 2-5. Public Water System Boundaries within and adjacent to the Proposed Management Zone

In order to determine if a SSWS is within the Management Zone boundary, the addresses need to be geocoded or plotted on a map. After attempting to geocode the addresses of the water systems (some addresses were incomplete and must be estimated) provided by each County, it was possible to locate only a total of three systems within the Management Zone (**Table 2-3**). Where available, the Counties provided water quality test results, including nitrate test results, as available.

Table 2-3. State Small Water Systems Located within the Proposed Management Zone

County	Small Water System Name	Address
Fresno County	Rio Vista Mobile Home Park	25385 E Trimmer Springs Rd Sanger
Tulare County	Kingsburg Community MWC	39309 Holly Oaks Ln, Kingsburg
	Quintero WS	13547 Ave, Cutler

2.2.5.3 Local Small Water Systems

LSWS include residential systems serving two to four households. LSWSs are typically permitted by county Environmental Health Departments. Most counties regulate LSWS as if they were simply private wells – that is, they are unregulated except for the requirements associated with the drilling permit. Typically, no information is available to identify the difference between a single-household well and one used for a LSWS. No water quality data are typically collected on an ongoing basis from an LSWS and domestic wells, though some counties do collect a water quality sample at the time the well is drilled.

Within the proposed Management Zone area, the following groundwater well information was developed through coordination with the counties:

- *Fresno County* - Fresno County Environmental Health tracks domestic and LSWS wells and has been conducting a water quality survey on these wells for several years. Fresno was able to provide a list of all the wells in the portion of Fresno County within the proposed Management Zone, with nitrate results for many of these wells. The dataset provided included 2,570 Domestic Private wells, which include wells serving an LSWS. The database included the APN of the well location. For some locations a notation was included that the County has a copy of the Well Completion Report (WCR), however, construction information is only available by individual review of the WCRs, which has not been done to develop this Management Zone proposal.
- *Kings County* – The County does not collect water quality data for domestic wells or LSWS wells. The County Community Development Agency archives well permits in a pdf electronic format, and WCRs (also as pdf) if those are provided to the County by the well drillers. WCRs are required to be submitted, but the extent of compliance is poorly understood.

- *Tulare County* - Tulare GIS provided a large database of well and groundwater-related information. These data include information about domestic and LSWS wells; however, at this time is not possible to distinguish among these data types.

2.2.6 *Disadvantaged Communities and Disadvantaged Unincorporated Communities*

DACs and DUCs include many areas of the state that have poor access to regulated drinking water supplies, and the neighborhoods these areas comprise tend to include many households without adequate financial resources to treat their residential domestic supply well water, or even to test for contaminants.

DACs are defined as those areas of the state with Median Household Income (MHI) below 80% of the statewide MHI. These areas are further categorized as Severely Disadvantaged Communities (SDAC) if the local MHI is below 60% of the statewide MHI. DWR, which maintains several databases of DAC Boundaries based on the most recent census,⁷ provides three different scales of analysis for DACs:

- *DAC Tracts* – Census Tracts are the largest census areas compiled below the county level. County boundaries are contiguous with Tract boundaries. Tracts consist of groups of Block Groups.
- *DAC Block Groups* – Census Block Groups are the next scale smaller than Tracts. Tract boundaries are contiguous with Block Group boundaries. Block Groups consist of groups of Blocks.
- *DAC Places* – Census Places, or Census Designated Places (CDP) are not contiguous with other Census boundaries and may consist of groups of complete or partial Blocks or Block Groups. CDPs are typically unincorporated residential neighborhoods; but, unincorporated status is not a requirement for place designation. CDPs are legacy designations, with locally known names. Some are distinct from nearby incorporated areas due to geographic boundaries such as rivers, roads, or topography. DAC Places are typically a more accurate representation of neighborhoods with qualifying MHIs rather than Tracts or Block Groups. DWR does not provide an assessment of DAC status at the Block level.

