

This section describes the utilities and service systems that would serve the proposed Tehama County General Plan Planning Area. Specifically, this section includes an examination of, water infrastructure, wastewater service, and electrical, natural gas and telephone services. Each subsection includes descriptions of existing facilities, service standards, potential environmental impacts resulting from implementation of the General Plan, mitigation measure where appropriate and cumulative impacts. This section of the EIR addresses comments received by the California Regional Water Quality Control Board in response to the Notice of Preparation.

### 4.14.1 WATER SERVICE

The following is discussion and impact analysis regarding water supply infrastructure. A detailed analysis of water supply (existing and planned) is provided in Section 4.8 (Hydrology and Water Quality) and the Tehama County Water Inventory and Analysis dated September 2003.

#### 4.14.1.1 EXISTING CONDITIONS

##### WATER SERVICE PROVIDERS IN THE PLANNING AREA

The Cities of Corning and Red Bluff each operate domestic water distribution systems that serve the residents of these communities. The remainder of the County is served by small community water systems and individual wells, listed below.

##### **Los Molinos CSD**

The Los Molinos Community Services District (LMCSD) was formed in 1995 to deliver potable water to the unincorporated community of Los Molinos. The distribution system was completely rebuilt in 1996. The LMCSD uses three wells to serve 356 connections. The system was initially designed to service approximately 415 connections and was sized to provide for fire protection. The distribution system is currently not being used for fire protection; therefore it is believed that the system has additional capacity. No formal studies have been conducted to determine specific quantities. (Tehama County Background Report, 2007, page 4-1).

##### **Gerber-Las Flores CSD**

The Gerber-Las Flores Community Services District (GLFCSD) was formed in 1974 when several services consolidated. The Gerber and Las Flores area is located between State Highway 99 and Interstate 5 approximately 12 miles southeast of Red Bluff and 2 miles west of the Sacramento River. The GLFCSD began providing water services in 1999. Currently water, wastewater, lighting, levee and fire protection services are provided by the GLFCSD. The utility serves the unincorporated communities of Gerber and Las Flores with a district population of approximately 1,200. Water services are funded with monthly user charges while lighting, levee, and fire protection services are funded by property tax assessments. Water is provided by three wells that have a maximum pumping capacity of two million gallons per day. Currently, the 420 water connections have an average daily use of 340,000 gallons. (Tehama County Background Report, 2007, page 4-1).

##### **Paskenta Community Service District**

The Paskenta Community Services District (PCSD) was formed in 1968 to provide water to the unincorporated area of Paskenta, located approximately 20 miles west of Corning in southwestern Tehama County. The water treatment plant was constructed in 1968 and became operational in 1969. Because the bedrock in Paskenta is primarily vertical, reliable sources of

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groundwater in the area is very difficult to obtain. Currently, 100 percent of the district's water is pumped from Thomes Creek. (Tehama County Background Report, 2007, page 4-2).

Surface water is removed from the creek via pumps prior to processing and treatment. The pumps currently operate approximately 18 hours per day during the peak season. The district utilizes a process of sedimentation tanks, pressure filters, and chlorination to treat the water. Although no documentation exists, information provided by a district representative estimated that the district currently has less than four miles of service lines. On average, the CSD estimates that it delivers approximately two million gallons of treated potable water per month to its current customers. (Tehama County Background Report, 2007, page 4-2).

The CSD currently has 82 water connections, though some are not currently in use. The district charges a \$30 flat fee for customers for any usage up to 15,000 gallons, with anything beyond 15,000 gallons being charged an additional rate. The district currently only employs a single individual that serves the functions of operation and maintenance. Based upon the current estimate provided by the CSD, the district could accommodate an expansion of 10 additional single-family units. There are currently no expansion plans contemplated by the district, as funding for such a small district is only enough to cover operation and maintenance. (Tehama County Background Report, 2007, page 4-2).

### **Rio Alto Water District**

The Rio Alto Water District (RAWD) was formed in 1968 to provide water to the residents of the Lake California area, which is located in northern Tehama County, approximately 20 miles north of Red Bluff. The district currently serves 1,163 potable water customers. Customers of the RAWD are almost exclusively residential, with the exception of five commercial uses. Rio Alto is 93 percent customer "fee for service" based, with about seven percent of its funding being tax-based.

