

## 6.2 Tehama County

The following summarizes the local setting, current and future land and water use, and primary recommendations in the Tehama County area. Tehama County officials were interviewed and consulted as a part of the development of this IRWMP and identified the following key and/or highest priority water- and land use related issues (Ohlin, 2006):

- Potential groundwater impacts from urban development and protection of county groundwater resources.
- Lack of baseline groundwater information and the need for more monitoring (especially in the Redding Basin area of Tehama County).
- Potential development of the Lower Tuscan and Tehama Formations, and funding needed for further study and peer review of existing hydrogeologic data.
- Continued protection of water quality.
- Groundwater quality protection in the City of Corning.

### 6.2.1 Local Setting

Tehama County is located in the northern portion of the Sacramento Valley approximately midway between Sacramento and the Oregon border. The Sacramento River bisects the county. The western boundary is the Cascades Mountains, and the eastern boundary is the Sierra Nevada Mountain Range. The county consists of approximately 3,000 square miles and three incorporated cities: Red Bluff, Corning, and Tehama. The climate is typical of that found in the Central Valley, with summers being very warm and dry with mild, wet winters. The economy is based primarily on agriculture, including ranching, farming, and some timber production.

Tehama County is made up almost entirely of watersheds that feed the Sacramento River, and lies within the Sacramento Valley Hydrologic Region. Hydrologic regions are defined as “major drainage basins” by the California Water Plan. However, the western edge of the county contributes a small amount of drainage to the North Coast Region.

Agriculture and irrigated lands are the dominant land use in Tehama County along the Sacramento River. The RBDD, constructed in 1964, is on the Sacramento River just downstream from the City of Red Bluff. From this diversion, the TCCA conveys CVP water to 17 districts, which serve approximately 300,000 acres of farmland in Tehama, Glenn, Colusa, and Yolo Counties (TCCA, 2003). In Tehama County, approximately 6,000 acres are irrigated with CVP water from the Tehama-Colusa and Corning Canals.

Significant groundwater resources lie beneath Tehama County. Ninety-eight percent of public drinking water comes from groundwater sources. The northernmost portion of Tehama County overlies the southernmost part of the Redding Groundwater Basin. The southern

boundary of the Redding Basin is the Red Bluff arch in Tehama County. The Red Bluff arch is an east-northeastern trending combination of folds and a fault, which forms the northernmost barrier to groundwater flow in the Sacramento Valley Groundwater Basin. Because of this, the groundwater issues in the Redding Basin are different from the issues in the Sacramento Valley Groundwater Basin. Most of the remainder of the county overlies the Sacramento Valley Groundwater Basin, which extends several counties to the south along the Sacramento River.

Numerous water agencies and districts oversee the provision and development of water supplies in Tehama County. These include the following agricultural water purveyors, urban water purveyors, agencies with flood management responsibilities, and agencies with land use management responsibilities:

- **Agricultural Water Purveyors**

- Proberta Water District
- El Camino Irrigation District
- Thomas Creek Water District
- Corning Water District
- Stanford Vina Ranch Irrigation Company
- Deer Creek Irrigation District
- Los Molinos Mutual Water Company
- Anderson-Cottonwood Irrigation District
- Thomas Creek Water Users Association

- **Urban Water Purveyors**

- City of Red Bluff
- City of Tehama
- Gerber-Las Flores Community Services District
- City of Corning
- Rio Alto Water District
- Mineral County Water District
- Golden Meadows Estates Community Services District
- Los Molinos Community Services District

- **Flood Management Agencies**

- Tehama County Flood Control and Water Conservation District (FCWCD)
- Tehama County Building and Safety Department
- U.S. Army Corps of Engineers
- California Department of Water Resources

- **Land Use and Resource Agencies**

- Tehama County
- Tehama County Resource Conservation District
- Vina Resource Conservation District

### **6.2.2 Land Use Patterns**

The majority of land use in the county is nonirrigated agriculture (ranch and grazing land), or other (timber or barren lands). Urban development is relatively limited, existing primarily in the Red Bluff and Corning areas and other small communities close to the Sacramento River corridor. Figure 6.2-1 demonstrates the relative gross values for the leading agricultural commodities in Tehama County.

Along the Sacramento River, agriculture and irrigated lands are the dominant land uses. Recent agricultural trends in Tehama County indicate an acreage increase in production of tree crops (almonds and walnuts) and a decrease in livestock. Between 2001 and 2004, cattle within the county have decreased from 79,000 to 66,000 (United States Department of Agriculture National Agricultural Statistics Service, 2006). Between 1998 and 2003, almond acreage increased by approximately 1,500 acres for a total of 7,426 acres, and an additional 2,300 acres of walnuts were planted in 2005, for a total of 15,587 acres. The trend towards increased acreage in tree crops results in additional groundwater demand.

Future urban growth is anticipated to be centered along the Interstate 5 corridor, which runs north-south through the center of the county. Tehama County urban land use grew by 1,733 acres between 1990 and 2002, from 9,811 to 11,544 acres. Large-scale housing developments (3,700 units, 3,950 units, and 1,200 units) are currently proposed in north-central Tehama County (northern end of the Sacramento Valley Groundwater Basin and in the Tehama County portion of the Redding Groundwater Basin). Urban growth is also expected surrounding existing urban centers of Red Bluff and Corning, including the South Avenue and Corning Road interchanges with Interstate 5.

### **6.2.3 Water Use and Water Supply Patterns**

In the early 1900s, Tehama County relied on surface water for most of its water demand. The CVP and completion of Shasta Dam and the Corning Canal allowed for surface water to be delivered to the west side of the Sacramento River in the county.