DUCs are areas that meet the above-defined MHI criteria (80% of statewide MHI). PolicyLink (2013) provides the best available information on DUCs located in the Management Zone area. These locations were developed primarily through the use of Census data, but neighborhoods were also characterized and individually delineated based on parcel density, more detailed income from counties and state agencies, and with input from local resources. Each DUC is designated as one of the following:

⁷ DWR's boundary files for DACs: <https://gis.water.ca.gov/app/dacs/>

- *Island* – Neighborhood within a city or other incorporated area that has been left out of that incorporated jurisdiction
- *Fringe* – Neighborhood on the outskirts of an incorporated area
- *Legacy* – Neighborhood located well outside the boundaries of any incorporated area.

Many of the DUCs identified by PolicyLink overlap with DAC Places identified by DWR (see above) because many CDPs are unincorporated areas that also meet the criteria used by PolicyLink in their study.

Table 2-4 lists and **Figure 2-6** illustrates the locations of the 17 DACs and eight DUCs in the proposed Management Zone. Many of the DUCs identified by PolicyLink overlap with DACs identified by DWR. An investigation of these populations must determine which coverage is more appropriate for each community identified as an overlapping feature. These overlaps occur since many of the CDPs are unincorporated and meet the criteria used by PolicyLink in their study. **Table 2-5** summarizes the characteristics of DACs and DUCs in the Management Zone area. Combined, non-overlapping DAC and DUC areas comprise approximately 10.3% of Management Zone (20,296 acres or 31.7 sq. mi).

2.2.7 Land Use

Table 2-6 and **Figure 2-7** provide the land use characteristics of the proposed Management Zone associated with agricultural activity. Land use in the eastern portion of the Management Zone is predominantly classified as citrus and subtropical crops. The predominate crop shifts to more deciduous fruits and nuts to the west and more field crops to the south.

Besides the nonpoint sources of nitrate loading that can occur due to agricultural land uses, septic systems are also a smaller but potential source of localized nitrate loading. The amount of nitrate loading from septic systems is variable, dependent on the rate of denitrification. Denitrification occurs in the soil column below the septic leachfield, with more denitrification occurring where more carbon is available and where clayey or heavy soils slow the downward flow of water (creating larger anaerobic zones that increase denitrification). Conversely, in soils below the septic leachfield where there is less carbon available and there exists sandy, faster soils, the water travels downward more quickly (creating a thin anaerobic zone), which results in lower denitrification rates, and therefore more nitrate potentially reaching the water table.