Rio Alto's water source is 100 percent groundwater. None of the groundwater that is delivered to customers is treated by the water district and no chemicals are added. The district has three active wells and one standby well. These range from 450 feet to 660 feet in depth. The district can currently supply a maximum of approximately 2.5 million gallons of potable water per day. According to district officials, Rio Alto is currently at approximately 1.9 million gallons, or 75 percent of its maximum supply capacity per day on the hottest days of the year. (Tehama County Background Report, 2007, page 4-2 and 4-3).

### **Mineral Mutual Water Company**

The Mineral Mutual Water Company, which was first certified in 1940, is a regulated water company serving 173 connections. The utility provides potable water to the unincorporated community of Mineral, located along State Highway 36, approximately 45 miles east of Red Bluff. Permitted water sources for Mineral City include two developed springs and a well. Four redwood storage tanks provide system storage of 325,000 gallons. The system has capacity to serve a maximum of 270 total connections (Tehama County Background Report, 2007, page 4-2).

Prior to 1991, the primary source of water for Mineral was chlorinated surface water from Martin Creek. However, in 1991, the state adopted new regulations requiring an approved filtration method and disinfection of surface water. All public water systems using surface water were required to come into compliance with these regulations by June 29, 1993. The Mineral Mutual Water Company initially had difficulty meeting water filtration and disinfection regulations. The

company drilled three wells, but two were unsuccessful and the third had unacceptable levels of iron and manganese.

In August 2002, a private organization purchased the Mineral Mutual Water Company through an assessment district and upgraded the system with hookups that brought it into compliance with state standards. (Tehama County Background Report, 2007, page 4-2).

### IRRIGATION WATER PROVIDERS IN THE PLANNING AREA

The following districts discussed below are the prominent irrigation districts in operation, numerous smaller irrigation water providers are located throughout the county.

#### **Corning Water District**

The Corning Water District (CWD) was formed in 1954 to deliver irrigation, manufacturing, and industrial water to the Corning area. Distribution system construction was completed in the spring of 1967, with water delivery beginning immediately thereafter. The CWD has a water supply contract with the Bureau of Reclamation for 23,000 acre-feet annually by way of the Red Bluff Diversion Dam and the Corning Canal. The delivery system was originally designed to deliver 25,000 acre-feet annually. The District currently provides water delivery to approximately 400 users. Because limited capacity remains, each request for annexation is evaluated individually and acceptance is dependant on the distribution system capacity at the location of the requested delivery (Tehama County Background Report, 2007, page 4-3).

#### **El Camino Irrigation District**

The El Camino Irrigation District formed in 1921 to deliver irrigation water to 7,500 acres (approximately 12 square miles) of Tehama County. The District maintains approximately 70 miles of underground pipe consisting of the original construction in addition to updates which occurred in 1967. Groundwater is pumped by 27 wells that have a 1,000 gallon per minute capacity. The system capacity is approximately 87,000 acre-feet per year. Currently, the District pumps approximately 60,000 acre-feet to around 800 connections (Tehama County Background Report, 2007, page 4-3).

In 1995 the District was serving approximately 670 connections. Facing rising service requests but a constant amount of water sales, the District adopted a Groundwater Management Plan. A Subdivision Policy was approved in 1996. By 2002 the number of connections had risen to 770 and the District adopted a system of development fees and strengthened both the Subdivision Policy and the review process for new parcels. The District now delivers water to 800 connections (Tehama County Background Report, 2007, page 4-3).

#### **Los Molinos Mutual Water Company**

The Los Molinos Mutual Water Company (LMMWC) was formed in 1948 and provides irrigation water for approximately 450 connections. The utility serves the unincorporated community of Los Molinos and the surrounding area. Los Molinos is located along State Highway 99 approximately 15 miles southeast of Red Bluff and one mile east of the Sacramento River. The LMMWC obtains its water from nearby Mill and Antelope Creeks in addition to a well which operates on an as-needed basis in the dry season. The LMMWC is currently at its capacity to serve water and is not able to take additional customers (Tehama County Background Report, 2007, page 4-3).

