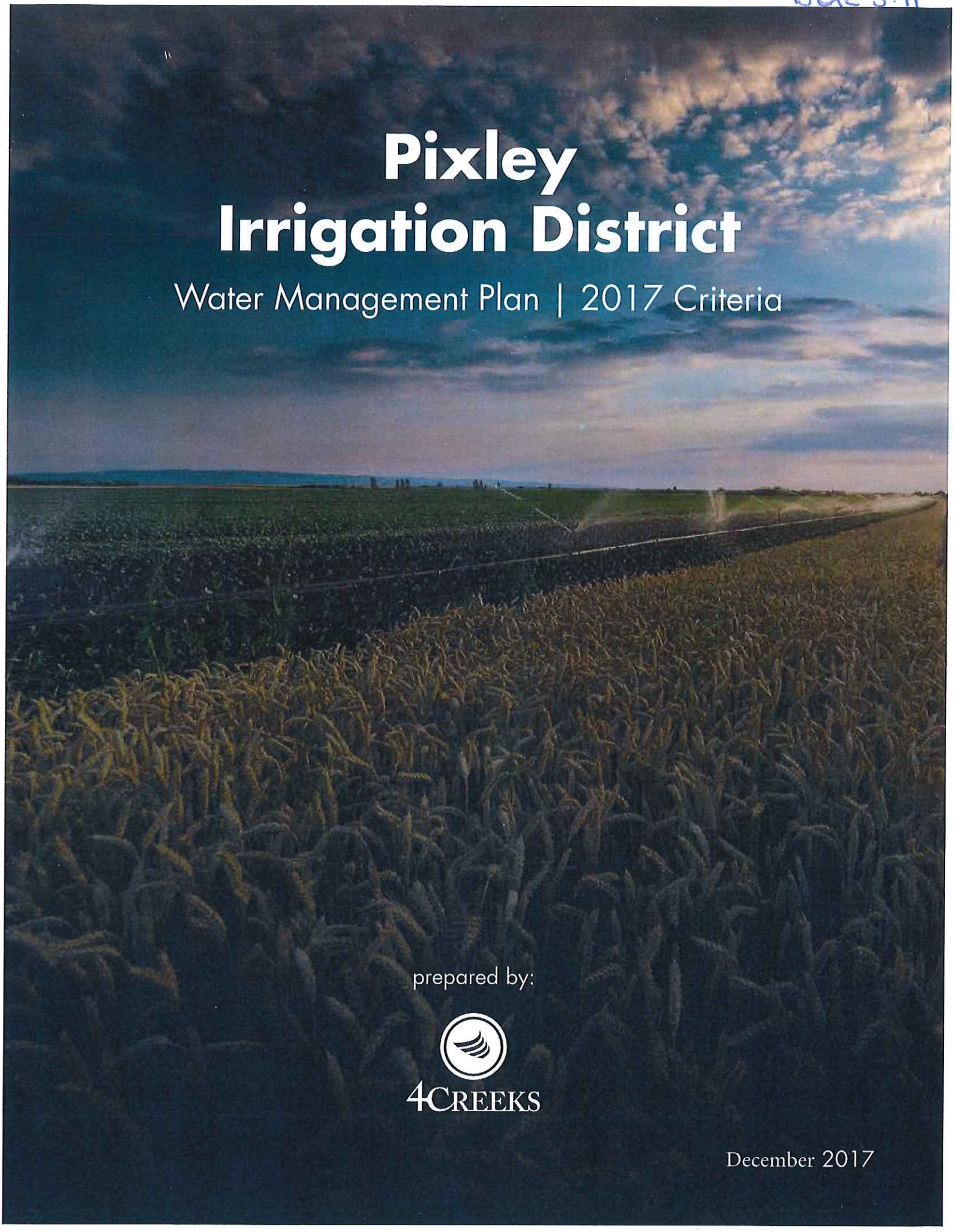
BOR 3.11



# Pixley Irrigation District

## Water Management Plan | 2017 Criteria

prepared by:

4CREEKS

December 2017

## Section 1: Description of District

District Name: Pixley Irrigation District
Contact Name: Eric Limas
Title: General Manager
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### A. History

1. Date district formed: 1958 Date of First Reclamation Contract: 1975
   Original Size of District: 67,571 Current year (last complete calendar Year: 2010

The Pixley Irrigation District (District) was organized in 1958 pursuant to the California Irrigation District Law, Division 11, Sections 20500 through 29975, as amended, of the California Water Code. The District was formed for the purpose of promoting flood control on Deer Creek and to secure a supplemental irrigation water supply from the Federal Central Valley Project and other agencies. This supply was needed to sustain and enhance the irrigated agriculture that had developed in the area.

The District's water supply is derived from the use of groundwater, surface water diverted from Deer Creek and surface water diversions from the Sacramento - San Joaquin Rivers delta under a long-term water service contract for Central Valley Project water with the U.S. Bureau of Reclamation and the State of California.

In 1975, the District sold bonds to purchase a share of the capacity in the Cross Valley Canal in Kern County and entered into a three-party contract with the U.S. Bureau of Reclamation and the State of California (for wheeling) to provide an additional water supply from the Sacramento River for 31,102 acre-feet through an exchange for water supplies with the Arvin-Edison Water Storage District (Cross Valley Exchange Program). This contract provided an additional average water supply of approximately 29,000 acre-feet per year through the first 20 years of contract history.

The District is governed by a board of five directors elected for four-year terms on a staggered basis of two and three, at elections held every two years. The District Board of Directors appoint an Engineer-Manager, Assessor, Collector, Treasurer, Legal Counsel and Secretary. Pixley Irrigation District shares administration, operation and maintenance staff with the Lower Tule Basin Irrigation District.

## 6. Cropping patterns (agricultural only)

| Original Plan (2003) | | Previous Plan (2011) | | Current Plan (2016) | |
|---|---|---|---|---|---|
| Crop Name | Acres | Crop Name | Acres | Crop Name | Acres |
| Almonds | 1,960 | Almonds | 5,443 | Almonds | 6,652 |
| Alfalfa | 5,452 | Alfalfa | 12,160 | Pistachios | 1,803 |
| Grapes | 2,760 | Grapes | 4,981 | Wheat | 16,498 |
| Silage | 9,145 | Wheat | 3,299 | Barley | 2,519 |
| | | Corn | 22,152 | Sorghum* | 7,382 |
| | | Sudan | 984 | Silage* | 8,226 |
| | | Cotton | 2,920 | Cotton | 38 |
| | | | | Beans | 100 |
| | | | | Pecans | 20 |
| | | | | Grapes | 3,579 |
| | | | | Alfalfa | 3,657 |
| | | | | | |
| Other (<5%) | | Other (<5%) | | Other (<5%) | |
| **Total** | **19,317** | **Total** | **53,274** | **Total** | **50,474** |

*Double Cropped

(See Planner, Chapter 2, Appendix A for list of crop names)

Although there is a large difference in cropped acres between the current plan and the plan in 2003, the actual increase in the District is not as drastic. The District's method of data collection changed around 2010. Prior to 2010 the method was to ask growers their cropped acreage information thinking that growers would reliably provide the requested information. Not all growers reported cropped acreage back to the District during this time, so information in the 2003 report reflects only a partial reporting of cropped acres. 2010 information is based on land use surveys completed by the California Department of Water Resources and provides a more complete view of the cropping in the District. 2016 data is from the District Crop Report.

## 7. Major irrigation methods (by acreage) (Agricultural only)

| Original Plan (2003) | | Previous Plan (2011) | | Current Plan (2016) | |
|---|---|---|---|---|---|
| Irrigation Method | Acres | Irrigation Method | Acres | Irrigation Method | Acres |
| Level basin | | Level basin | | Level basin | |
| Furrow | 12,377 | Furrow | 25,474 | Furrow | |
| Sprinkler | 500 | Sprinkler | 478 | Sprinkler | |
| Low-volume | 3,052 | Low-volume | 11,321 | Low-volume | |
| Flood | | Flood | | Flood | 12,178 |
| Boarder Strip | | Boarder Strip | 16,000 | Boarder Strip | 1,320 |
| Drip | | Drip | | Drip | 23,161 |
| Micro | | Micro | | Micro | 13,786 |
| Other | 15,822 | Other | | Other | 32 |
| **Total** | **31,751** | **Total** | **53,273** | **Total** | **50,474** |

## 1. Incoming flow locations and measurement methods

| Location Name | Physical Location | Type of Measurement | Accuracy |
|---|---|---|---|
| Deer Creek Wasteway from FKC | | Broad Crested Weir | ± 4 % |
| East Main Canal | | Parshall Flume | ± 5 % |
| Harris Ditch | | Parshall Flume | ± 5 % |
| West Main Canal | | Parshall Flume | ± 5 % |

## 2. Current year Agricultural Conveyance System

The District's entire distribution system is unlined earth canals with CMP pipe or reinforced concrete control structures. Local financing by District landowners has been used for the construction of the distribution system. Collectively, the District owns or controls approximately 45 miles of earthen manmade canals in addition to the Deer Creek channel. The District delivers water from the Friant-Kern Canal through Deer Creek to District diversion structures in Deer Creek. The District's distribution system is shown on Attachment B. All of the District's distribution system also functions as their recharge facilities the 15 miles noted in the "Other" category accounts for the Deer Creek channel that is used to deliver surface water to District diversion locations. Currently the District facilities provide surface water delivery to approximately 27,510 acres within the District. The remaining farmed acres within the district are under severed by surface water and rely on groundwater extraction.

| Miles Unlined - Canal | Miles lined - Canal | Miles Piped | Miles - Other |
|---|---|---|---|
| 45 | None | None | Deer Creek - 15 |

## 3. Current year Urban Distribution System

| Miles AC- Pipe | Miles Steel - pipe | Miles Cast Iron Pipe | Miles - Other |
|---|---|---|---|
| N/A | N/A | N/A | N/A |

## 4. Storage facilities (tanks, reservoirs, regulating reservoirs)

| Name | Type | Capacity (AF) | Distribution or Spill |
|---|---|---|---|
| School Pit (E) | Earth Embankment | 150 | Spill Capture |
| South Pit (E) | Earth Embankment | 50 | Spill Capture |
| Harris Pit (E) | Earth Embankment | 25 | Spill Capture |
| Michelle Pit No. 1 (E) | Earth Embankment | 150 | Distribution |
| Hesse Pit (E) | Earth Embankment | 200 | Spill Capture |
| Valov Pit (E) | Earth Embankment | 200 | Spill Capture |
| West main/Shop Pit (E) | Earth Embankment | 50 | Distribution |
| Michelle Pit No.3 (E) | Earth Embankment | 200 | Distribution |
| Berenda-Mesa Pit (E) | Earth Embankment | 150 | Spill Capture |
| Ave. 116 Lateral (E) | Earth Embankment | 200 | Spill Capture |

District to deliver and sell much more than it could otherwise. The District finished constructing a new pipeline extension of the Avenue 116 in March of 2015.

The DEID-PIXID Groundwater Bank Project would develop a new bank with the ability to return up to 30,000 acre-feet per year to banking parties. The banking facility would be developed within PIXID along Deer Creek and DEID would be a partner in the facilities development so that they would have access to both a significant amount of the available banked. storage and the revenues generated from the bank. PIXID would potentially gain a stable revenue stream for the development of new District surface water delivery facilities and the leave behind percentage of banked supplies that would benefit local groundwater conditions is 10%. DEID Pixley Groundwater Bank Basins is still in the environmental documents phase. This project is estimated to be complete in 2019.

## C. Topography and Soils

### 1. Topography of the district and its impact on water operations and management

The District is situated on the eastern floor of the San Joaquin Valley, approximately six miles west of the Sierra Nevada foothills. The District lies on and adjacent to the Deer Creek alluvial fan with a small area in the northwestern part of the District lying on the Old Tulare Lake bed. The surface slopes gently east to west from eight feet per mile on the east to five feet per mile near its western boundary. Maximum elevation is 415 feet above sea level on the east and the minimum elevation is 195 feet near its western boundary.