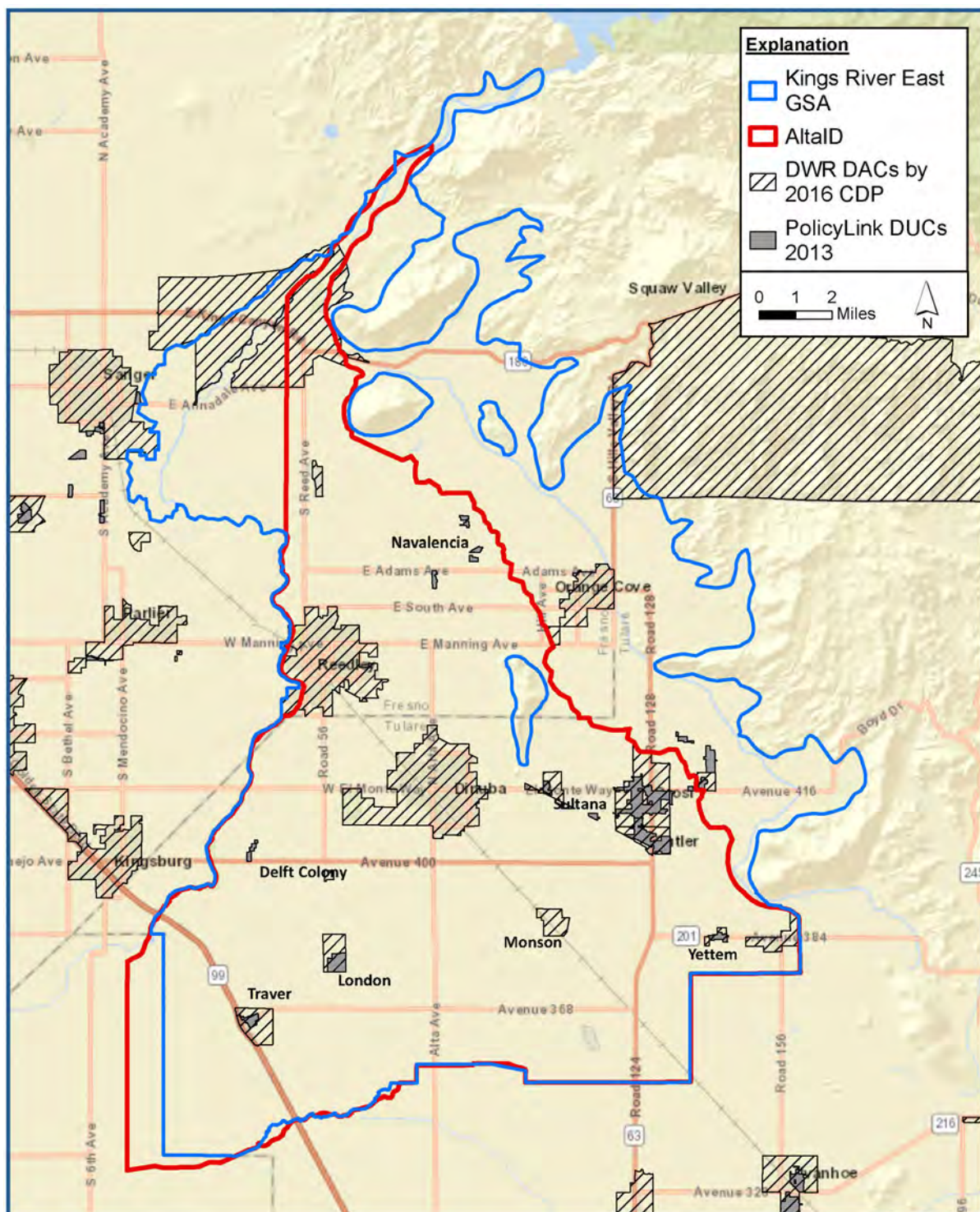


Figure 2-6. Location of DACs and DUCs within and adjacent to the Proposed Management Zone.