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### Surface Water

In the early 1900s, Tehama County relied primarily on surface water. The Sacramento River and its tributaries provided water needed for irrigation. Surface water runoff may have been stored locally for later use, but large-scale storage projects did not exist. Shallow groundwater wells were likely developed for domestic supplies during this time. As the County's population and agricultural production continued to increase throughout the first half of the century, groundwater use continued to expand, representing a significant agricultural supply for the time but a relatively small volume compared to today's use (TCFCWCD, 2003, page ES-2).

Reliable surface water supplies became available to areas of Tehama County west of the Sacramento River following authorization of the Central Valley Project (CVP) in 1935 and the subsequent construction of Shasta Dam and the Corning Canal. Surface water use increased significantly following the completion of CVP facilities and the organization of water districts. By the 1970s, two-thirds of irrigation water used in the county was derived from surface water supplies. However, many water users in other parts of the state were also dependant upon CVP water supplies, which resulted in demand for stored CVP water that exceeded available supply in some years. The cost of CVP water also increased over time, resulting in a reduced demand for CVP surface water and an increased demand for groundwater as a primary supply. Groundwater use for irrigated agriculture increased to two-thirds of the irrigated agriculture supply in the 1990s and continues at a similar rate to the present day (TCFCWCD, 2003, page ES-2).

Other factors have also contributed to an increasing reliance of groundwater, including local and statewide population growth, changing land use patterns, increased environmental water use, and water supply reliability. Increased municipal and industrial uses within the County rely almost entirely on groundwater as a water source.

### Groundwater

Most County wells are located in a north-south swath along either sides of the Sacramento River. Over 10,000 wells exist in the County with approximately 78 percent classified as having domestic usage. Twelve percent are used for irrigation, four percent for monitoring purposes, one percent for municipalities, and six percent for miscellaneous uses.

The majority of Tehama County's groundwater resources come from the Sacramento Valley groundwater basin (TCFCWCD, 2003). It lies at the head of the Sacramento Valley and is defined on its northern boundary by the so-called Red Bluff Arch. This geologic structure, extending in an east-northeast series of folds and faults immediately north of Red Bluff, effectively separate groundwater conditions from areas to the north. Groundwater movement in Tehama County generally flows from both the Coast Range and Sierra Nevada toward the Sacramento River. The Red Bluff Arch structure affects water flow north of the Arch, with groundwater movement tending to flow to the northeast. The Redding Groundwater Basin is the primary aquifer that will supply the water needs for many of the north county development as proposed in the General Plan (TCFCWCD, 2003).

Change in groundwater in storage is dependent on many factors, including climatic conditions, the annual rate of groundwater extraction, and the annual rate of groundwater recharge. Groundwater storage commonly fluctuates within a given year and from year to year. Groundwater in storage will typically decline during periods of drought and rebound during periods of above-normal precipitation. Within the same year, groundwater in storage will decline through the summer months as it is extracted for municipal and agricultural uses, then recover as

extraction slows and seasonal precipitation increases recharge. In basins where the amount of annual groundwater extraction is at or below the amount of normal-year recharge, the long-term change in groundwater in storage will remain the same. In basins where the annual amount of groundwater extraction exceeds the amount of normal-year recharge, the long-term change in groundwater in storage will decline. Depletion of groundwater in storage is typically exhibited by a decline in groundwater levels during periods of normal precipitation (TCFCWCD, 2003, page 3-25).

Information on the total groundwater in storage in Tehama County was not finalized at the completion of this DEIR. Information will be included in the forthcoming report from DWR, entitled *Tehama County Groundwater Inventory*.

The Tehama County Department of Environmental Health monitors groundwater quality in the County. They also regulate the quality of public drinking water supplies. A number of regional groundwater quality issues have arisen in the recent past.