By the 1970s, two-thirds of irrigation water used in the county was derived from surface water supplies. Figure 6.2-2 shows the change in surface water and groundwater use over the years. However, since that time, CVP water has become more expensive, and demand has exceeded supply in some years. Other factors such as increased environmental water demands, water supply reliability, and changing land use patterns have also contributed to an increased reliance on groundwater. Many agricultural users are investing in micro-emitters or

similar high-efficiency watering systems that require a higher standard of water purity and more on-demand availability than surface water can supply. Small orifices become plugged with tiny debris that is inherently found in diverted river water, and the water needs to be delivered in an on-demand basis rather than by a weekly schedule.

By the 1990s, Tehama County was relying on groundwater for more than two-thirds of its irrigated land (Tehama County FCWCD, 1996). It is important to note, however, that local stream diversions are the second largest water source in the county, and the largest surface water supply (28 percent). Local stream diversions total 106,300 ac-ft in a normal year, and CVP surface water only accounts for 21,300 ac-ft (see Table 5-2 in the *Tehama County FCWCD Water Inventory and Analysis* [Department, 2003d]).

Nearly all of the municipal and industrial (M&I) suppliers depend solely on groundwater to deliver municipal water to their customers. There are approximately 10,000 groundwater wells in Tehama County, and groundwater pumping and recharge are very high-priority issues for the county (CDM et al., 2005). Concerns about potential development in recharge areas have been raised in recent years, and the further study of recharge areas is needed. A Proposition 50 grant funding proposal has been submitted for the Lower Tuscan Recharge Investigation Program. Preliminary mapping of recharge areas can be found in the *Northern Sacramento Valley (Four County) Drinking Water Quality Strategy Document* (Four-County Document; CDM, 2005).

Tehama County has an AB3030 groundwater management plan and is SB1938 compliant. The Tehama County Board of Supervisors passed a groundwater aquifer protection ordinance in 1994 (Ordinance 1617). The Tehama County FCWCD is working with the Department and local purveyors to implement an effective groundwater management plan. Figure 6.2-3 shows the distribution of groundwater wells in Tehama County.

The majority of Tehama County's groundwater resources come from the Sacramento Valley Region (Tehama County FCWCD, 2003); however, large-scale developments in the Bowman area will induce land use and water use changes in this formerly rural setting. Tehama County FCWCD is taking a proactive approach to monitoring groundwater impacts from large-scale development by requiring developers to install additional onsite monitoring wells.

The *Tehama County FCWCD Water Inventory and Analysis* indicates that overall total groundwater in storage in the county was in a declining trend from 1998 to 2002 during years of normal to above normal precipitation. The Department is presently analyzing the total water in storage for spring 2006.

#### **6.2.4 Existing and Ongoing Planning**

In the past decade, the Tehama County water purveyors have taken several steps toward preparing for future land use changes and their associated water demands. Table 6.2-1 summarizes recent planning documents. The Tehama County FCWCD has completed a

comprehensive study that examined water inventories and issues in the county. Included in the 2003 *Tehama County FCWCD Water Inventory and Analysis* are water management recommendations and water supply and demand scenarios for 75 and 100 percent dry-year cutbacks in CVP water in the county.

**TABLE 6.2-1**

Existing and Relevant Tehama County Water Resource Planning Documents

Planning Document	Description	Date Published
Tehama County FCWCD Water Inventory and Analysis	Contains detailed water use analysis, groundwater analysis, and water management issue descriptions for Tehama County.	September 2003
Tehama County Small Water Systems Drought Vulnerability Study	Small water systems (small water users/groups not associated with larger municipal systems) inventory and drought analysis. GIS-based study provides tool for future management.	2005
Tehama, Butte, Glenn, and Colusa Four-Counties MOU	Agreement among common governing entities to participate in groundwater planning efforts.	March 2006
Tehama County Groundwater Management Plan	AB3030 Groundwater Management Plan.	1998
Sacramento River Basinwide Water Management Plan	Contains current and future water requirements for all Sacramento River diverters (includes portions of Tehama County).	October 2004
Northern Sacramento Valley (Four County) Drinking Water Quality Strategy Document	The Four-County effort is intended to develop and promote regional collaboration among Butte, Colusa, Glenn, and Tehama Counties to effectively coordinate drinking water resources and contribute to local, regional, and statewide water quality goals.	June 2005
Tehama County General Plan	General Plan.	Updating 2006
City of Corning Water Production Master Plan	Water plan to the year 2025.	
Ordinance 1617 "Aquifer Protection"	Prohibits the mining of groundwater, and requires a permit to move groundwater from one parcel to a noncontiguous parcel of ownership.	1994
Developing Groundwater Trigger Levels	Developing groundwater trigger levels to provide public awareness of groundwater levels in each of the 10 groundwater subbasins.	In progress
City of Red Bluff General Plan	Surface and groundwater resources section (2000-2020).	October 2000

Tehama County FCWCD is taking a proactive approach to groundwater monitoring in Tehama County. To date, the district has installed three 1,000-foot-deep multi-completion groundwater monitoring wells in three known areas of groundwater depression. The Service has donated several existing agricultural wells to be retrofitted into monitoring wells. The district has secured funding to instrument several existing Department multiple-completion

monitoring wells with pressure transducers and dataloggers to provide real-time water level data. Grant funds will be used to install additional monitoring wells in areas slated for large-scale residential developments. Hourly groundwater level data, including hydrographs, are available at the district's Web site (<http://www.tehamacountywater.ca.gov>). Furthermore, the Tehama County FCWCD is requiring these large-scale developers to include groundwater monitoring infrastructure in their construction plans. This includes installation of pressure transducers and dataloggers in the monitoring wells and collecting both baseline groundwater level data before construction begins and real-time groundwater level data after construction is completed to allow for evaluation of drawdown impacts due to groundwater production. Groundwater modeling is also required to help fulfill SB221 and SB210 and to track predicted effects compared to real-time demand of the project.