### 2. District soil association map (Agricultural only)

| Soil Association | Estimated Acres | Effect on Water Operations and Management |
|---|---|---|
| Akers loam | 16,707.7 | Well drained, neg. runoff, saline-sodic phases moderately slow permeability |
| Hanford loam | 11,904.4 | Well drained, neg. runoff, moderately rapid permeability |
| Gambogy-Giggriz | 7,312 | Poorly drained, moderately slow permeability |
| Gareck-Garces | 5,118.7 | Well drained, moderately slow permeability |
| Gambogy loam | 4,666.9 | Poorly drained, moderately slow permeability |
| Crosscreek loam | 4,209.0 | Well drained, moderately slow permeability above duripan, very slow below |
| Lethent loam | 3,837.8 | Moderately well drained, slow to very slow permeability |
| Colpien loam | 3540.9 | Moderately well drained, moderately slow permeability |
| Biggiz loam | 2,456.8 | Somewhat poorly drained, moderately slow permeability |
| Kimberlina loam | 2,342.4 | Well drained, moderate to moderately rapid permeability, saline-sodic phases moderately slow permeability |
| Tagus loam | 2,065.0 | Well drained, moderate permeability |

## D. Climate

### 1. General climate of the district service area

| | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep | Oct | Nov | Dec | Annual |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Avg Precip. | 1.94 | 1.69 | 1.74 | 1.02 | 0.43 | 0.07 | 0.01 | 0.01 | 0.16 | 0.49 | 0.97 | 1.62 | 10.16 |
| Avg Temp. | 44.3 | 48.7 | 54.4 | 57.8 | 66.8 | 73.6 | 79.4 | 76.5 | 71.4 | 61.1 | 50.4 | 44.9 | 60.9 |
| Max Temp. | 58 | 65 | 75 | 77 | 91 | 92 | 98 | 96 | 92 | 48 | 70 | 60 | 98 |
| Min Temp. | 28 | 33 | 38 | 40 | 46 | 53 | 61 | 57 | 52 | 45 | 22 | 32 | 28 |
| ETo | 1.15 | 1.90 | 3.59 | 4.74 | 6.79 | 7.63 | 7.90 | 7.13 | 5.31 | 3.35 | 1.76 | 1.11 | 52.36 |

Weather station ID: CIMIS Porterville 169
Data Period: 2000 to 2016
Average Wind Velocity: 3.0
Average annual frost-free days: 225

The climate in the area served by the Pixley Irrigation District (District) is representative of that of the entire San Joaquin Valley. During the summer months the days are generally hot and dry with daytime temperatures typically exceeding 90 degrees Fahrenheit and during the winter months the days are generally mild and damp with daytime temperatures typically averaging 45 degrees Fahrenheit. The mean annual temperature at Porterville, located approximately 10 miles east of the District, is 60.9 degrees Fahrenheit. The average minimum and maximum temperatures are 41.2 degrees and 78.5 degrees Fahrenheit, respectively.

The average seasonal rainfall for the District area is 10.16 inches, based on records published by the California Irrigation Management Information System for the recording station in Porterville. The rain falls principally during the November through April period. The average annual evaporation for the area is 52.4 inches with the greatest evaporation occurring during the months of May, June, July and August.

### 2. Impact of microclimates on water management within the service area

Microclimates are not a significant factor in the Pixley ID.

## E. Natural and Cultural Resources

### 1. Natural resource areas within the service area

| Name | Estimated Acres | Description |
|---|---|---|
| None | None | N/A |
| | | |

through regular mailers. The District encourages landowners to notify the district if they do not want, or cannot use their allocation for the year, the District will then re-allocate proportionally to all landowners.

**5. Policies on water transfers by the district and its customers**

The District has no policies permitting transfers.

## G. Water Measurement, Pricing, and Billing

**1. Agricultural Customers**

**a.** Number of farms 94
**b.** Number of delivery points (turnouts and connections) 166
**c.** Number of delivery points serving more than one farm 3
**d.** Number of measured delivery points (meters and measurements) 166
**e.** Percentage of delivered water that was measured at a delivery point 100
**f.** Delivery point measurement device table

Every user has a different turnout and account number, even if the physical turnout is the same turnout. When a user calls in to place an order on a share turnout, the order is placed under his or her unique turnout and account number. There is no official policy.

| Measurement Type | Number | Accuracy (+/-%) | Reading Frequency | Calibration Frequency (Months) | Maintenance Frequency (Months) |
|---|---|---|---|---|---|
| Orifices | | | | | |
| Propeller Meter | | | | | |
| Weirs | | | | | |
| Flumes | | | | | |
| Venturi | | | | | |
| Metered gates | 166 | ± 4 | Daily | 12 | 12 |
| Acoustic Doppler | | | | | |
| Other (define | | | | | |
| Total | | | | | |

**2. Urban Customers** **(This section not applicable)**

**a.** Total number of connections none.
**b.** Total number of metered connections None.
**c.** Total number of connections not billed by quantity None.
**d.** Percentage of water that was measured at delivery point None.

## H. Water Shortage Allocation Policies

### 1. Current year water shortage policies or shortage response plan – specifying how reduced water supplies are allocated

The District does not have sufficient surface water resources to deliver amounts close to what crops require throughout the year. Therefore, all growers in the District also have groundwater wells that rely heavily on groundwater resources. The primary component of the District's water shortage response plan is its method of communication with District growers regarding the developing surface water supplies through the year and the reliability of groundwater resources.

### 2. Current year policies that address wasteful use of water and enforcement methods.

The District has no current year policy that supplements the general policy. Based on the general policy, it is the responsibility of the farm operator to manage their water supply after it is taken from the District facilities. Growers in the District utilize recapture and regulation ponds to recirculate water after it passes through their system. Similarly, The District also utilizes regulation basins to capture any excess water in the canal system.

## I. Evaluate Policies of Regulatory Agencies Affecting the Contractor and Identify Policies that Inhibit Good Water Management

The District lies within the Tule Subbasin, defined by the California Department of Water Resources as a critically overdrafted basin. To remediate this, in 2014 the State of California passed the Sustainable Groundwater Management Act (SGMA), which regulates the use of groundwater in the State of California. As part of the SGMA process the District has determined that imported surface water should be allocated to landowners on an annual basis. The goal is to allow equal and proportional access of imported surface water to all landowners in the District.

The District will update this policy as conditions warrant, based on operational and policy issues identified as the policy is implemented.

*deposits are probably not important as a source of water to wells but may yield sufficient supplies for domestic and stock use. The younger alluvium is a complex of interstratified and discontinuous beds of unsorted to fairly well sorted clay, silt, sand, and gravel, comprising the materials beneath the alluvial fans in the valley and stream channels. Where saturated the younger alluvium is very permeable, but this unit is largely unsaturated and probably not important as a source of water to wells. The older alluvium consists of poorly sorted deposits of clay, silt, sand, and gravel. This unit is moderately to highly permeable and is a major source of water to wells. The Tulare Formation consists of poorly sorted deposits of clay, silt, sand, and gravel derived predominately from the Coast Ranges. It contains the Corcoran Clay Member, the major confining bed in the subbasin. The formation is moderately to highly permeable and yields moderate to large quantities of water to wells. The continental deposits undifferentiated consist of poorly sorted lenticular deposits of clay, silt, sand, and gravel derived from the Sierra Nevada. The unit is moderately to highly permeable and is a major source of ground water in the subbasin."*

The total Storage capacity of the subbasin is estimated at 14.6 million acre feet to a depth of 300 ft. according to the DWR as of 1995. Groundwater flow through the basin is generally westward

### 3. Map of district-operated wells and managed groundwater recharge areas

See Attachment B for a map of Groundwater Monitoring Facilities within the District

The District does not own any groundwater extraction wells. See Appendix A – Water Inventory Tables, Table 2.

### 4. Description of conjunctive use of surface and groundwater

The District overlays two extensive and usable groundwater aquifers. The upper unconfined aquifer is above the well documented Corcoran "A" Clay layer and is very receptive to recharge from locations throughout the District and extending east into the foothills of the Sierra Nevada Mountains. The lower aquifer is confined under the Corcoran Clay and can most effectively be recharged from areas east of Highway 99.

On average, approximately 25,000 acre-feet of surface water per year has been brought into the District's service area since the beginning of District operations. These highly variable supplemental water supplies have, however, required the District to develop and operate a conjunctive use water management program. The District owns, or has access to by agreements, approximately 278 acres of sinking/re-regulation basins within the District boundaries. These basins, along with the Deer Creek channel and the District's canals, are used for direct groundwater recharge when surface water supplies are available. The depth to groundwater for the past ten years has averaged 124.0 feet over the District. It is estimated that a third of the water imported by the District has been directly recharged into the underground reservoir by District operations since the District's inception.

Pixley ID does not have its own surface water quality monitoring program. However, one (1) separate water quality monitoring program has historically been in place. This program has developed a history of water quality sampling events and test results and is still conducted by specific water contractors. As the conducting entity is a public agency, the developed information is part of the public domain and is thus available to each of the contractors diverting water from the Friant-Kern Canal. While this program is principally designed to address domestic water quality program issues, the generated data covers all of the constituents of concern related to agricultural uses. This information is available upon request through the Friant Water Authority (FWA). The District directs growers to the FWA if they ask for water quality information.

The Department of Health Services (DHS) has approved a monitoring program specific to four (4) permitted water systems diverting raw water from the Friant-Kern Canal. The testing frequency is designed to assure compliance with state and federal drinking water quality programs and thus is more than sufficient to insure an adequate testing frequency for agricultural concerns.

The District participated in the Southern San Joaquin Water Quality Coalition on behalf of its growers for compliance with State Water Resource Control Board's agricultural discharge permitting. This coalition tests water quality in a monitoring network across a large area to develop information to show that there are no issues of concern in smaller local areas. http://www.ssjwqc.org/

**4. Current water quality monitoring programs for surface water by source**

| Analyses Performed | Frequency | Concentration Range | Average |
|---|---|---|---|
| Title 22 Standard Compliance | Monthly | As per state requirements | Well below State MCLs* |
| | | | |
| | | | |

*MCLs available at https://www.waterboards.ca.gov/water_issues/programs/water_quality_goals/

**Current water quality monitoring programs for groundwater by source**

| Analyses Performed | Frequency | Concentration Range | Average |
|---|---|---|---|
| None. | | | |
| | | | |
| | | | |

## E. Water Uses Within the District

### 1. Agricultural

See Appendix A – Water Inventory Tables, Table 5 – Crop Water Needs

### 2. Types of irrigation systems used for each crop in current year

6. **Transfers and exchanges into the service area in current year**

| From Whom | To Whom | AF | Use |
|---|---|---|---|
| LTRID | PIX ID | 20,000 | URF |
| PID | PIX ID | 10,000 | Class 1 |
| LTRID | PIX ID | 30,000 | Class 2 |
| LTRID | PIX ID | 3,060 | 2016 Class 1 C/O |
| DEID | PIX ID | 4,000 | Class 1 |
| TID | PIX ID | 2,000 | Class 1 |
| LTRID | PIX ID | 20,000 | Class 2 |

7. **Transfers and exchanges out of the service area in current**

| From Whom | To Whom | AF | Use |
|---|---|---|---|
| PIX ID | Bereneda Mesa WSD | 1,555 | |
| PIX ID | BWSD | 2,000 | |
| PIX ID | RRBWSD | 16,887 | |

8. **Wheeling, or other transactions in and out of the district boundaries**

| From Whom | To Whom | AF | Use |
|---|---|---|---|
| N/A | | | |
| | | | |
| | | | |

9. **Other uses of water**

| Other Uses | AF |
|---|---|
| Not Applicable | |
| | |
| | |

## F. Outflow from the District

See Attachment B, Map of District Boundary and Distribution Facilities, for the location of District facilities. The District's only surface water outflow point is where Deer Creek flows past Highway 43 on the west edge of the District. The District does not have subsurface outflow points or outflow water-quality testing locations (see Appendix A – Water Inventory Tables, Table 7).