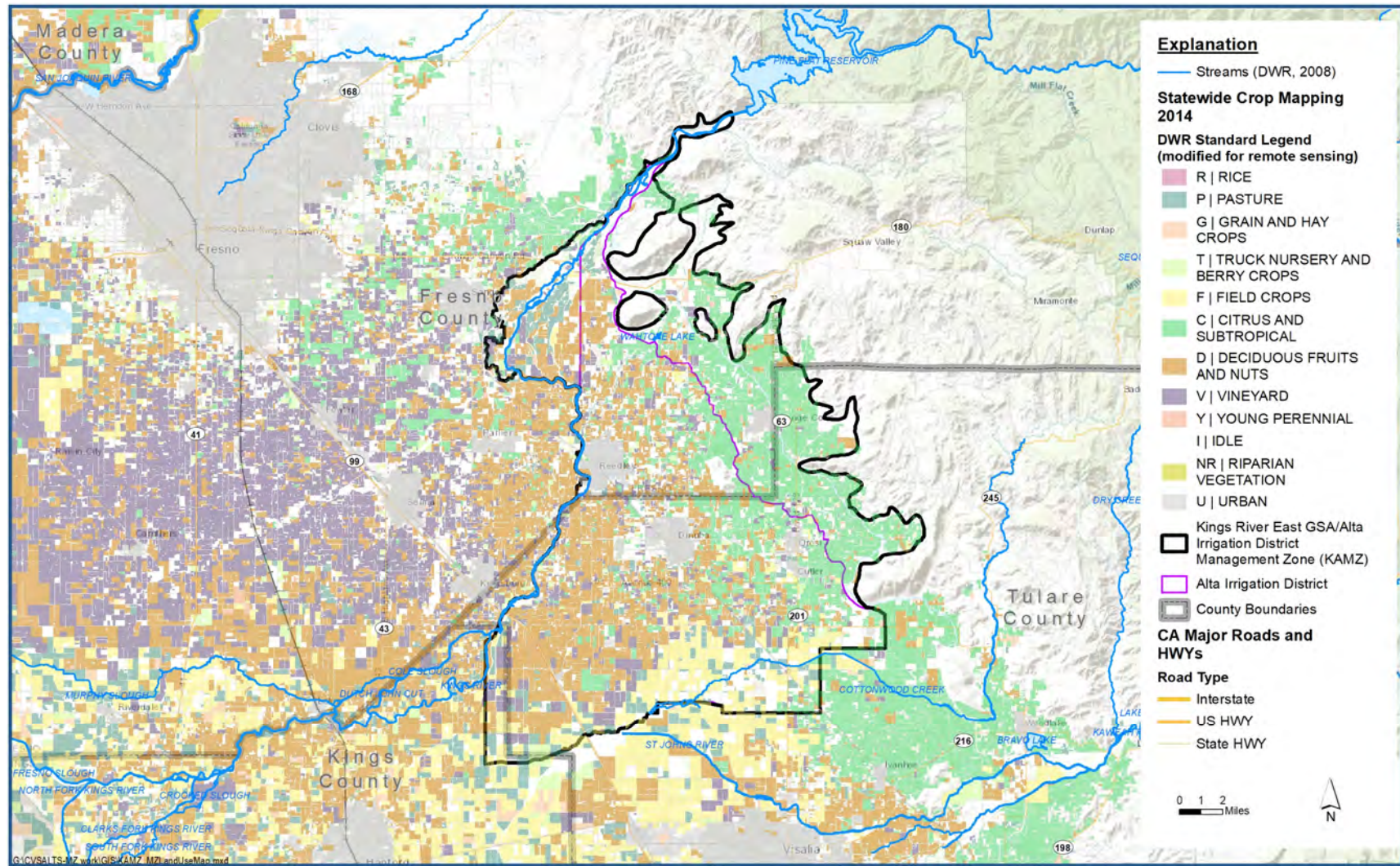


Figure 2-7. Agricultural Land Use in the Proposed Management Zone (Note: Far eastern portion is unmapped).

Table 2-4. Population of DACs and DUCs located in the Proposed Management Zone

Community	DWR DAC Populations by 2010 CDP	DUC Population (PolicyLink 2013)
Centerville CDP	450	
Cutler	5,175	
Delft Colony	103	77
Dinuba	23,465	
East Orosi	785	782
London	2,084	1,855
Minkler	1,293	
Monson	294	
Navelencia		145
Orange Cove	9,566	
Orosi	7,711	11,951
Reedley	25,273	
Sanger	24,741	
Seville	586	
Squaw Valley	3,187	
Sultana	1,099	624
Traver	747	633
Yetter	353	195
Total Population	106,912	16,262

Table 2-5. DAC and DUC Characteristics in the Proposed Management Zone

Category	No. of Locales	Acres (sq. mi.)	Estimated Population
DACS	17	19,935 (31.1)	78,814
DUCs	14	1,518 (2.4)	16,262
DACs (without overlap)	17	18,779 (29.3)	71,948
Total (without overlaps)	31	20,296 (31.7)	88,210