In 2005, the county completed a small water systems drought vulnerability study to determine which parts of the county are more susceptible to water shortage impacts. The study indicated that only six small water systems in the county are likely to be at risk in the event of drought. The Geographic Information System (GIS)-based study is now being used as a tool to help the county as it moves forward with water resources management planning.

In early 2006, the Counties of Tehama, Butte, Glenn, and Colusa signed an MOU that is commonly referred to as the "Four-County Agreement." This MOU is a voluntary agreement among these counties that share common groundwater resources to coordinate and cooperate with each other relating to water issues. The Four-County Document (2005) is an excellent example of water planning integration in the region. The Four-County Agreement highlights the primary water sources that link the four counties, including the Sacramento River that flows through each county, shallow alluvial aquifers, and the deeper Lower Tuscan Aquifer that underlies a portion of each county. Operational links include such common factors as groundwater quality and level monitoring programs, water resource studies, data and information management, county ordinance oversight, public education, and stakeholder interaction.

### **6.2.5 Plan Areas**

The *Tehama County FCWCD Water Inventory and Analysis* divided the county into 14 discrete inventory units for analysis (see Figure 6.2-4).

The Mountain Region West and Mountain Region East areas account for approximately two-thirds of the county acreage. The middle third of the county represents lands overlying groundwater basins and is divided into regions along groundwater basin boundaries. Many of the inventory units have been further divided into inventory subunits that are based primarily on political boundaries, of which many represent irrigation or water districts. A complete description of each inventory area and subarea can be found in the *Tehama County FCWCD Water Inventory and Analysis*.

### 6.2.5.1 Land Use Conditions

#### *Existing Land Use Condition (2006)*

Existing land use for each subunit was mapped and inventoried for the *Tehama County FCWCD Water Inventory and Analysis*. Detailed land use information for each subregion has been categorized and documented. Tehama County land use was mapped for the IRWMP using FMMP data. Land use categories were combined to reflect regional water use and urbanization patterns in the county. Tehama County land use is summarized in Table 6.2-2.

**TABLE 6.2-2**  
Existing Tehama County Land Use

Land Use Category	Acreage	% Change in 10 years <sup>a</sup>
Important Farmland <sup>b</sup>	245,445	3
Grazing Lands	705,674	-1
Urban	11,544	13
Other	870,610	0
Water	6,221	0

<sup>a</sup>Percent change over period 1992 to 2002

<sup>b</sup>Sum of Unique, Prime, Statewide, and Locally Important Farmland

Source: California Department of Conservation, 2002a

#### *Future Land Use Condition*

Future land use will occur in accordance with county and local plans. Interviews with local officials indicate that the majority of urban development will most likely occur in the far northern and southern portions of Tehama County along the Interstate 5 corridor. The areas that will see significant development will be the Bowman area in the far north near the community of Cottonwood, both east and west of Interstate 5, and the Corning area in the southern part of the county. The northern part of the county could see 9,000 additional homes or more in the next 10 years (Impact Sciences, Inc., 2006). The City of Corning expects to add approximately 1,700 new homes (about 60 percent population growth) by the year 2025 (Kimbrough, 2006). Corning City officials state that groundwater quality protection is the highest water management priority for the city. The City of Corning has an adequate supply according to the Corning Water Production Master Plan (Kimbrough, 2006). Corning does not allow new septic systems or private groundwater wells within the city, to protect groundwater quality.

### 6.2.5.2 Water Use Conditions

#### *Existing Water Use Condition (2006)*

In Tehama County, 98 percent of public drinking water comes from groundwater sources. (CDM, 2005). The *Tehama County FCWCD Water Inventory and Analysis* evaluated a dry-year scenario to see the affect on water supply sources and demands. Relative to an average

water year, water demand in a dry year from all sectors increases by 63,800 ac-ft (17 percent). Agricultural water demand and M&I demands typically increase during a dry year because of higher demand for irrigation of crops and landscape during summer months. Environmental water demand doubles in the areas near Mill and Deer Creeks, mainly because these areas participate in dry-year programs to benefit the environment. Conveyance losses decrease during a dry year because of the smaller surface water supply and less potential for percolation, evaporation, and spillage.

The composition of water supplies also changes during a dry year. Local surface water supplies decrease by 26 percent, and CVP supplies decrease by 47 percent, relative to an average year, because of lower precipitation and snowmelt in local rivers and creeks and related CVP contract curtailment provisions. Accordingly, groundwater use increases by approximately 32 percent to compensate for increased water needs and smaller surface water supplies. Supply shortages total approximately 31,000 ac-ft under the dry-year scenario.

Increased groundwater use mitigates a portion of the shortage; however, the county does not have adequate groundwater infrastructure to cover all water shortages. In general, areas with greater reliance on surface water supplies and relatively higher conveyance losses experience the larger shortages. Without the infrastructure, the cutbacks in CVP supply during a dry year create water shortages, generally in areas west of the Sacramento River. Drought along the east side of the river results in less stream diversion. Dry-year scenario supply and demands are summarized in Tables 6.2-3.