In reference to Appendix B, the District acknowledges that it is listed as a drainage problem area within the listed Tulare subarea. However, the area identified in "A Management Plan for Agricultural Subsurface Drainage and Related Problems on the Westside San Joaquin Valley (09/'90)", being the far west edge of the District has not been viewed as a drainage problem area by the District. These lands are currently in agricultural production, without drainage water collection systems, and are producing consistently with other lands in the District. No drainage water is being produced by these lands and therefore it also does not flow from these lands. The District's belief is that historically this area had soils that did not drain well and they were identified as potentially problematic if they were ever irrigated. However, as this area has been developed and reclaimed soil amendments have increased the

**Outflow (Subsurface drainage) Quality Testing Program**

| Analysis Performed | Frequency | Concentration Range | Average | Reuse Limitation? |
|---|---|---|---|---|
| Not Applicable | | | | |

**4. Provide a brief discussion of the District's involvement in the Central Valley Regional Water Quality Control Board programs or requirements for remediating or monitoring and contaminants that would significantly degrade water quality in the receiving surface water.**

The District is not responsible for groundwater remediation or contaminant plume management, and therefore they are not involved directly in any Central Valley Regional Water Quality Control Board programs. Those responsibilities are assigned to other agencies such as cities, counties, the USEPA or California Department of Toxic Substances Control. The District is a part of the Southern San Joaquin Water Quality Coalition (SSJWQC). This coalition's efforts are to monitor surface water quality and report to the Regional Board. Although the District is a part of the coalition, it does not do any groundwater quality monitoring nor does it receive the data collected by the coalition. Also, the District is not involved with the Regional Board's ag waiver program as that is viewed as the responsibility of individual landowners. PIXID tries to stay informed of contaminant plumes and their management and remediation within District boundaries. Surface water quality information for a few testing locations in local rivers is summarized in an annual report generated by the SSJVWC and can be requested from the SSJVWC Coordinator.

Contact information by which the SSJWQC Coordinator can be reached:
Kings River Conservation District
4886 East Jensen Avenue
Fresno, CA 93725
(559) 237-5567
http://www.krcd.org/

## G. Water Accounting (Inventory)

### 1. Water Supplies Quantified

- **a.** Surface water supplies, imported and originated within the service area, by month (Appendix A, Table 1)
- **b.** Groundwater extracted by the district, by month (Appendix A, Table 2)
- **c.** Effective precipitation by crop (Appendix A, Table 5)
- **d.** Estimated annual groundwater extracted by non-district parties (Appendix A, Table 2)
- **e.** Recycled urban wastewater, by month (Appendix A, Table 3)
- **f.** Other supplies, by month (Appendix A, Table 1)

## Section III: Best Management Practices for Agricultural Contractors

### A. Critical Agricultural BMPs

**1. Measure the volume of water delivered by the district to each turnout with devices that are operated and maintained to a reasonable degree of accuracy, under most conditions, to +/- 6%**

a. Number of delivery points (turnouts and connections) 166
b. Number of delivery points serving more than one farm 3
c. Number of measured delivery points (meters and measurement devices) 166
d. Percentage of water delivered to the contractor that was measured at a delivery point 100
e. Total number of delivery points not billed by quantity _____
f. Delivery point measurement device table _____

| Measurement Type | Number | Accuracy (t/-%) | Reading Frequency (Days) | Calibration Frequency (Months) | Maintenance Frequency (Months) |
|---|---|---|---|---|---|
| Pump or gravity | 166 | ± 4 % | 2 times per day | At request of water users | Handled by water users |
| | | | | | |
| | | | | | |
| | | | | | |
| | | | | | |
| | | | | | |
| | | | | | |
| | | | | | |
| | | | | | |

**2. Designate a water conservation coordinator to develop and implement the Plan and develop progress reports**

**Name:** Dain Vink
**Address:** 357 East Olive Avenue, Tipton CA 93272
**Telephone:** (559) 686-4716
**Email:** dvink@ltrid.org

**3. Provide or support the availability of water management services to water users**

**a. On Farm Evaluations**

i. On farm irrigation and drainage system evaluations using a mobile lab type assessment

Also, the District recently undertook a study of the estimated crop water use within the District between 1985 – 2007. This retrospective effort was an effort to evaluate the changing crop conditions within the District over time and gauge where the crop water use for the District was increasing or staying relatively the same. During this effort interviews with growers were conducted to better understand irrigation practices within the District. This effort used GIS based crop maps from DWR within the District's service area and calculated optimum crop water use based on published crop ET information for this region and accounting for effective precipitation. This study and the topic of irrigation by crop has been discussed several times in the regular public meetings held by the Board of Directors.

The District offers a service to growers that they can submit water orders over the internet, check their water delivery accounts from the District website, and get email water supply update notices from the District.

**b. Real time and normal irrigation scheduling and crop ET information**

As per this BMP the District has developed and sponsors a local CIMIS station which was constructed with the assistance of the Deer Creek and Tule River Authority members. Before the next annual update the District will update their website with the CIMIS station information and also provide growers with links to the available information on the DWR CIMIS network for crop ET calculations and crop specific irrigation scheduling. With this information growers have the necessary information to convert the real-time ETo information from the local CIMIS station into real-time crop ET and irrigation scheduling information. http://www.ltrid.org/links/

See Appendix D for a screen shot of the districts website.

Also, normal year crop ET adjusted for effective precipitation is available through reports at the District office, on the District website and on Cal Poly ITRC's website. At the Cal Poly ITRC's website there is information on dry, normal and wet years for varying regions within the state including one covering the District.

The Kings River is approximately 30-40 miles north of the District, but has the same regional climate as the District. An Inspection of reference ETo maps published by CIMIS (http://wwwcimis.water.ca.gov/cimis/images/etomap.jpg) shows that zone 12 covers an area that is common to the Kings River contractors and the District. Also, rainfall totals between these two areas are historically very similar. For these reasons it is understood that the real-time ET information published by Kings River Conservation District is valid for use in the District's service area. A link to the real-time ET information for the Kings River Contractors on the KRCD site will be included in the District website update and its use will be discussed in further detail in the next Ag Water Management Plan.

Farmers have reported other sources they use to gain ET information as well, complicating the process for the District to meet this BMP. These other sources range from using soil moisture, receiving daily

- http://wwwcimis.water.ca.gov/cimis/pdf/21427-KcAgronomicGrassandVeg.pdf;
- http://wwwcimis.water.ca.gov/cimis/pdf/21428-KcTreesandVines.pdf;
- http://www.itrc.org/etdata/irrsched.htm.

- Links to the DWR CIMIS network make farmers and the public aware of a variety of ag water software that is available to help irrigators with data management and irrigation scheduling.
  - http://wwwcimis.water.ca.gov/cimis/infoIrrSoftware.jsp
- Also, links to Cal Poly's ITRC website and the DWR CIMIS network provide farmers and the public with information on crop water budgets and irrigation scheduling techniques.
  - http://www.itrc.org/irrevaldata/isedata.htm;
  - http://wwwcimis.water.ca.gov/cimis/infoIrrOverview.jsp;
  - http://wwwcimis.water.ca.gov/cimis/infoIrrSchdule.jsp;
  - http://wwwcimis.water.ca.gov/cimis/infoIrrBudet.jsp;
- Also the District links ACWA's Water Event's and Water Education Foundation's webpages on its website to inform growers and the public about available conferences, webinars, tours and classes on water issues, environmental concerns, existing and developing regulations, as well as irrigation methods and technologies.
  - http://www.acwa.com/category/event-type/external-meeting;
  - http://www.watereducation.org/doc.asp?id=1070.

The District took on a District-wide water balance study that addressed irrigation efficiencies, cultural practices, and other water issues. Also the District undertook a System Optimization Review Study in partnership with the Bureau of reclamation. Both reports were discussed by staff, the Board of Directors and they were open to the public at public Board meetings. Additional joint Board meetings were held for significant discussions focused on calculated crop water use, irrigation efficiency and conservation.

Discussion on calculated crop water use covered the comparison between ETc and irrigation efficiency fraction and reported applied water from District growers.

Some staff members regularly attend conferences such as the Bureau's Water Users Conference and Association of California Water Agencies where there are seminars on efficient irrigation techniques and after these conferences these individuals share this information with other staff members as well as the Board of Directors.

The District is a member of ACWA and this agency supports a regular program of education with grade school teachers throughout the state, bringing them to agricultural areas like the District and explaining to them how agriculture supports our society and how farmers efficiently use available water supplies to produce our Nation's food supply.

**e. Other**

in-lieu pumping water when same is available, verification by the District is accomplished on a periodic basis to assure that the price for delivered water is competitive with power costs associated with pumping groundwater within the District. The District tracks by way of external inquiries, as well as farm operator input, the costs associated with groundwater pumping and utilizes this input to verify the competitiveness of the established price for District supplies. The principal mechanism which the District utilizes to price the cost of actual surface deliveries is the annual assessment. The assessment rate is a per acre charge established following adoption of the annual budget. The assessment is divided into four (4) components, each related to District budget items. The four categories and their respective percentages of the total are as follows:

- Groundwater 4.97%
- Distribution System 27.17%
- Surface Water 28.57%
- Operation and Maintenance 39.29%

The billing process is fashioned in such a manner that, for delivered supplies, the farm operators are charged for water on a metered basis and billed following deliveries. In this fashion, farm operators are encouraged only to utilize that water which they need and are not penalized for unused water which may be available.

Water which is not delivered for consumptive purposes, principally due to the non-storable nature of the District's surface supply, is delivered for groundwater recharge. The costs of the water associated with this recharge program are not borne by the water delivery charge income, but by a percentage of the assessment. As previously noted, the District sought and received considerable input with respect to the development of this policy and with further respect to the level of assessment which is established in order to insure that recharge programs are maintained and contributions to the groundwater reservoir are maximized.

With increases in the costs of operation and those associated with water acquisition, the assessment rate has been increased substantially over time. The current level of assessment income is in excess of $4,200,000 per year, as compared to a mid-1970's level of less than $300,000.

### 5. Evaluate and improve efficiencies of district pumps

The District does own or operate any pumps.

## B. Exemptible BMPs for Agricultural Contractors

### 1. Facilitate alternative land use

| Drainage Characteristic | Acreage | Potential Alternate Uses |
|---|---|---|
| Drainage Characteristic | | Not Applicable |
| High Water Table (<5 feet) | | Not Applicable |

**6. Increase flexibility in water ordering by, and delivery to, water users**

The District's water order process is managed by a staff member that is available by phone or by email. Also the District has developed the ability for growers to submit their water orders on-line at the District's website if they wish. The District continues to look for new ways to serve their growers and provide flexible, timely and consistent water delivery service.

**7. Construct and operate district spill and tailwater recovery systems**

| Distribution System Lateral | Annual Spill (AF/Y) | Quantity Recovered and Reused (AF/Y) |
|---|---|---|
| There are no District Spills | All supply is contained within the Distribution Sytem | |
| | | |
| | | |
| **Total** | | |

The District has a few terminal basins used to capture water at the end of a conveyance system. These facilities recharge this water to the local groundwater aquifer. However, the District does not suffer from spills. Also, the District does not allow tailwater recovery systems to be diverted into District conveyance systems. Private tailwater return systems within the District are used on farms to allow growers to apply large heads of water to fields, thereby increasing the irrigation efficiency, and tailwater is then recirculated back to the head of the field for a second longer application after the field is uniformly wetted up.

| Distribution System Lateral | Annual Drainage Outflow (AF/Y) | Quantity Recovered and Reused (AF/Y) |
|---|---|---|
| There are no District Drainage Systems | | |
| | | |
| | | |
| **Total** | | |

As was previously mentioned, there are no perched groundwater areas within the District and no known subsurface drainage systems within the District. Also, surface drainage in this area is not collected through any systems, as it is the responsibility of landowners to manage stormwater on their own properties. Therefore, there are no District Drainage Systems and no Drainage Outflow or Quantity Recovered.

**8. Plan to measure outflow**

Total # of outflow (surface) locations/points 1

Total # of outflow (subsurface) locations/points 0

Total # of measured outflow points 1

Percentage of total outflow (volume) measured during the report year 100%

Identify locations, prioritize, determine best measurement method/cost, submit funding proposal

Authority (DCTRA). With the joint management of contract supplies within the DCTRA, the districts requiring delivery of surface water during dry year periods can now bank water with the District who has agreed to take the surface water for banking during normal to above-normal years, in exchange for the release of the District's CVP supply during dry year periods.

In order to further augment spreading capability and to expand on conjunctive use capability, the DCTRA has recently completed its first groundwater recharge facility adjacent to the Friant-Kern Canal and the natural channel of Deer Creek. This facility was utilized during the last year, is currently being used and will continue to be utilized in the future to recharge available supplies during above-normal runoff conditions. It is anticipated to be augmented by other similar facilities in the future at sites which are currently under consideration.

### 10. Automate distribution and/or drainage system structures

There are no planned projects to automate canal structures in the near-term. The District has not studied the potential for automating canal structures, but is using the automated LTRID facilities at the Tule River Weir and the Wood Central Ditch diversion from the Tule River as pilot projects to gage their water management improvement potential. The project resulted in the district winning the WaterSmart grant in 2017 to install a SCADA system at the head of the Ave 116 Canal. Installation is set for the winter of 2017.