Table 2-6. Table 2-4. Land Use Summary for Proposed Management Zone (land use designations based on DWR 2014)

Land Use Designation	Area (sq. mi.)	Area (acres)	Percent of Total Management Zone Area
CITRUS AND SUBTROPICAL	67.93	43,476	22.06%
Citrus	65.27	41,774	21.20%
Miscellaneous Subtropical Fruits	0.03	17	0.01%
Olives	2.63	1,684	0.85%
DECIDUOUS FRUITS AND NUTS	70.94	45,399	23.03%
Almonds	5.69	3,643	1.85%
Apples	0.19	123	0.06%
Cherries	2.68	1,717	0.87%
Kiwis	1.44	921	0.47%
Miscellaneous Deciduous	1.32	847	0.43%
Peaches/Nectarines	37.59	24,058	12.21%
Pears	0.12	74	0.04%
Pistachios	1.50	958	0.49%
Plums, Prunes and Apricots	15.50	9,919	5.03%
Pomegranates	2.19	1,404	0.71%
Walnuts	2.71	1,735	0.88%
FIELD CROPS	20.29	12,988	6.59%
Beans (Dry)	0.52	333	0.17%
Corn, Sorghum and Sudan	19.14	12,252	6.22%
Cotton	0.51	326	0.17%
Miscellaneous Field Crops	0.12	77	0.04%
GRAIN AND HAY CROPS	1.75	1,120	0.57%
Miscellaneous Grain and Hay	1.12	714	0.36%
Wheat	0.63	406	0.21%
IDLE	15.41	9,863	5.00%
Idle	15.41	9,863	5.00%
PASTURE	15.32	9,803	4.97%
Alfalfa and Alfalfa Mixtures	10.03	6,420	3.26%
Miscellaneous Grasses	0.26	167	0.08%
Mixed Pasture	5.02	3,216	1.63%
TRUCK NURSERY AND BERRY CROPS	3.33	2,131	1.08%
Bush Berries	1.13	723	0.37%
Flowers, Nursery and Christmas Tree Farms	0.07	47	0.02%
Melons, Squash and Cucumbers	0.52	331	0.17%
Miscellaneous Truck Crops	0.87	555	0.28%
Onions and Garlic	0.07	48	0.02%
Peppers	0.03	20	0.01%
Strawberries	0.02	12	0.01%
Tomatoes	0.62	395	0.20%

Table 2-6. Table 2-4. Land Use Summary for Proposed Management Zone (land use designations based on DWR 2014)

Land Use Designation	Area (sq. mi.)	Area (acres)	Percent of Total Management Zone Area
URBAN	11.11	7,108	3.61%
Urban	11.11	7,108	3.61%
VINEYARD	21.65	13,854	7.03%
Grapes	21.65	13,854	7.03%
YOUNG PERENNIAL	0.57	363	0.18%
Young Perennials	0.57	363	0.18%
Grand Total	228.29	146,105	74.13%
Unmapped Total	79.66	50,984	25.87%
Total KAMZ Area	307.95	197,089	100.00%

No current dataset exists that reports the fate of sewage from households. The most recent dataset was from the 1990 Census, which is now almost 30 years old. For the proposed Management Zone, the density of septic systems was estimated using the number of household data from the most recent 2010 census block spatial coverage. The census block coverage was used by erasing areas within City boundaries (CalTrans dataset) or community water system (CWS) service areas (CEHTP dataset). The proportion of area erased was used to reduce the number of households associated with the census block that is likely hooked up to a sewer system. The remaining households outside city and CWS service areas were assumed to have septic systems. **Figure 2-8** illustrates the estimated location and density of septic systems by assigning random locations within remaining census blocks (i.e., areas not served by a sewer system) with the restriction that no septic system can be within 100 feet of another septic system (per California Code).