**TABLE 6.2-3**  
Summary of Water Supply Versus Demand in Dry-year Scenario

<b>Inventory Unit</b>	<b>Surface Water Supply (ac-ft)</b>	<b>Total Groundwater Supply (ac-ft)</b>	<b>Total Water Demand (ac-ft)</b>	<b>Total Water Shortage (ac-ft)</b>
Red Bluff East	5,000	91,200	98,500	2,300
Red Bluff West	100	3,900	4,100	100
Corning East	10,000	131,500	150,100	8,600
Corning West	1,300	1,100	4,300	1,900
Bend	2,200	400	2,600	0
Antelope	10,500	24,600	34,900	0
Dye Creek	25,000	9,500	44,400	9,900
Los Molinos	13,400	14,500	32,200	4,300
Vina	15,500	16,800	34,600	3,400
Bowman	13,600	3,900	17,900	400
Rosewood	1,300	1,400	2,600	0
South Battle Creek	6,300	2,400	8,700	0
West Mountain	0	300	300	0
East Mountain	6,900	200	7,100	0
<b>Total County</b>	<b>111,100</b>	<b>301,700</b>	<b>442,300</b>	<b>30,900</b>

Source: *Tehama County FCWCD Water Inventory and Analysis*

### ***Future Water Use Conditions***

Tehama County agencies and purveyors have been managing water and supplying high-quality water from surface water and groundwater sources for more than a century. Except in times of extreme drought, water supplies have been adequate to meet demand for the entire county. Current trends indicate that most future urban development will depend on a groundwater source to meet water demands. Agricultural demands that have historically used surface water might also trend toward groundwater in the future, depending on cropping trends and water efficiency system improvements.

## **6.2.6 Local Water Management Issues and Strategies**

### **6.2.6.1 Conjunctive Management and Groundwater Storage**

Groundwater management is a top priority for Tehama County. Significant groundwater resources lie beneath Tehama County. The Tuscan, Tehama, and Modesto Formations are high-profile geologic layers that lie beneath Tehama and surrounding counties. Tehama County has an AB3030 groundwater management plan and is SB1938 compliant. The Tehama County groundwater management ordinance was passed in 1994. The Tehama County FCWCD is working with the Department and local purveyors to implement an effective groundwater management plan. Tehama County FCWCD is taking a proactive approach to monitoring groundwater impacts from large-scale development by requiring developers to install additional onsite monitoring wells.

Conjunctive management is the coordinated operation of surface water storage and use, groundwater storage and use, and conveyance facilities to meet water management objectives. Conjunctive management strategies are used to improve water supply reliability, reduce groundwater overdraft, protect water quality, and improve environmental conditions. The county would like to obtain funding to explore possible recharge opportunities along the western slopes of the county in areas where significant outcrops can be found, and is participating in the Lower Tuscan Recharge Investigation in the eastern part of the county.

### **6.2.6.2 Floodplain Management**

Floodplain management in the county falls within the jurisdiction of the Tehama County Building and Safety Department. In January 1997, major storms throughout the state caused record flows in many Central Valley rivers, resulting in flooding and property damage. In Tehama County, the Sacramento River at Tehama Bridge reached 8 feet over flood stage. Over 1,000 feet of broken levee at Deer Creek resulted in \$2 million in damages and an additional \$1 million to repair private levees. Several areas are subject to flooding almost annually. The county is actively engaged with the U.S. Army Corps of Engineers regarding flooding and levee problems in the county. Tehama County FCWCD is responsible for maintaining the Deer Creek and Elder Creek levees. The Tehama County Flood Mitigation Plan is presently underway and is expected to be completed soon. System Reoperation – the Red Bluff Diversion Dam Problem.

The TCCA operates and maintains two canal systems owned by Reclamation: the Corning Canal and the Tehama-Colusa Canal. The Corning Canal is 15 miles long and serves three water districts in the county, and the Tehama-Colusa Canal is 110 miles long and serves 14 water districts, 6 of which are in Tehama County. The system was designed to divert water from the Sacramento River into the settling basin by virtue of a dam across the Sacramento River located in Red Bluff. Environmental concerns and regulatory requirements have altered the operational practices of the dam. Current regulations generally prevent the dam gates from being lowered until May 15. To overcome this limitation, current practice is to dam up Stony Creek in Orland and backflow water through canal gates that were actually intended to let water out of the canal into Stony Creek. Between the pumps on the Sacramento River at Red Bluff, and the reverse flow diversion at Stony Creek, the demands of irrigators have been met, but generally without any reserve. Diversions from Stony Creek are currently permitted between April 1 and May 15 and again between September 15 and October 29. The Stony Diversion depends on U.S. Army Corps of Engineers' operation of Black Butte Reservoir, which is primarily for flood control purposes and not irrigation. These two needs are not always compatible, and present operations do not provide TCCA with sufficient water diversion reliability or flexibility.

Since construction of RBDD, concern has been expressed regarding the dam's effect on both upstream and downstream fish migration. Over the years, the dam gates have been raised more frequently in an attempt to enhance fish passage, which has reduced the ability to divert irrigation water to the current 4-month (gates-in) operations from May 15 to September 14. During the remainder of the year, the dam gates are open. Studies show the current design of the fish ladders and the operations of the dam gates do not adequately allow passage of threatened and endangered fish species. At this time, National Marine Fisheries Service is finalizing the first stage of a listing of the green sturgeon as a threatened species. This listing will further emphasize the urgent need for an alternative method of diversion at Red Bluff because the green sturgeon is incapable of passing the RBDD.

Further complicating the reoperation of the RBDD is the impoundment of Lake Red Bluff that occurs when the dam gates are down. The potential loss of what is called Lake Red Bluff is a significant local concern. A draft EIS/EIR was prepared in 2002 to assess all options for reoperating the RBDD. To date, no additional operational changes have been made, and the RBDD continues to operate as described above.

Additionally, the TCCA is investigating the potential to extend the existing Tehama-Colusa Canal to provide high-quality water to urban uses in the Yolo and/or North Bay and Solano areas. This project could include a conjunctive water management/recharge component. The potential for this project, which would require extensive design, environmental, and right-of-way effort prior to construction, is being reviewed as to the potential benefits in relation to anticipated costs.