### 11. Facilitate or promote water customer pump testing and evaluation

The District provides information to the farm operators relative to the availability of pump testing and efficiency services provided by the serving utility or local pump companies. The involvement of the District with private pump efficiencies is related to water conservation and overall resource management. The District performs pump tests on surface water derisions where lift pumps are utilized. The District refers water users to SCE for pump tests on their privately owned wells. The fact that a farmer may apply a given amount of water to a field with a pump which is operating at a less than optimum efficiency does affect the application time and the total quantity of water which is being demanded by the crop. This information can be found in the District's Water Information & Operating Policy in Appendix B. The third paragraph below the numbered list references available services. This policy is sent to all growers each year.

## C. Provide a 5- Year Budget for Implementing BMP's

### 1. Amount spent during current year

| Year 2017 or Year 1 BMP # | BMP Name | Budgeted Expenditure (not including staff time) | Staff Hours |
|---|---|---|---|
| A1 | Measurement | $1,000 | 100 |
| A2 | Conservation staff | $400 | 8 |
| A3 | On-farm evaluation/water delivery info<br>Irrigation Scheduling<br>Water Quality<br>Agricultural Education Program | $1,250<br>$0<br>$0<br>$0<br>$0 | 25<br>0<br>0<br>0<br>0 |
| A4 | Quantity pricing | $200 | 4 |
| A5 | Contractor's pumps | $200 | 4 |
| B1 | Alternative land use | $0 | 0 |
| B2 | Urban recycled water use | N/A | N/A |
| B3 | Financing of on-farm improvements | $0 | 0 |
| B4 | Incentive pricing | $300 | 8 |
| B5 | Line or pipe canals/install reservoirs | $0 | 0 |
| B6 | Increase delivery flexibility | $140 | 4 |
| B7 | District spill/tailwater recovery systems | $0 | 0 |
| B8 | Measure outflow | $0 | 0 |
| B9 | Optimze conjunctive use | $70 | 2 |
| B10 | Automate canal structures | $37,779.8 | 100 |
| B11 | Customer pump testing | $50 | 0 |
| B12 | Mapping | $900 | 10 |
| | **Total** | **$42,290** | **265** |

3. **Projected budget summary for the 3rd year**

| Year 2019 or Year 3 BMP # | BMP Name | Budgeted Expenditure (not including staff time) | Staff Hours |
|---|---|---|---|
| **A1** | Measurement | $1,000 | 100 |
| **A2** | Conservation staff | $400 | 8 |
| **A3** | On-farm evaluation/water delivery info<br>Irrigation Scheduling<br>Water Quality<br>Agricultural Education Program | $1,250<br>$0<br>$0<br>$0<br>$0 | 25<br>0<br>0<br>0<br>0 |
| **A4** | Quantity pricing | $200 | 4 |
| **A5** | Contractor's pumps | $200 | 4 |
| **B1** | Alternative land use | $0 | 0 |
| **B2** | Urban recycled water use | N/A | N/A |
| **B3** | Financing of on-farm improvements | $0 | 0 |
| **B4** | Incentive pricing | $300 | 8 |
| **B5** | Line or pipe canals/install reservoirs | $0 | 0 |
| **B6** | Increase delivery flexibility | $140 | 4 |
| **B7** | District spill/tailwater recovery systems | $0 | 0 |
| **B8** | Measure outflow | $0 | 0 |
| **B9** | Optimze conjunctive use | $70 | 2 |
| **B10** | Automate canal structures | $0 | 0 |
| **B11** | Customer pump testing | $50 | 0 |
| **B12** | Mapping | $900 | 10 |
| | **Total** | **$4,510** | **165** |

5. **Projected budget for the 5th year**

| Year 2021 or Year 5 BMP # | BMP Name | Budgeted Expenditure (not including staff time) | Staff Hours |
|---|---|---|---|
| **A1** | Measurement | $1,000 | 100 |
| **A2** | Conservation staff | $400 | 8 |
| **A3** | On-farm evaluation/water delivery info<br>Irrigation Scheduling<br>Water Quality<br>Agricultural Education Program | $1,250<br>$0<br>$0<br>$0<br>$0 | 25<br>0<br>0<br>0<br>0 |
| **A4** | Quantity pricing | $200 | 4 |
| **A5** | Contractor's pumps | $200 | 4 |
| **B1** | Alternative land use | $0 | 0 |
| **B2** | Urban recycled water use | N/A | N/A |
| **B3** | Financing of on-farm improvements | $0 | 0 |
| **B4** | Incentive pricing | $300 | 8 |
| **B5** | Line or pipe canals/install reservoirs | $0 | 0 |
| **B6** | Increase delivery flexibility | $140 | 4 |
| **B7** | District spill/tailwater recovery systems | $0 | 0 |
| **B8** | Measure outflow | $0 | 0 |
| **B9** | Optimze conjunctive use | $70 | 2 |
| **B10** | Automate canal structures | $0 | 0 |
| **B11** | Customer pump testing | $50 | 0 |
| **B12** | Mapping | $900 | 10 |
| | **Total** | **$4,510** | **165** |

## B. Provide a 5-Year Budget for Expenditures and Staff Effort for BMPs

### 1. Amount Spent during current year

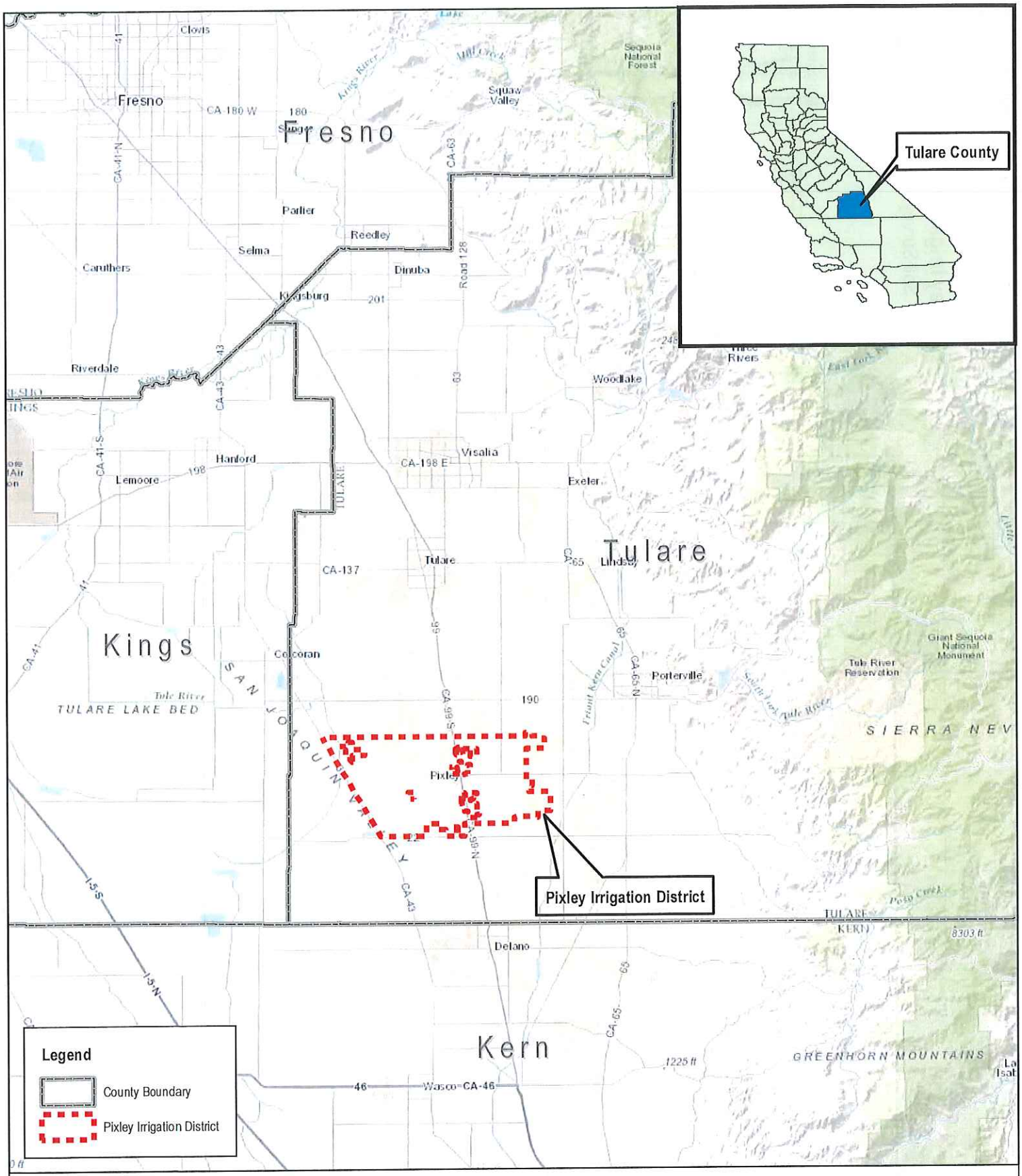
| Year 2017 or Year 1 BMP # | BMP Name | Budgeted Expenditure (not including staff time) | Staff Hours |
|---|---|---|---|
| 1 | Utilities Operations | | |
| | 1.1 Operations Practices | | |
| | 1.2 Water Loss Control | | |
| | 1.3 Metering | | |
| | 1.4 Retail Conservation Pricing | | |
| 2 | Education Programs | | |
| | 2.1 Public Information Programs | | |
| | 2.2 School Education Programs | | |
| 3 | Residential | | |
| 4 | CII | | |
| 5 | Landscape | | |
| | **Total** | | |

### 2. Projected budget summary for 2nd year

| Year 2017 or Year 1 BMP # | BMP Name | Budgeted Expenditure (not including staff time) | Staff Hours |
|---|---|---|---|
| 1 | Utilities Operations | | |
| | 1.1 Operations Practices | | |
| | 1.2 Water Loss Control | | |
| | 1.3 Metering | | |
| | 1.4 Retail Conservation Pricing | | |
| 2 | Education Programs | | |
| | 2.1 Public Information Programs | | |
| | 2.2 School Education Programs | | |
| 3 | Residential | | |
| 4 | CII | | |
| 5 | Landscape | | |
| | **Total** | | |

5. **Projected budget summary for 5th year**

| Year 2017 or Year 1 BMP # | BMP Name | Budgeted Expenditure (not including staff time) | Staff Hours |
|---|---|---|---|
| 1 | Utilities Operations | | |
| | 1.1 Operations Practices | | |
| | 1.2 Water Loss Control | | |
| | 1.3 Metering | | |
| | 1.4 Retail Conservation Pricing | | |
| 2 | Education Programs | | |
| | 2.1 Public Information Programs | | |
| | 2.2 School Education Programs | | |
| 3 | Residential | | |
| 4 | CII | | |
| 5 | Landscape | | |
| | **Total** | | |