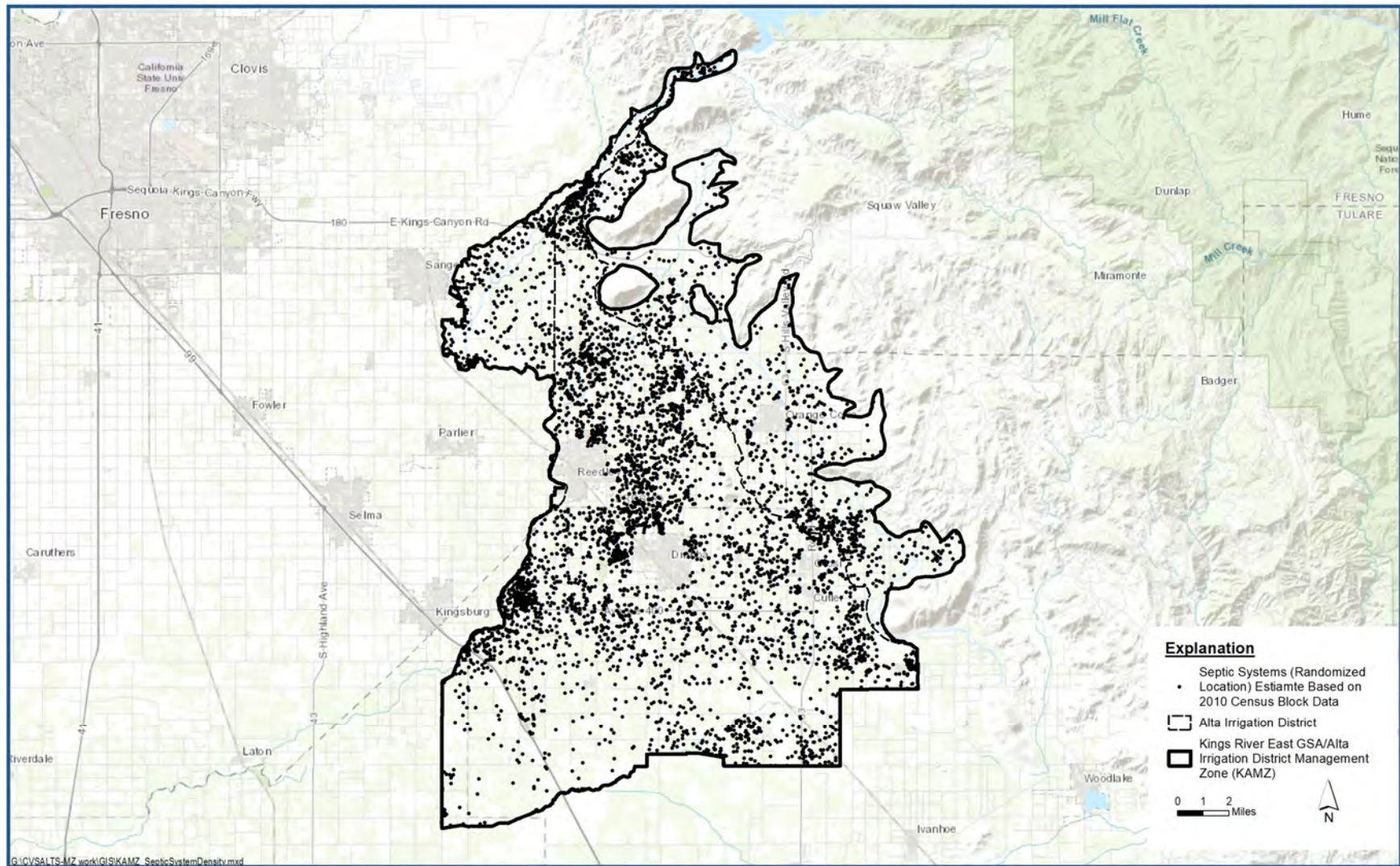


Figure 2-8. Estimated Locations of Septic Systems within the Proposed Management Zone