### 6.2.6.3 Water Conservation

The Tehama County Resource Conservation District operates a mobile irrigation lab that provides agricultural growers with important system information for management decisions. The mobile irrigation lab can identify problems with distribution uniformity and suggest solutions. An evaluation process is conducted with test protocols and evaluation software from the Irrigation Training and Research Center at Cal Poly. Through this service, growers learn to operate their systems more effectively and save water in the process. [Mobile lab evaluations are performed at no cost to growers.](#)

### 6.2.6.4 Ecosystem Restoration

The California Water Plan describes ecosystem (aquatic) restoration as “changing the flows in streams and rivers, restoring fish and wildlife habitat, controlling waste discharge into streams, rivers, lakes, and reservoirs, or removing barriers in streams or rivers so salmon and steelhead can spawn” (Department Bulletin 160-05). Ecosystem restoration improves the condition of the modified natural landscapes and biotic communities to provide for the sustainability and for the use and enjoyment of those ecosystems by current and future generations.

Tehama County is actively involved in many major ecosystem restoration programs, including the following:

- Battle Creek Salmon and Steelhead Restoration Program
- Cottonwood Creek Watershed Group Monitoring and Management Programs
- Deer Creek Spring-run Chinook Salmon Protection Program
- Deer Creek Water Exchange Pilot Program
- Numerous riparian rehabilitation projects along the Sacramento River

### 6.2.6.5 Recharge Area Protection

Butte County has proposed the Lower Tuscan Aquifer Monitoring, Recharge, and Data Management Program to be implemented in Butte and Tehama Counties. The following are goals of the project:

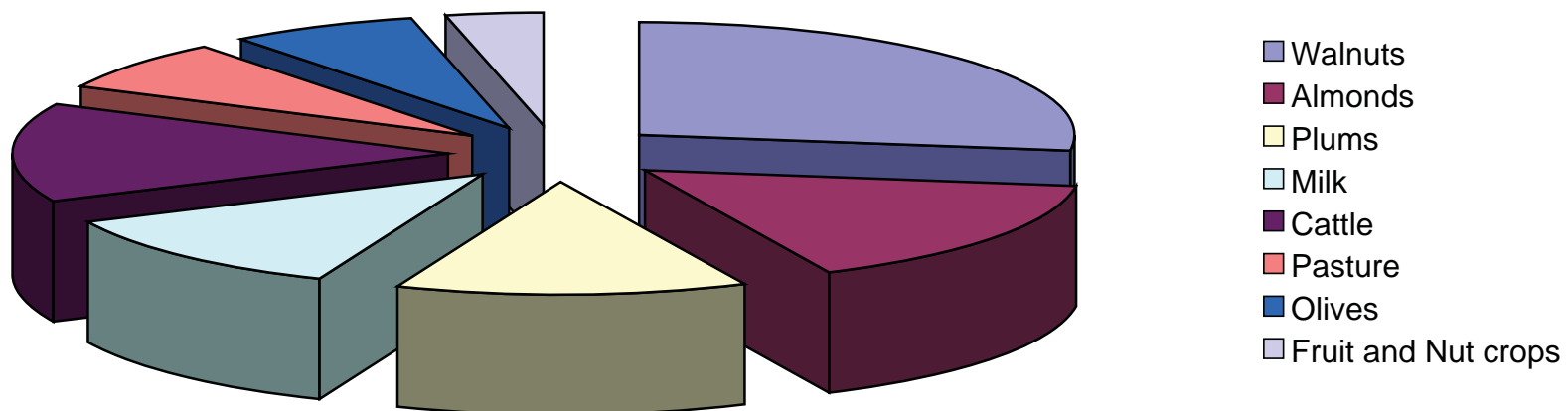
- Identify the geological makeup of the Lower Tuscan Aquifer
- Quantify the potential yield of the Lower Tuscan Aquifer
- Determine the aquifer system’s ability to meet the water needs of the local agricultural economy
- Examine the potential for conjunctive water management programs
- Educate the public to reduce potential local and regional conflict
- Foster regional coordination of water management

Element facilities will consist of several stream gauging stations and monitoring wells. The wells will be integrated into the Department-Butte County cooperative monitoring well network. In addition to installation of equipment and infrastructure, the Lower Tuscan Recharge Investigation project will entail the development of a comprehensive GIS database of water and resource management information for the four counties (Butte, Tehama, Colusa, and Glenn) that overlie the Lower Tuscan Aquifer. Further detail on the SVWMA and the project are provided in Section 1, Introduction, and Section 4, Assessment of Water Management Strategies, of this IRWMP.