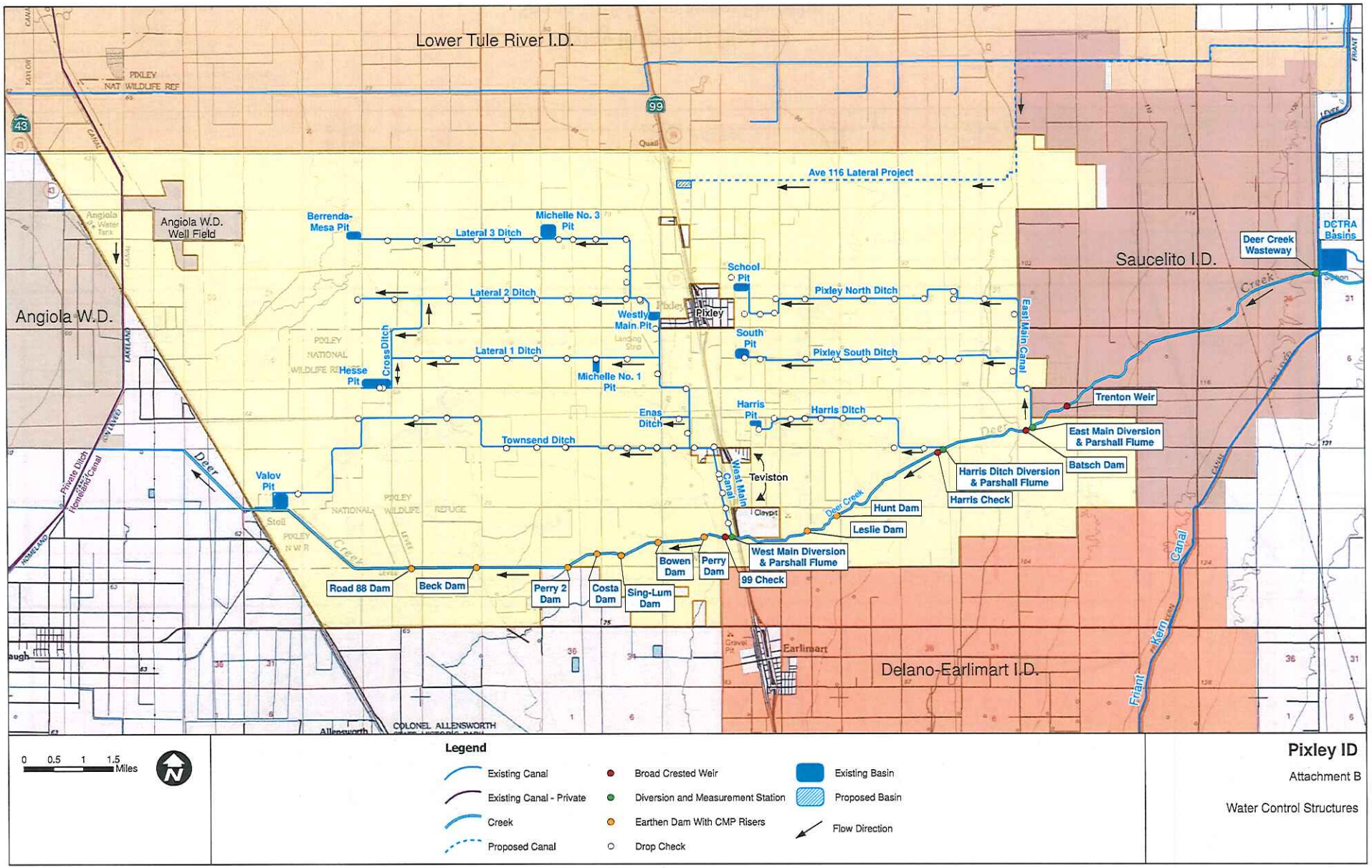

4CREEKS

# Pixley Irrigation District

## Vicinity Map

1 in = 10 mi

Attachement A


Lower Tule River I.D.
Angiola W.D.
Angiola W.D. Well Field
Saucelito I.D.
Delano-Earlimart I.D.
Ave 116 Lateral Project
Berrenda-Mesa Pit
Michelle No. 3 Pit
Lateral 3 Ditch
Lateral 2 Ditch
Lateral 1 Ditch
Cross Ditch
Hesse Pit
Michelle No. 1 Pit
Westly Main Pit
School Pit
South Pit
Pixley North Ditch
Pixley South Ditch
East Main Canal
Deer Creek Wasteway
DCTRA Basins
Trenton Weir
East Main Diversion & Parshall Flume
Batsch Dam
Harris Pit
Harris Ditch
Harris Ditch Diversion & Parshall Flume
Harris Check
Enas Ditch
Townsend Ditch
Valov Pit
West Main Canal
Teviston
Deer Creek
Hunt Dam
Leslie Dam
West Main Diversion & Parshall Flume
99 Check
Bowen Dam
Perry Dam
Road 88 Dam
Beck Dam
Perry 2 Dam
Costa Dam
Sing-Lum Dam
Friant-Kern Canal
Private Ditch
Homeland Canal
Pixley
Earlimart
Stoll
Allensworth
PIXLEY NAT WILDLIFE REF
PIXLEY NATIONAL WILDLIFE REFUGE
COLONEL ALLENSWORTH
0 0.5 1 1.5 Miles
Legend
Existing Canal
Existing Canal - Private
Creek
Proposed Canal
Broad Crested Weir
Diversion and Measurement Station
Earthen Dam With CMP Risers
Drop Check
Existing Basin
Proposed Basin
Flow Direction
Pixley ID
Attachment B
Water Control Structures

Attachement E

# GROUNDWATER MANAGEMENT PLAN

# DEER CREEK AND TULE RIVER AUTHORITY

JULY 2006

DENNIS R. KELLER / JAMES H. WEGLEY
CONSULTING CIVIL ENGINEERS

SECTION 5 - MANAGEMENT STRATEGIES (Cont'd)



SECTION 6 - MONITORING



SECTION 7 - PLAN IMPLEMENTATION

SECTION 1
PURPOSE
GROUNDWATER MANAGEMENT PLAN
DEER CREEK AND TULE RIVER AUTHORITY

under provision of Part 2.75 of Division 6 of the California Water Code commencing with Section 10750, otherwise known as AB3030, the Groundwater Management Act of 1992. The 1992 Act was amended in 2002 and 2004 to describe specific requirements for the Plan.

For the purpose of groundwater management, powers granted to an entity which adopts a Plan include the powers of a water replenishment district (Part 4, Division 18, California Water Code), to the extent not already possessed by the entity, but not limited to the following:

1. Acquire and operate facilities, waters and rights needed to replenish the groundwater supplies;
2. Store water in groundwater basins, acquire water rights, import water into the Authority and conserve water;
3. Participate in legal proceedings as required to protect and defend water rights and water supplies and to prevent unlawful exportation of water from the Authority.
4. Under certain conditions to exercise the right of eminent domain;
5. Act jointly with other entities in order to economically perform required activities;
6. Carry out investigations required to implement the Plan;
7. Fix rates for water for replenishment purposes; and
8. Fix the terms and conditions of contracts for use of surface water in-lieu of groundwater.

TABLE 1-1
PLAN SUMMARY
GROUNDWATER MANAGEMENT PLAN
DEER CREEK AND TULE RIVER AUTHORITY

| SECTION REFERENCE | SUBJECT | PLAN LOCATION |
|---|---|---|
| REQUIRED PLAN ELEMENTS (Water Code §10753.7 (a)) | | |
| (1) | Basin management objectives | Section 4 |
| (1) | Monitoring and Management:<br>– groundwater levels<br>– groundwater quality<br>– land surface subsidence<br>– changes of surface water flow and quality | <br>Section 5, Section 6<br>Section 5, Section 6<br>Section 5, Section 6<br>Section 5, Section 6 |
| (2) | Plan to involve other agencies | Section 2, Section 5, Section 7 |
| (3) | Map of groundwater basin and local agencies | Section 2 |
| (4) | Monitoring protocols | Section 6 |
| RECOMMENDED PLAN ELEMENTS (Water Code §10753.8) | | |
| a. | Saline Water Intrusion | Section 5 |
| b. | Wellhead Protection (Recharge Areas) | Section 5 |
| c. | Migration of Contaminated Water | Section 5 |
| d. | Well Abandonment/Destruction | Section 5 |
| e. | Overdraft Mitigation | Section 5 |
| f. | Groundwater Replenishment | Section 5 |
| g. | Groundwater Extractions | Section 5 |
| h. | Groundwater Monitoring | Section 5, Section 6 |
| i. | Conjunctive Use | Section 5 |
| j. | Well Construction Policies | Section 5 |
| k. | Operation of Facilities | Section 5, Section 7 |
| l. | Relationships with Other Agencies | Section 5 |
| m. | Land Use Planning | Section 5 |

SECTION 2
GENERAL
GROUNDWATER MANAGEMENT PLAN
DEER CREEK AND TULE RIVER AUTHORITY

AB 3030 provides for the development of a groundwater management plan within the boundaries of the Authority members. The underlying groundwater basin is part of the larger Tulare Lake Basin as identified in State of California Bulletin 118. The management area for the Authority's Plan may include, by agreement, adjacent entities whose activities would influence the common groundwater resource. The Authority's member Districts and the Plan area is shown on Figure 2-1.

Plan Participants

The Authority will be responsible for the implementation of the Plan. The Authority's member Districts comprise the primary Plan Participants. The identification and involvement of additional Plan Participants will result from Plan activities.

The Plan Participants are presented in Appendix A. This Appendix will be revised accordingly to reflect the Plan's current participants.

Stakeholders

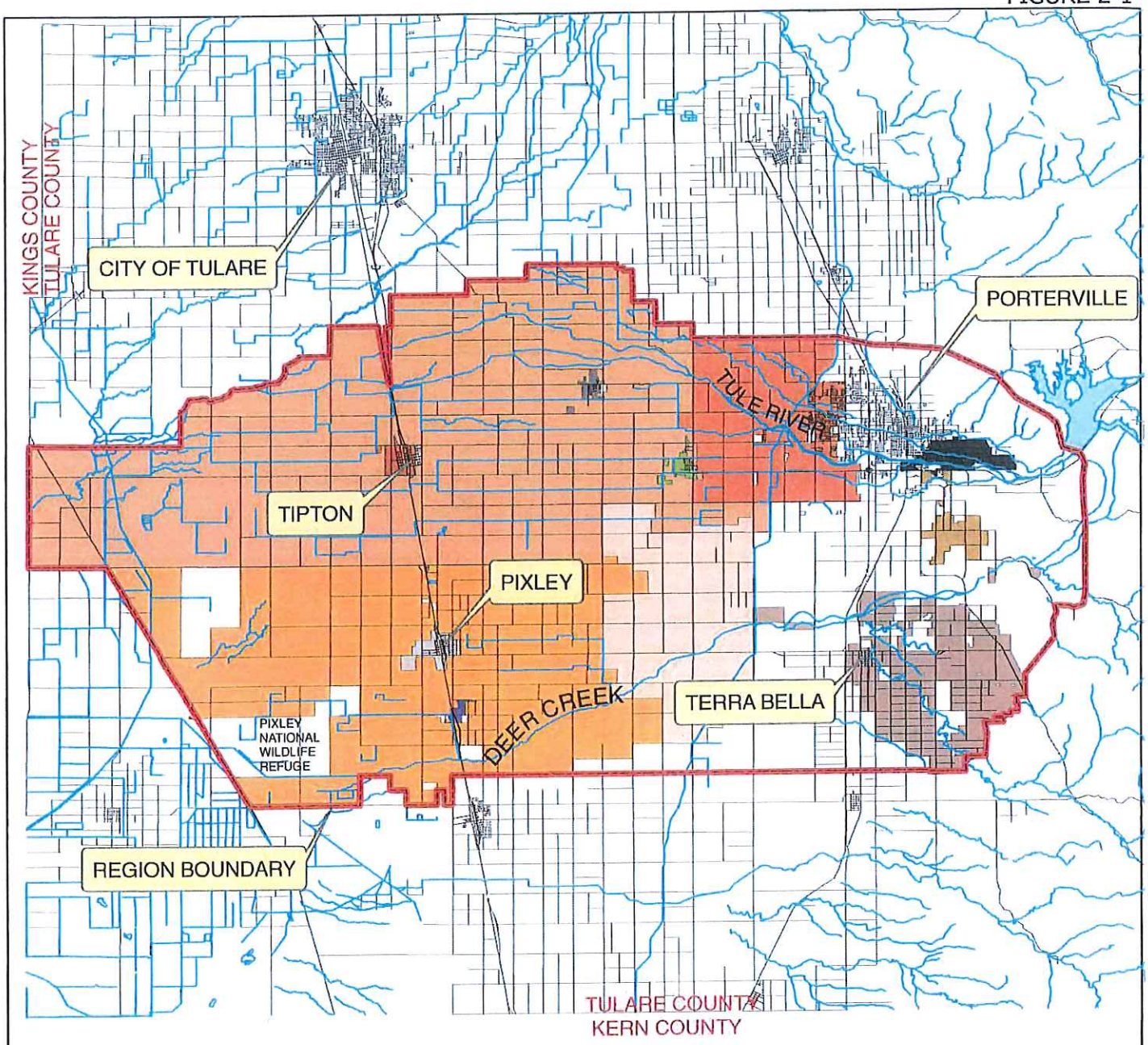
For the purposes of the Plan, a stakeholder will be defined as any individual, group, or entity located within the Plan Area that may be affected by the implementation of the Plan. Stakeholders can be Plan Participants.

An initial compilation of groundwater basin stakeholders is presented in Appendix A. Additional stakeholders may be identified through Plan activities.

Advisory Committee

The Authority has created an Advisory Committee to oversee the development, implementation and subsequent refinement of the Plan. The members of the Advisory Committee are presented in Table 2-1.

FIGURE 2-1




SOURCE: TULARE COUNTY GRAPHICAL INFORMATION SYSTEM, 1999

**LEGEND**

**GEOGRAPHICAL INFORMATION**
- Boundary - Groundwater Management Plan
- Streams
- Streets
- Lake Success

**PUBLIC UTILITY DISTRICTS**
- Pixley Public Utility District
- Porter Vista Public Utility District
- Woodville Public Utility District

**COMMUNITY SERVICES DISTRICTS**
- Poplar Community Services District
- Teviston Community Services District
- Tipton Community Services District

**IRRIGATION DISTRICTS**
- Lower Tule River Irrigation District
- Pixley Irrigation District
- Porterville Irrigation District
- Saucelito Irrigation District
- Terra Bella Irrigation District
- Vandalia Irrigation District

N W E S

10 5 0 10 Miles

PLAN BOUNDARIES
GROUND WATER MANAGEMENT PLAN
DEER CREEK AND TULE RIVER AUTHORITY

KELLER/WEGLEY

# SECTION 3
# GROUNDWATER BASIN CHARACTERISTICS
# GROUNDWATER MANAGEMENT PLAN
# DEER CREEK AND TULE RIVER AUTHORITY

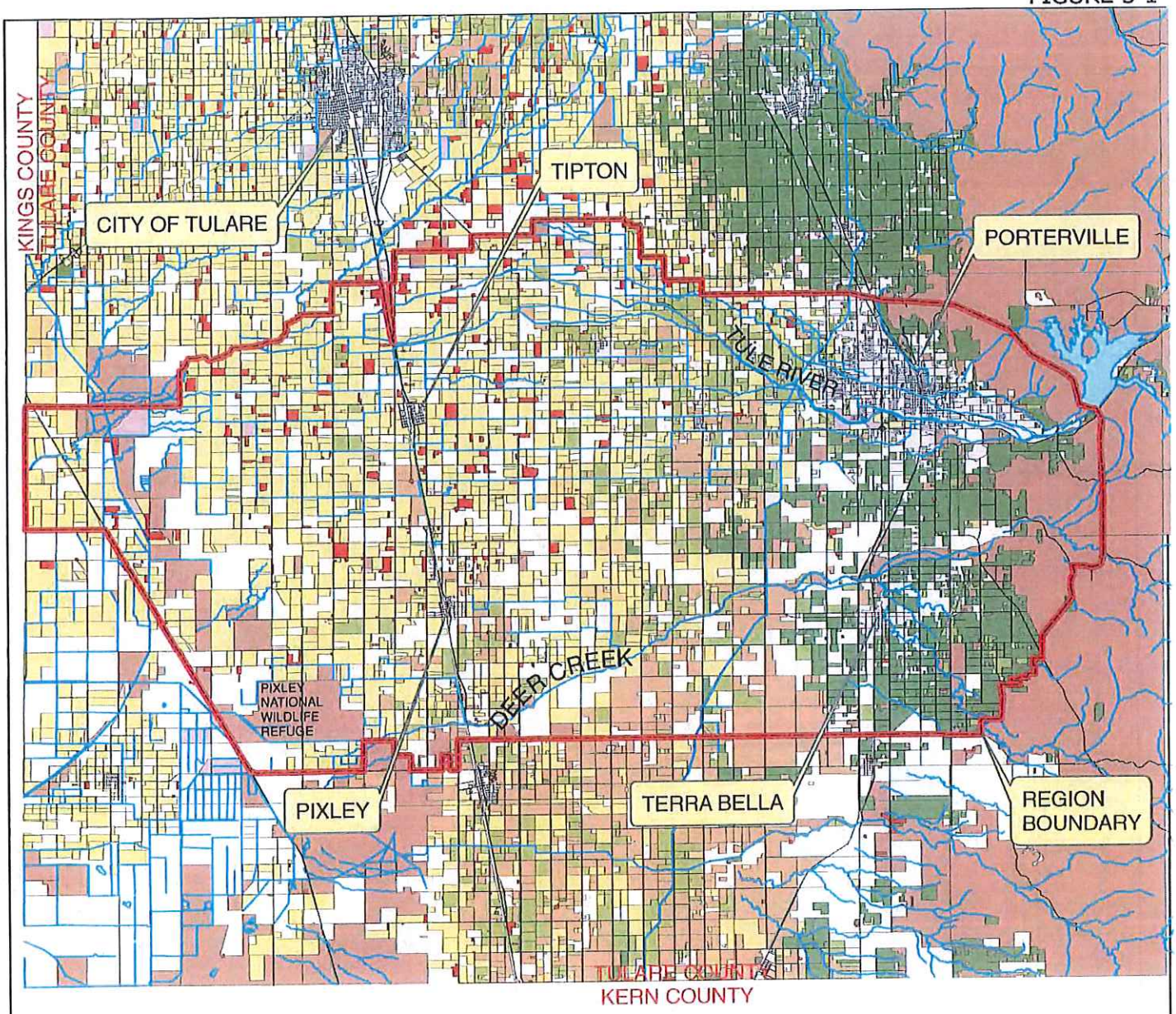
## GENERAL

The Deer Creek and Tule River Authority (Authority) is located within the Tule River Sub-basin of the San Joaquin Valley Groundwater Basin (Basin No. 5-22.13). The Tule River Sub-basin is bounded by the following groundwater sub-basins; Kaweah River (north), Tulare Lake (west) and Kern County (south). The groundwater basin includes three major surface drainages: Tule River, Deer Creek and White River.

Typical annual rainfall in the basin is approximately 11 inches. The western portion of the Basin is typically more arid. The eastern edge of the Basin along the mountains experiences higher rainfall amounts.

The region encompassed by the Authority's Groundwater Management Plan (Plan) is shown on Figure 2-1 in Section 2. Table 3-1 summarizes the communities located in the basin and their respective populations.

FIGURE 3-1




SOURCE: TULARE COUNTY GRAPHICAL INFORMATION SYSTEM, 1999

**LEGEND**

**GEOGRAPHICAL INFORMATION**

- Boundary - Groundwater Management Plan
- Streams
- Streets
- Lake Success

**LAND USE**

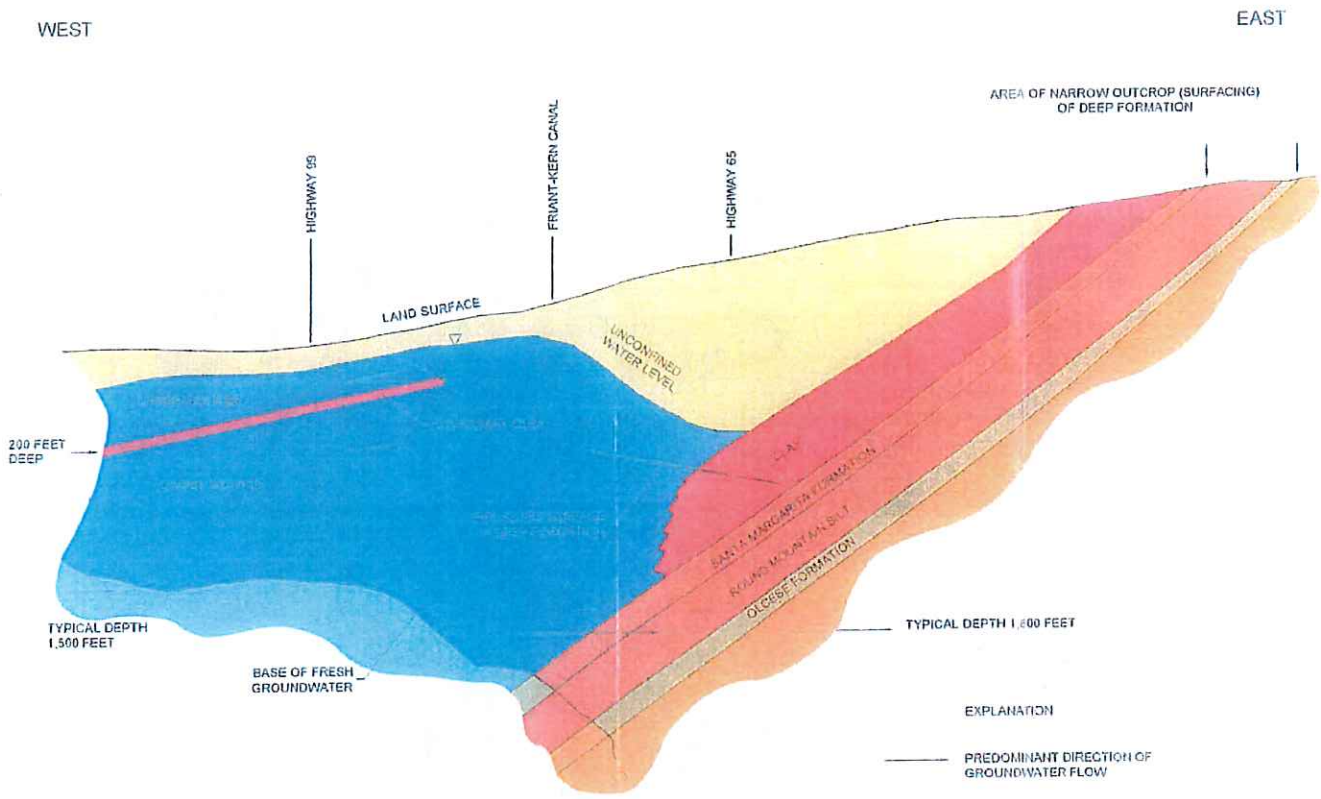
- Citrus
- Decdiduous Fruit and Nuts
- Field Crops
- Semi Agricultural: Livestock, Dairies, Etc.
- Truck, Nursery and Berry Crops
- Vineyards
- Native Vegetation
- Water Surfaces
- Urban

N
W E
S

10 5 0 10 Miles

LAND USE
GROUND WATER MANAGEMENT PLAN
DEER CREEK AND TULE RIVER AUTHORITY

KELLER/WEGLEY





SOURCE: FIGURE 9, ANALYSIS OF GROUNDWATER RESOURCES
PROVOST AND PRITCHARD 2001.

SURFACE CONDITIONS
GROUND WATER MANAGEMENT PLAN
DEER CREEK AND TULE RIVER AUTHORITY

KELLER/WEGLEY

SECTION 4
BASIN MANAGEMENT OBJECTIVES
GROUNDWATER MANAGEMENT PLAN
DEER CREEK AND TULE RIVER AUTHORITY

1. Wellhead/Recharge Area Protection;

2. Migration of Contaminated Water Controls;

3. Well Abandonment and Destruction Policies; and

4. Well Construction Policies.

Protection of the groundwater beneath the Plan Participants ensures that the maximum amount of groundwater remains available. Achieving this basin management objective minimizes the potential to lose groundwater volumes to contamination.

GROUNDWATER RESOURCE SUSTAINABILITY

Groundwater is the primary water supply in the Plan Area for both domestic and agricultural purposes. This objective emphasizes the maintenance and/or increase of the available groundwater supply. The following management strategies will be used toward achieving this objective:

1. Overdraft Mitigation;

2. Groundwater Recharge Policies;

3. Groundwater Extraction Management;

4. Conjunctive use Policies; and

5. Operation of Facilities.

This basin management objective of the Plan will identify and quantify the surface and groundwater supplies available to the Authority members and define the interaction between these supplies. Groundwater storage is affected by groundwater pumping and groundwater recharge as water users attempt to meet their water use demands. The net result of the

This objective will be achieved through the following management strategies:

1. Land Subsidence Monitoring;
2. Land Use Planning; and
3. Surface Water Management.

Through these strategies, the Authority will remain familiar with the Plan Area's topographic, geologic and hydrologic conditions that may affect the groundwater resource. The Authority will have the capability to react to proposed projects and changing conditions and potentially avoid adverse groundwater impacts.

INFORMATION DISSEMINATION

Groundwater resource and basin information and knowledge will result from the active implementation of this Plan. The Authority will serve as the primary conduit of information regarding the Plan and subsequent results.

This Basin management objective will result from the following plan elements:

1. Groundwater Basin and Resource Information Management;
2. Groundwater Basin and Resource Reports; and
3. Local Agency and Stakeholder Involvement.

The Plan and its management strategies will result in the compilation of various data and information regarding the groundwater basin and its resources. The Authority will compile, manage and disseminate this information to facilitate improved coordination and use of the Plan Area's hydrologic resources. The Plan will also result in various opportunities for the Basin's stakeholders to respond to basin management efforts.