### **6.2.7    *Next Steps/Recommendations***

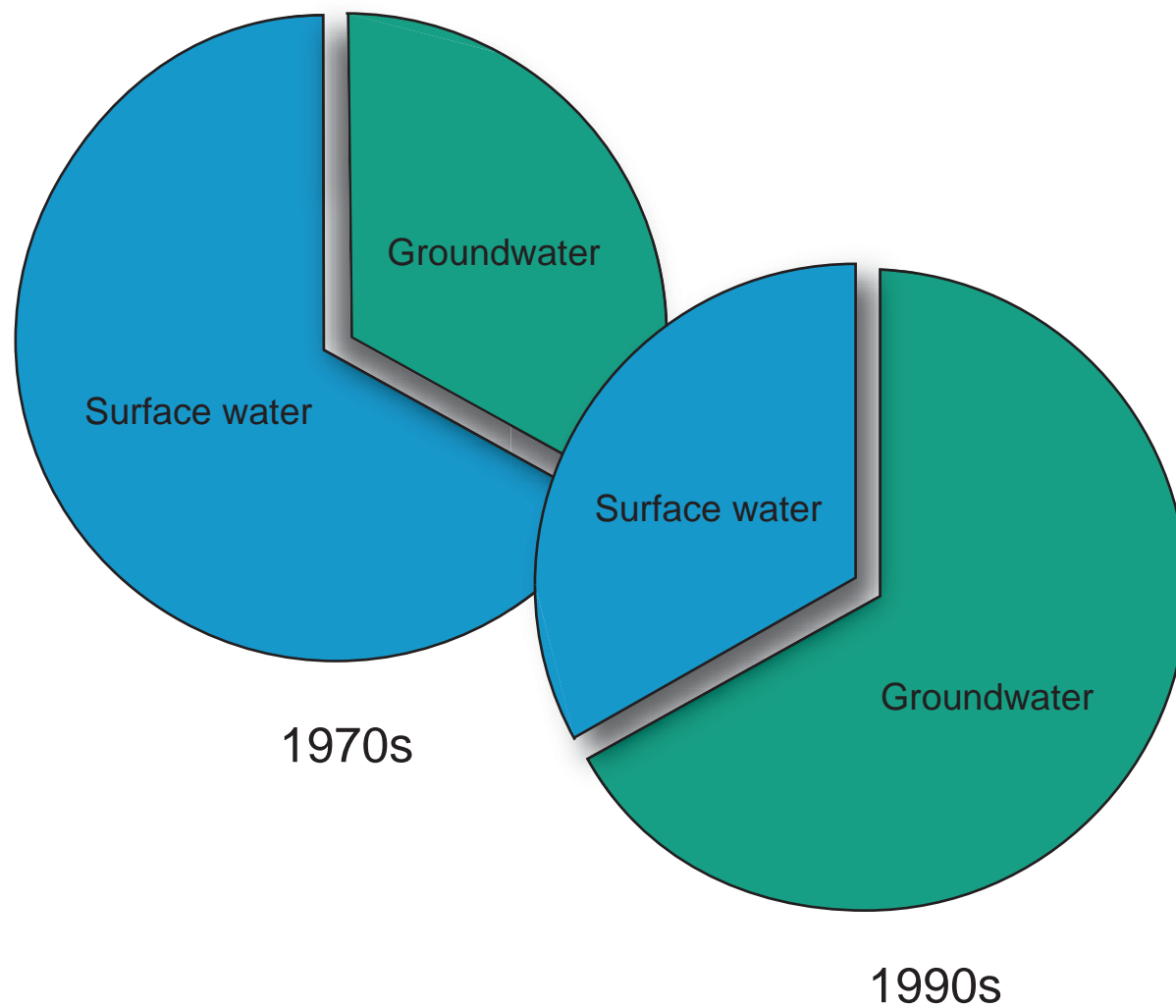
Next steps/recommendations are as follows:

1. Implement the Lower Tuscan Recharge Investigation program.
2. Create a BMO database similar to Butte County.
3. Explore funding opportunities to develop a subsistence network.
4. Explore research opportunities and funding to expand knowledge base for the Tehama Formation.
5. Continue the cooperative effort with Glenn, Colusa, and Butte Counties to ensure reliable, high-quality drinking water, and work with the Coalition to promote management of agricultural runoff and discharge.
6. Continue to encourage agricultural uses and development through land use planning and policies.
7. Support existing efforts to evaluate flood potential and pursue funding to protect both urban and agricultural areas.
8. [Tehama County FCWCD] pursue a more coordinated effort with Tehama County Planning Department with respect to development and water supply.
9. Continue to support proposed projects within Tehama County as detailed in Appendix B to this IRWMP.



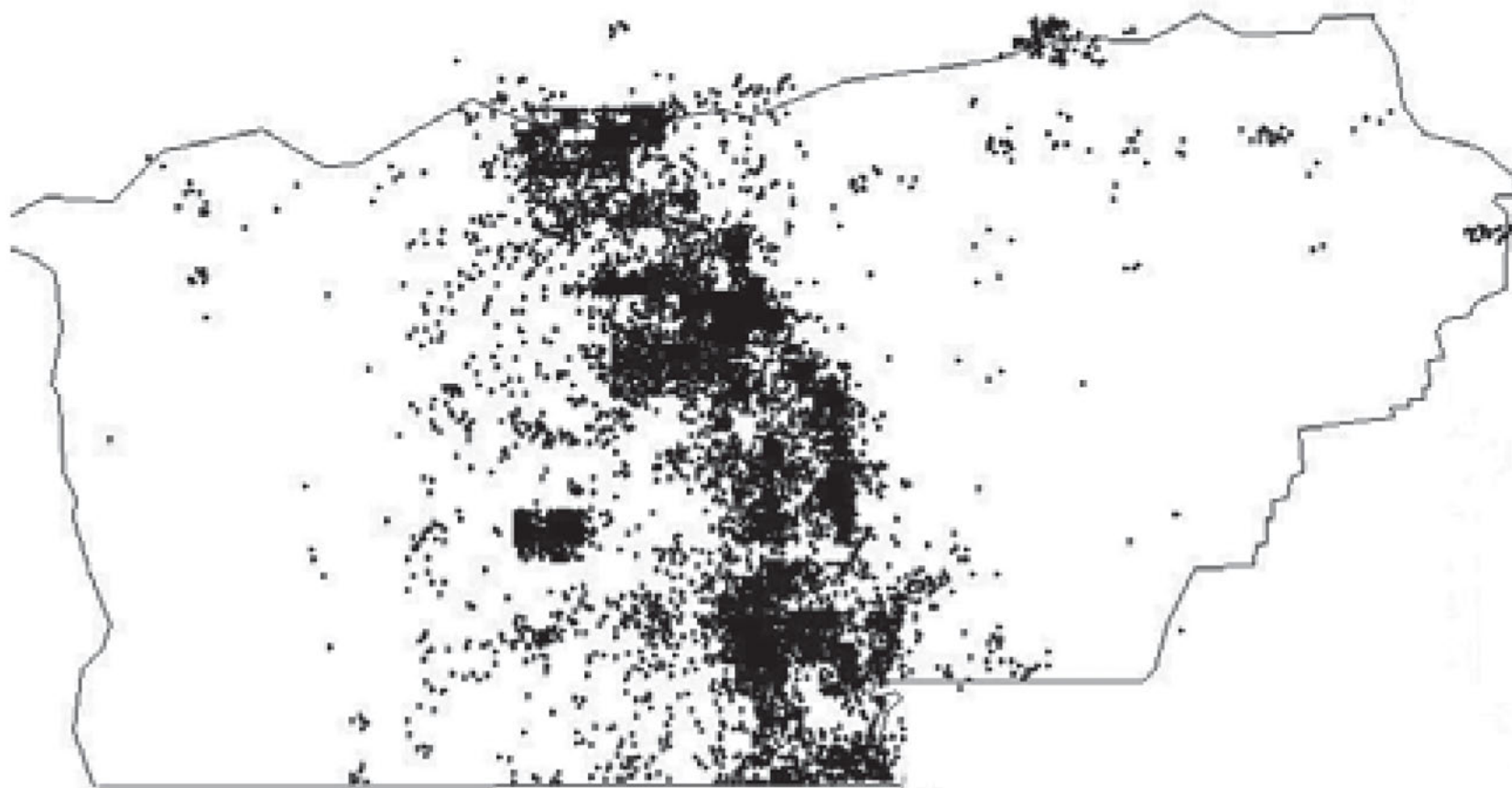
Source: United States Department of Agriculture National Agricultural Statistics Service, 2006a