# SECTION 5
# MANAGEMENT STRATEGIES
# GROUNDWATER MANAGEMENT PLAN
# DEER CREEK AND TULE RIVER AUTHORITY

## GENERAL

California Water Code Sections 10753.7 and 10753.8 set forth required and recommended elements that establish strategies for groundwater management. Each strategy and the Deer Creek and Tule River Authority's (Authority) planned activities conducted in support of the strategy are described in this section. Some activities have been in use since the adoption of the previous 1994 Groundwater Management Plan (Plan). Planned activities describe proposed Authority efforts that will be utilized during the implementation of this Plan.

## WELLHEAD AND RECHARGE AREA PROTECTION

The management strategy consists of the identification, establishment and management of wellhead and recharge protection areas. Areas where groundwater pumping and recharge occur warrant dedicated attention by the Authority. Wells represent a direct conduit to groundwater. Recharge area (basins) are typically constructed in areas exhibiting high soil permeability characteristics.

The Authority will monitor and participate in land use development activities within the Plan Area. The Authority will also consider structural measures such as fencing or land acquisition to protect wellhead or recharge areas.

### Plan Activities

1. Land use and development monitoring;
2. Participation in pertinent land use/zoning planning procedures; and
3. Incorporation of security measures such as fencing, as necessary.

## WELL ABANDONMENT/DESTRUCTION POLICIES

Improper well abandonment may allow contamination of the groundwater. Well abandonment must be conducted in conformance with standards adopted by the County of Tulare. The Authority will monitor these activities by reviewing abandonment records compiled by the County. Appropriate information on proper abandonment of wells within the Plan area will be made available through the Authority.

In lieu of well abandonment, the Authority will pursue the conversion of a production well to a monitoring well if such suitable opportunities arise and funding is available.

### Plan Activities

1. Establish and maintain a protocol with Tulare County regarding review of well abandonment records;
2. Develop record keeping system/database of abandoned wells;
3. Establish public education activity to inform stakeholders of well standards and policies; and
4. Develop and implement program to convert abandoned production wells to monitoring wells.

OVERDRAFT MITIGATION

The groundwater basin is experiencing groundwater overdraft as evidenced by lower groundwater levels within the Plan Area.

This management strategy is best achieved through the implementation of several companion management strategies. Overdraft mitigation is accomplished through the integration of the following strategies:

1. Groundwater Recharge/Management;
2. Groundwater Extraction Policies;
3. Conjunctive Use Policies; and
4. Surface Water Management.

These strategies will be implemented to attempt to achieve a hydrologic balance within the Plan area, thereby reducing overdraft of the groundwater resource.

## GROUNDWATER EXTRACTION POLICIES

Effective groundwater replenishment and maintenance of groundwater levels involves the management of water supplies available to the basin and extractions from the basin. Groundwater extractions within the management area are primarily by private wells. Management of groundwater extractions can best be achieved through economic incentives, rather than through the regulation of extractions. This current practice will continue to be implemented through the pricing of surface water at rates which encourage water users to use surface water in-lieu of pumping groundwater.

### Plan Activities

1. Secure surface water quantities and establish subsequent pricing that encourages maximum surface water use;
2. Develop and implement an educational program focused on:
    a) Timing of use of groundwater;
    b) Timing of use of surface water; and
3. Evaluate grower incentive based banking program.

## SURFACE WATER MANAGEMENT

### Surface Water Quantity

The Authority members import surface water supplies from the Central Valley Project through the Friant Division and the Cross Valley Canal exchange program under long-term contracts with the United States and receive local surface supplies from the Tule River and Deer Creek. Also, the Authority members make short-term and year-to-year arrangements to secure additional Central Valley Project (CVP) water and other supplies. The Authority members have in place and operate an extensive system of conveyance, distribution and recharge facilities throughout their service area to make use of available surface supplies. Table 5-1 summarizes the water supply contract amounts of each member District of the Authority.

Under this Plan, the Authority will seek to preserve the existing water rights and contracts and will pursue opportunities to supplement these supplies through importation of additional water supplies for Authority members. Supplemental supplies may be obtained through purchase of additional CVP water from other entities, "Section 215 water" from the United States and through other programs as may be available. Efficient water use and distribution within the management area will be encouraged through the use of transfers and exchanges among Authority members.

Importation of affordable water supplies, in quantities sufficient to achieve a long-term water balance within the service area of the Authority members, is a prerequisite for successful implementation of the recharge groundwater management strategy. All opportunities to supplement the regular supplies of the Authority members through long-term water exchange and banking agreements, hereinafter referred to as Projects, will be evaluated for compatibility with the goals of this Plan pursuant to an adopted evaluation process.

This evaluation process will consist of the following steps:

1. Submittal of written proposal and technical report;
2. Authority Advisory Committee and consultant evaluation;
3. Proponent and Authority Coordination; and
4. Authority Advisory Committee recommendation and Board of Directors action.

For any proposed Project, the Proponent will initiate the process through the transmittal of a written proposal describing the Project, including the anticipated benefits. A technical report will be prepared by the Proponent and evaluated by the Authority. The report must describe:

1. Quantities and sources of water;
2. Structures and other physical features of the proposed Project;
3. Water accounting measures and/or methods;
4. Funding;
5. Schedule, including CEQA compliance;
6. Anticipated benefits; and
7. Proponent's evaluation of compliance with Plan's management objectives.

The Authority Advisory Committee will evaluate the Technical Report prior to any Board determination regarding the proposed Project.

The Authority Advisory Committee will utilize outside consultants, as necessary, for further evaluations. The proposal and technical report will be reviewed for consistency with the Plan's basin management objectives and utilization of adopted management strategies.

The resulting evaluation will be returned to the Project Proponent. The Authority Advisory Committee will coordinate with the Proponent to develop the final proposed Project.

TABLE 5-2
SURFACE WATER QUALITY MONITORING
GROUNDWATER MANAGEMENT PLAN
DEER CREEK AND TULE RIVER AUTHORITY

| SURFACE WATER | MONITORING AGENCY | FREQUENCY |
|---|---|---|
| Friant-Kern Canal | Reclamation District 770 | Annually |
| | Terra Bella Irrigation District | Varies - monthly to annually |
| Tule River | Reclamation District 770 | Annually |
| | Tule River Association | Seasonal |

## GROUNDWATER MONITORING

Groundwater monitoring will be used by the Authority to assess the quantity and quality of the groundwater resource. The details of this management strategy are described in Section 6.

Each member District of the Authority currently participates in biannual monitoring of groundwater levels. Additional groundwater level information is available from domestic water providers.

In general, regular groundwater quality assessments are conducted by domestic water providers within the region. The Authority will develop a protocol to compile groundwater quality data. Additional groundwater quality monitoring efforts will be developed as needed.

LAND USE PLANNING

This management strategy consists of reviewing land use plans and coordination with local planning agencies. Under this strategy, the Authority will review projects and basin activities that affect land use and the potential for groundwater resource impacts.

Plan Activities

1. Develop and maintain protocols to participate in local land use planning efforts; and
2. Continue participation in California Environmental Quality Act as a responsible agency.

## GROUNDWATER BASIN AND RESOURCE REPORTS

This management element consists of the preparation of reports and other documents used by the Authority to disseminate information and findings regarding its efforts under the Plan. Reports will be used to document Plan activities and subsequent effectiveness. These reports will also be used to present new and/or additional knowledge regarding the Basin characteristics and resources.

Detailed information regarding the Authority's reporting efforts can be found in Section 7, Implementation.

### Plan Activities

1. Prepare Annual Groundwater Management Plan Report; and
2. Prepare technical memoranda as necessary to disseminate information regarding Plan activities.

Plan Activities

1. Pursue Plan participation by local agencies within Plan Area;
2. Maintain advisory committee of Plan Participants and Plan stakeholders; and
3. Establish and maintain public notification and participation procedures regarding Plan activities.

# SECTION 6
# MONITORING
# GROUNDWATER MANAGEMENT PLAN
# DEER CREEK AND TULE RIVER AUTHORITY

## GENERAL

Optimal use of the groundwater resource is dependent on the acquisition of good basic data respecting both geology and hydrology. The purpose of this element of the Deer Creek and Tule River Authority (Authority) Groundwater Management Plan (Plan) is to monitor conditions within the groundwater basin to identify changing conditions which may require attention. Monitoring includes gathering and analyzing basic data generated from Plan management activities to characterize the basin to provide the information necessary for future management decisions. Existing and proposed management activities in this regard may be enhanced to provide a more complete picture of the condition of the groundwater resource. The Plan's primary monitoring effort will be directed at the groundwater resource. Additional monitoring efforts will result from activities proposed by management strategies.

## GROUNDWATER MONITORING

Groundwater monitoring will consist of two components which are groundwater levels and groundwater quality.

### Groundwater Levels

Data regarding groundwater levels is used to evaluate groundwater movement and storage conditions. Groundwater contour maps showing lines of equal elevation of the water surface indicate the direction of groundwater movement and can be used to develop estimates of

ADDITIONAL MONITORING

Data related to the hydrologic inventory will be collected annually for quantification and analysis. Components of the inventory include precipitation, runoff, imported supplies, amounts of groundwater replenished and quantities of groundwater extracted. Additional monitoring efforts will result from the following Plan management strategies:

1. Groundwater Recharge Management;
2. Groundwater Extraction Policies;
3. Surface Water Management;
4. Land Use Planning;
5. Well Abandonment/Destruction Policies; and
6. Well Construction Policies.

SECTION 7
PLAN IMPLEMENTATION
GROUNDWATER MANAGEMENT PLAN
DEER CREEK AND TULE RIVER AUTHORITY

## DISPUTE RESOLUTION

The Plan acknowledges that controversial issues could arise concerning the groundwater resource. Stakeholders are encouraged to work through the Plan in addressing and resolving differences. When this process proves insufficient, the Authority has a policy in place that can be applied by the Plan. The Plan hereby adopts the Authority's "Alternative Dispute Resolution Policy." Appendix C of the Plan includes the most current version of the policy.

## ANNUAL REPORT

Documentation in the form of an annual report will be prepared as required to record the results of the management activities monitoring elements of the Plan. The contents of the annual report will include:

1. Maps and/or tables showing:
    a. Spring and fall groundwater elevations;
    b. Changes in the monitor well network;
    c. Changes in groundwater levels between subsequent spring readings; and
    d. Groundwater quality;
2. Estimation of the changes in groundwater storage computed using specific yield data and maps of change in groundwater levels;
3. Summary of water resource data; and
4. Assessment of the effectiveness of management activities.

TABLE 7-1
IMPLEMENTATION SCHEDULE
GROUNDWATER MANAGEMENT PLAN
DEER CREEK AND TULE RIVER AUTHORITY

| PLAN ACTIVITY | OCCURRENCE |
|---|---|
| Plan Management Strategies and Activities | Monthly (As Required) |
| Advisory Committee | Bi-monthly |
| Authority General Meeting | Bi-monthly |
| Plan Report | Annually |
| Plan Re-evaluation | Annually |
| Groundwater Monitoring | Semi-Annually (Additional As Required) |

## PLAN FUNDING

Implementing the Plan will require dedicated funding through the Authority and the Plan Participants. In general, funding for the Plan and its activities will be derived from grants, in-lieu contributions, cost-sharing agreements and/or assessments.

### Grants

The Authority will pursue opportunities to fund Plan activities through grants offered by DWR and other agencies. Member Districts may be asked to support grant applications on the Authority's behalf.

### Cost-Sharing Agreements

Costs for annual groundwater reports, Plan updates and other reporting efforts will be distributed and collected according to any cost-sharing agreements for Authority project activities.

APPENDIX A
PLAN PARTICIPANTS AND BASIN STAKEHOLDERS
GROUNDWATER MANAGEMENT PLAN
DEER CREEK AND TULE RIVER AUTHORITY

TABLE A-2
BASIN STAKEHOLDERS
GROUNDWATER MANAGEMENT PLAN
DEER CREEK AND TULE RIVER AUTHORITY

| STAKEHOLDER | INTEREST |
|---|---|
| Lower Tule River Irrigation District | District Landowners |
| Pixley Irrigation District | District Landowners |
| Porterville Irrigation District | District Landowners |
| Saucelito Irrigation District | District Landowners |
| Tea Pot Dome Water District | District Landowners |
| Terra Bella Irrigation District | District Landowners |
| Vandalia Irrigation District | District Landowners |
| Tipton Community Services District | Domestic Water Supply/Use |
| Poplar Community Services District | Domestic Water Supply/Use |
| Woodville Public Utility District | Domestic Water Supply/Use |
| Terra Bella Irrigation District | Domestic Water Supply/Use |
| Pixley Community Services District | Domestic Water Supply/Use |
| Teviston Community Services District | Domestic Water Supply/Use |
| Pixley Wildlife Refuge | Wildlife |
| Bureau of Reclamation | Surface Water Supplies |
| Friant Water Authority | Surface Water Supplies |
| National Resources Conservation Service | Natural Resources |
| Audubon Society | Wildlife/Monitoring |
| Tulare County | Land Use/Planning |
| City of Porterville | Domestic Water Supply/Use |

# MEMORANDUM OF UNDERSTANDING BETWEEN DEER CREEK AND TULE RIVER AUTHORITY AND _____

## ARTICLE 1 - AGREEMENT

The articles and provisions contained herein constitute a bilateral and binding agreement by and between DEER CREEK AND TULE RIVER AUTHORITY (hereinafter the "Authority") and _____ (hereinafter "Agency").

## ARTICLE II - RECOGNITION

The Authority has developed a Groundwater Management Plan (hereinafter the "Plan") with input from several local agencies located within the Authority boundaries. It is the intent of Authority to allow and encourage such agencies to coordinate efforts and be a part of the Authority's Plan by means of a separate Memorandum of Understanding (hereinafter the "MOU") between each agency and Authority.

## ARTICLE III - PURPOSE

It is the purpose of the MOU, entered into willingly between Authority and Agency, to document the interests and responsibilities of both parties in the adoption and implementation of the Plan. It is also hoped that such MOU will promote and provide a means to establish an orderly process to share information, develop a course of action and resolve any misunderstandings or differences that may arise regarding the Plan.

## ARTICLE IV - COORDINATE

There shall be an annual coordinating meeting (hereinafter the "Meeting") between the Authority and the Agency. Authority shall give notice to the Agency thirty (30) days prior to date of the Meeting to discuss the manner in which the Plan is being implemented and other items related to the Plan. If there are concerns or questions, regarding the Plan, Agency shall transmit its concerns in writing to Authority seven (7) days prior to the Meeting.

APPENDIX C
ALTERNATIVE DISPUTE RESOLUTION POLICY
GROUNDWATER MANAGEMENT PLAN
DEER CREEK AND TULE RIVER AUTHORITY

# Appendix A

# Water Inventory Tables

**Table 2: Groundwater Supply**

| Month | District Groundwater (acre-feet) | Private Agric Groundwater (acre-feet)* |
|---|---|---|
| Method | 0 | |
| January | 0 | |
| February | 0 | |
| March | 0 | |
| April | 0 | |
| May | 0 | |
| June | 0 | |
| July | 0 | |
| August | 0 | |
| September | 0 | |
| October | 0 | |
| November | 0 | |
| December | 0 | |
| Total | **0** | **102,164** |

*Estimated based on crop needs and available surface water

## Table 4: Distribution System

### Table 4: Agricultural Distribution System

| Canal, pipeline lateral Reservoir | Length (feet) | Width (feet) | Surface Area (Square feet) | Precipitation (acre-feet) | Evaporation (acre-feet) | Spillage (acre-feet) | Seepage (acre-feet) | Total (acre-feet) |
|---|---|---|---|---|---|---|---|---|
| Deer Creek | 77,687 | 95 | 7,380,265 | 227 | 719 | 0 | 2,513 | 3,005 |
| East Main Canal | 12,428 | 12 | 149,136 | 5 | 15 | 0 | 402 | 412 |
| Pixley North Ditch | 28,730 | 09 | 258,570 | 8 | 25 | 0 | 929 | 947 |
| Pixley South Ditch | 24,910 | 09 | 224,190 | 7 | 22 | 0 | 806 | 821 |
| Harris Ditch | 19,182 | 011 | 211,002 | 6 | 21 | 0 | 621 | 635 |
| West Main Canal | 33,066 | 022 | 727,452 | 22 | 71 | 0 | 1,070 | 1,118 |
| Townsend Ditch | 48,449 | 010 | 484,490 | 15 | 47 | 0 | 1,567 | 1600 |
| Cross Ditch | 12,894 | 08 | 103,152 | 3 | 10 | 0 | 417 | 424 |
| Lateral 1 Ditch | 23,760 | 13 | 308,880 | 9 | 30 | | 769 | 789 |
| Lateral 2 Ditch | 23,750 | 12 | 285,000 | 9 | 28 | | 768 | 787 |
| Lateral 3 Ditch | 29,180 | 11 | 320,980 | 10 | 31 | | 944 | 956 |
| Avenue 116 Lateral | 51,570 | 10 | 515,700 | | | | | |
| **Total** | | | **10,453,117** | **321** | **1,019** | **0** | | **11,503** |

**Table 6: District Water Budget**

| 2016 District Water Inventory | | | |
|---|---|---|---|
| Water Supply | Table 3 | | 98,395 |
| Riparian ET | Distribution and Drain | minus | 0 |
| Groundwater recharge | Intentional - ponds, injection | minus | 4,663 |
| Seepage | Table 4 | minus | 11,503 |
| Evaporation - Precipitation | Table 4 | minus | 698 |
| Spillage | Table 4 | minus | 0 |
| Transfers out of District | | minus | 20,442 |
| Water Available for sale to customers | | | 61,089 |
| | | | |
| Actual Agricultural Water Sales | From District Sales Records | | 35,479 |
| Private Groundwater | Table 2 | plus | 102,164 |
| Crop Water Needs | Table 5 | minus | 163,253 |
| Drainwater outflow | (tail and tile, not recycled | minus | 0 |
| Percolation from Agricultural Land | (calculated) | | 4,663 |
| Unaccounted for Water | (calculated) | | |

**Table 8: Annual Water Quantities Delivered Under Each Right or Contract**

| Year | Federal Ag water (acre-feet) | Federal Non-Ag Water (acre-feet) | State Water (acre-feet) | Local Water (acre-feet) | Water (define) (acre-feet) | Transfers into District (acre-feet) | Upslope Drain Water (acre-feet) | Total (acre-feet) |
|---|---|---|---|---|---|---|---|---|
| 2005 | 66,804 | 0 | 0 | 9,794 | 0 | 0 | 0 | 76,598 |
| 2006 | 61,009 | 0 | 0 | 9,156 | 0 | 0 | 0 | 70,165 |
| 2007 | 7,200 | 0 | 0 | 0 | 0 | 0 | 0 | 7,200 |
| 2008 | 12,243 | 0 | 0 | 0 | 0 | 0 | 0 | 12,243 |
| 2009 | 26,380 | 0 | 0 | 0 | 0 | 0 | 0 | 26,380 |
| 2010 | 30,296 | 0 | 0 | 1,000 | 0 | 0 | 0 | 31,296 |
| 2011 | 54,200 | 0 | 0 | 35,520 | 0 | 0 | 0 | 89,720 |
| 2012 | 0 | 0 | 0 | 10,420 | 0 | 0 | 0 | 10,420 |
| 2013 | 5,012 | 0 | 0 | 4,140 | 0 | 0 | 0 | 5,012 |
| 2014 | 0 | 0 | 0 | 2,607 | 0 | 0 | 0 | 2,607 |
| 2015 | 0 | 0 | 0 | 644 | 0 | 0 | 0 | 644 |
| 2016 | 3,791 | 0 | 0 | 5,544 | 0 | 0 | 0 | 6,145 |
| 2017 | 79,735 | 0 | 0 | 0 | 0 | 89,060 | 0 | 79,735 |
| Total | **346,400** | **0** | **0** | **81,528** | **0** | **89,060** | **0** | **516,988** |
| Average | **24,742** | **0** | **0** | **6,271** | **0** | **0** | **0** | **33,012** |

## PRORATE OR CANAL ALLOCATION

The need for prorating water use on canals occurs when demand exceeds the design capacity of specific canals. This problem typically occurs only in the summer months and only for short periods. During prorate periods the water users in the affected areas are given an allocation of water to be used within a two-week time frame. Prorates are designed to provide equitable water allocation to all water users. Cooperation when prorate is necessary will greatly assist in providing equal treatment to all District water users. If you have any questions, please contact the District office.

## WATER MEASUREMENTS

The Water Systems Operator using one of following three methods take water measurements at the numbered turnout:

1. Pump test rating
2. Gravity Measurement
3. Meter

Pumps will be rated once each season without charge upon request or if any changes are made to the pump station.

Any discrepancy regarding the quantity of water charged to an account must be reviewed with the District prior to the 15th of the month following the date of billing. All charges will be considered correct and final after that date.

Emergency Phone Numbers:

**559-686-4716 / 559-752-5050**

Follow the instructions to be transferred to the attendant on call.

*On behalf of the Board of Directors I want to thank you for your cooperation in providing equitable, reliable water service to the water users of the Lower Tule River & Pixley Irrigation District.*

*If you have any questions regarding this policy, please feel free to contact the District office at the numbers indicated.*

DAN VINK

*GENERAL MANAGER*

Lower Tule River Irrigation District
Pixley Irrigation District

357 E OLIVE AVE
TIPTON CA 93272
Phone (559) 686-4716
Fax (559) 686-0151
Email: ltrid@ltrid.org
www.ltrid.org

Lower Tule River Irrigation District
Pixley Irrigation District

357 E OLIVE AVE

TIPTON CA 93272

559-686-4716

559-686-0151 FAX

# WATER INFORMATION & OPERATING POLICY

*Working together to meet your water needs now and into our future*

3. Transfer of allocations are not permitted. Allocations can only be transferred to lessees under Lease agreements. Upon approval of the District, allocations can also be transferred to other common ownership entities who have an existing joint commercial interest.

    - Landowners will be sent a water order form every January, asking if they want their allocation, or allow their lessee or other entity ownership to use it, or do not want it. This form will be due back to the District by March 1. Proof of lease/lessor, or common ownership relationship will be required.
    - If a landowner does not want, or cannot use their allocation for the year, the District will re-allocate proportionally to all other landowners.
    - Landowner must identify whether the lessee must use the allocation on specified land or can use it on other lands owned/leased by lessee.

4. Allocations will be based on total assessed lands.
    - Class 6 soils not eligible for allocation. (Bureau of Reclamation Land Classification)
      - Non-farmed and non-developed lands.
    - Only lands with a turnout from a District facility will receive an allocation.

5. Overuse of users allocated amount of water will not be allowed. District staff will monitor use andwill terminate use to those who have no remaining allocation.

The District Board will update this policy as conditions warrant, based on operational and policy issues identified as the policy is implemented.

# CUSTOMER BILL

Customer # PIX700 Bill # 77567
Bill Date 6/30/2017

AIROSO, JOE & DIANE
C/O JOE AIROSO
PO BOX 1087
TIPTON, CA 93272-1087

Pixley Irrigation District
357 E Olive Avenue Tipton, Ca 93272

357 E Olive Ave
Tipton, CA 93272
**(559) 752-5050 or**
**(559) 686-4716**
pixley@ltrid.org

## Billing Summary

| Account Balance | |
|---|---|
| Previous Balance | $9,518.80 |
| Payments/Credits | $9,518.80 |
| Penalties | $0.00 |
| Charges | $30,850.80 |
| Adjustments | $0.00 |
| **Total Due** | **$30,850.80** |

| Water Usage | |
|---|---|
| Billing Period (June) | 6/1/2017 To 6/30/2017 |
| Billed Usage | 257.09 Af |

## Summary

| Turnout | Description | Qty | Rate | Amount |
|---|---|---|---|---|
| 02-L3150 | Multiple - 02-L3150 - 565.000ac - Pixley Regular | 257.090 Af | $120.00 | $30,850.80 |
| | **Total** | **257.090 Af** | | **$30,850.80** |

Detach and return the bottom remittance portion with your payment.

Customer # PIX700 Bill # 77567

| | |
|---|---|
| Delinquent Date | 7/31/2017 |
| Previous Balance | $9,518.80 |
| Payments/Credits | $9,518.80 |
| Penalties | $0.00 |
| Charges | $30,850.80 |
| Adjustments | $0.00 |
| **Total Due** | **$30,850.80** |

AIROSO, JOE & DIANE
C/O JOE AIROSO
PO BOX 1087
TIPTON, CA 93272-1087

**Amount Enclosed** $