**FIGURE 6.2-1**  
**TEHAMA COUNTY LEADING**  
**AGRICULTURAL COMMODITIES**  
SACRAMENTO VALLEY IRWMP



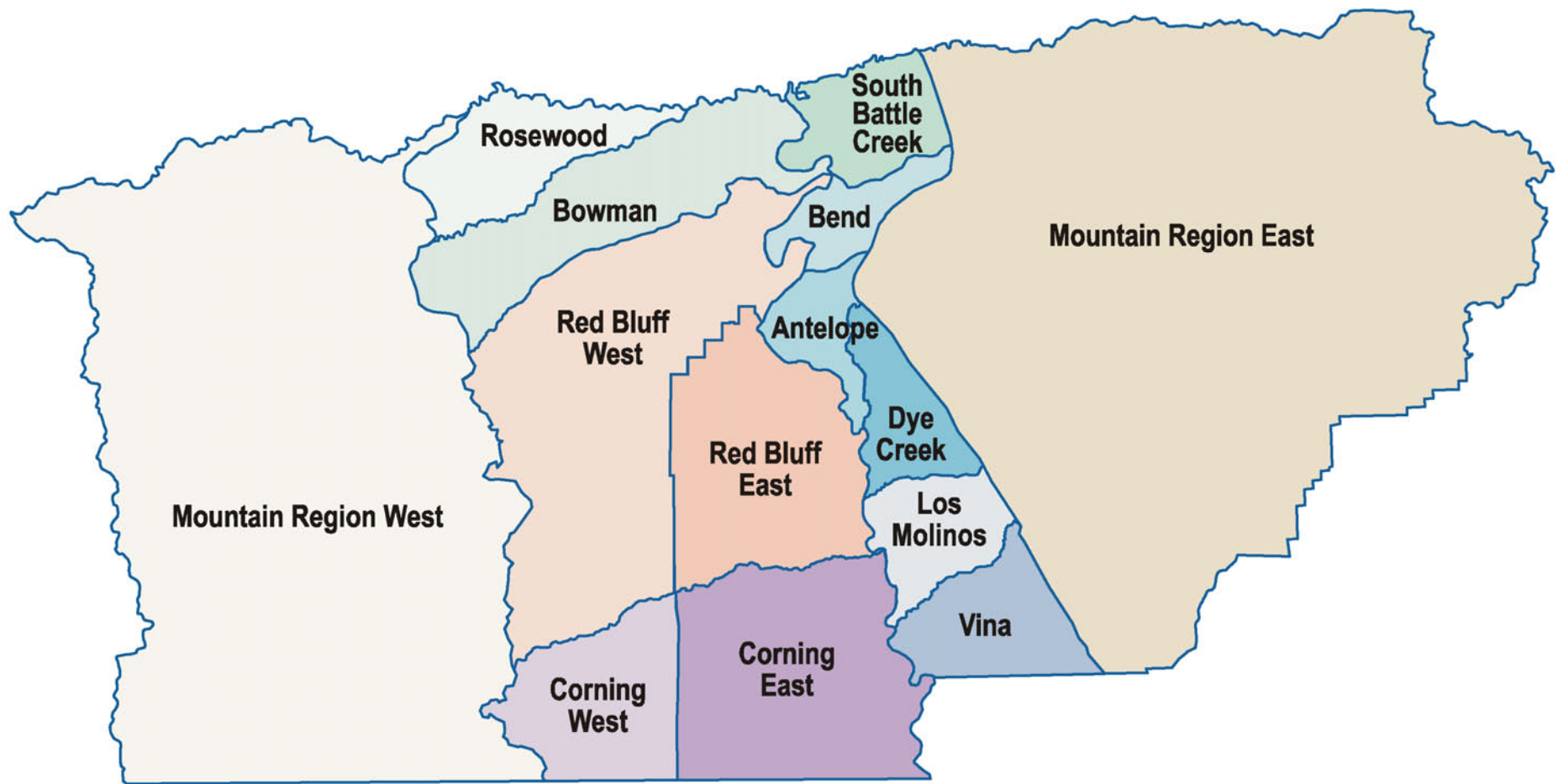
Source: Tehama County FCWCD Inventory and Analysis

**FIGURE 6.2-2**  
**CHANGE IN SURFACE WATER**  
**GROUNDWATER USE**  
SACRAMENTO VALLEY IRWMP

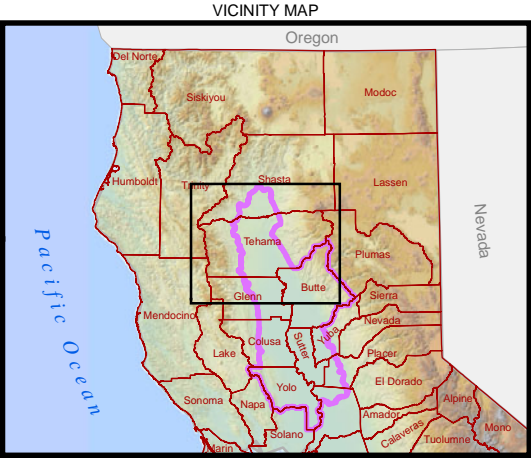
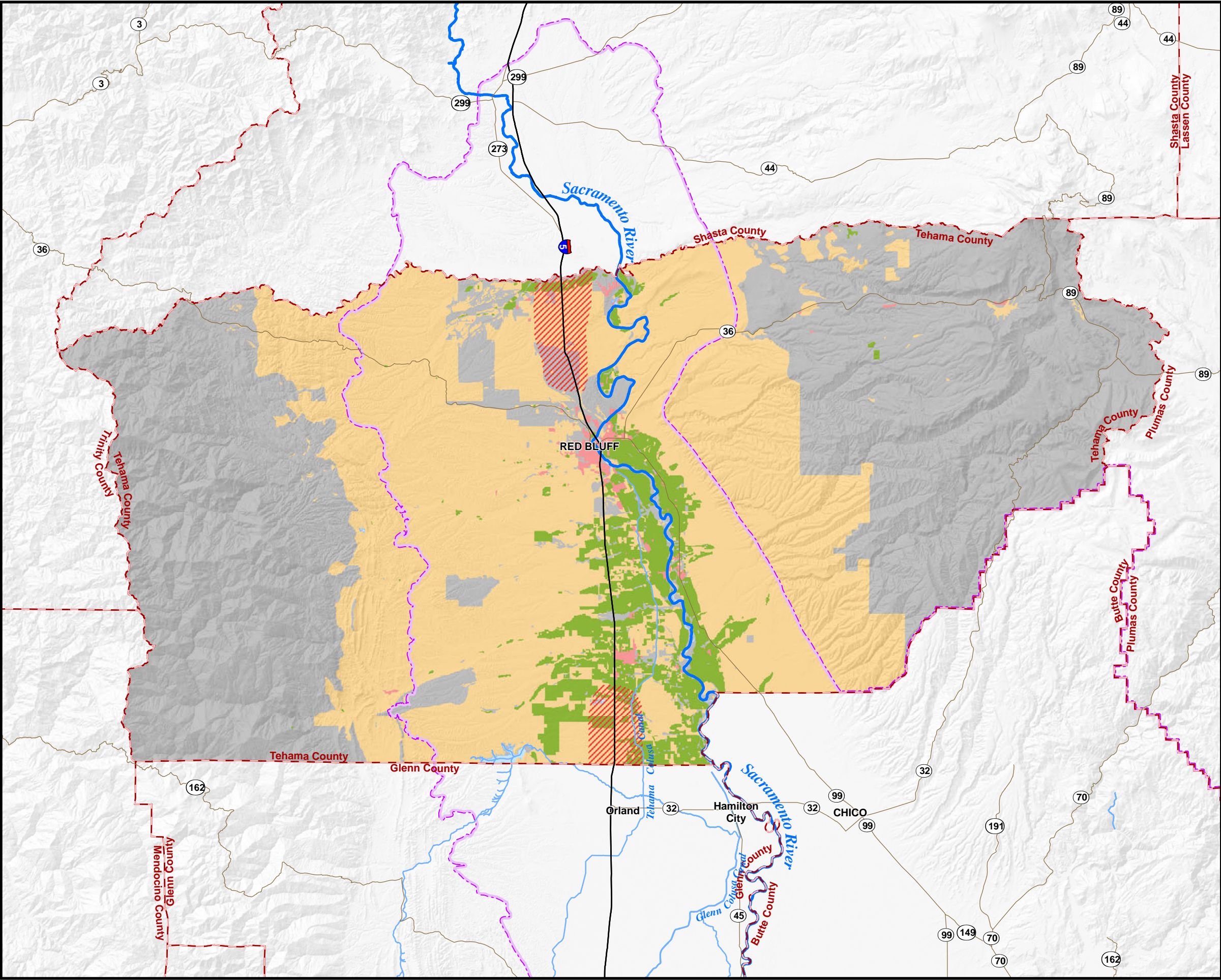


Source: Department of Water Resources

**FIGURE 6.2-3**  
**DISTRIBUTION OF GROUNDWATER**  
**WELLS IN TEHAMA COUNTY**  
SACRAMENTO VALLEY IRWMP



**FIGURE 6.2-4**  
**TEHAMA COUNTY INVENTORY UNITS**  
SACRAMENTO VALLEY IRWMP



**Legend**

- Interstate Highway
- State / US Highway
- River
- Stream
- Likely Future Development
- County Boundary
- Core IRWMP Region
- Current Land Use**
- Grazing Land
- Irrigated Farmland
- Other Land
- Urban
- Water

Source:  
1. Land Use provided by Farmland Mapping and Monitoring Program - 2002, (Tehama County 2002).



**FIGURE 6.2-5**  
**TEHAMA COUNTY LAND USE AND**  
**LIKELY FUTURE DEVELOPMENT**  
SACRAMENTO VALLEY IRWMP