For the Antelope area, east of Red Bluff increased levels of fecal coliform and nitrates have been found. Fecal coliform is an organism found in the waste of warm-blooded animals, and is often used as an indicator that wastewater may be present. Nitrates are present in wastewater and can be associated with percolation from poorly-designed or -performing leech fields. No wastewater collection and treatment systems exist in this area and domestic sewage disposal is throughout. In 1985 and 1990 four of 78 wells (5.0 percent) in this area had nitrate levels over the 45 mg/l standard given for safe drinking levels (DWR, 2003). However, in 2002 when additional sampling occurred, 18 of 88 wells (20 percent) had levels that exceed the state and federal standard. With regard to coliform levels, two of 78 wells (2.6 percent) test positive for coliform in the 1985 and 1990 sampling and 10 of 48 wells (48 percent) were positive in 2002. Water provided by residents was sampled and found 24 of 170 (14 percent) exceeded the standards for nitrate. Most locations with nitrate levels exceeding standards are from the residential area west of Trinity Avenue and north of Antelope Boulevard (DWR, 2003). Currently, local agencies are investigating grant-funding opportunities to construct a sewage collection system and treatment plant to serve the area.

Bacterial contamination of domestic wells was detected in the late 1980s in the Proberta/Las Flores area. Monitoring found that of the wells tested, 18 percent of the Proberta wells and 20 percent of Las Flores wells were contaminated. It was determined that poor draining surface clays, over highly permeable gravels led to domestic septic drain field discharging into shallow aquifers used by domestic wells. This problem has been greatly improved since completion of a public sewage system in the area (TCFCWCD, 1996).

Several sites within the County have groundwater affected by historic leaking fuel tanks. In one situation, TCE (Trichloroethene) and other petroleum waste constituents and chlorinated ethane concentrations have been found in Corning. The RWQCB (2004) has issued a Cleanup and Abatement Order for the site and has been exploring additional soil contamination sources.

The City of Corning has had other problems with chemical contamination affecting several of its municipal wells. Two of its wells were shut down because of methyl tertiary butyl ether (MTBE) and perchloroethyl (PCE). Also, in 1994 a DWR groundwater quality investigation noted three wells located north and west of Corning that were found to have waters with detectable levels of 1,2-dichloroethane exceeding levels established by the EPA. Typically, Volatile Organic Compound (VOC) contamination is found to be due to leaking fuel tanks, landfills, or industrial sites using solvents.

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While the previously described groundwater quality issues relate to human-caused impacts, natural sources of groundwater degradation also exist. An example involves higher than normal levels of the element boron in wells located in the east side of the County. It is thought that underlying Cretaceous marine sediment exposed in higher areas of the watershed potentially contribute to the elevated boron levels and other dissolved solids (TCFCWCD, 1996).

### TEHAMA COUNTY GROUNDWATER INVENTORY AND HISTORIC CHANGES

A detailed inventory of groundwater resources is forthcoming in a Department of Water Resources report entitled *Tehama County Groundwater Inventory* (cited in TCFCWCD, 2003). When considering depth to groundwater and potential changes, it is important to remember that groundwater levels vary during each given year and from year-to-year. During each summer groundwater levels decline as water is pumped for irrigation or domestic uses and increase as precipitation occurs during the wet-season. From a longer-term perspective, relative groundwater levels will increase, decrease, or stay static. Over a period of years, relative groundwater levels will decline during droughts, increase during wet series of years, and stay relatively stable if recharge and usage/loss are about equal.

Data from 2000 suggest the degree of seasonal groundwater level variation for a normal precipitation year). It shows that the groundwater levels can change between 0 and 45 feet and that the areas with greatest decline are where agricultural and municipal pumping occurs during summer. These include portions of the El Camino Irrigation District, the Elder Creek Water District, and the Aaction Tree Farm, the area southeast of Corning, and the area west of Proberta Water District.

To monitor relative changes of yearly groundwater levels, springtime measurements have been made at 100 wells throughout Tehama County between 1980 and 2002 (cited in TCFCWCD, 2003). Figure 8G-10 of the *Tehama County Background Report* shows the mean Spring-to-Spring depth to groundwater (and calculated cumulative change in water storage) during the period of monitoring (cited in TCFCWCD, 2003). Countywide cumulative results clearly show the increase in groundwater levels in the wet water-year of 1983 and 1986, cumulative decreases through the drought of the early 1990s, gradually recovery during the next five years, and then declines from 1998-2002. Although for the first two decades of this monitoring the springtime depth to groundwater has reflected the overall precipitation patterns for the County, the 1998-2002 decline is anomalous. This decline occurred during years of near-normal precipitation and might indicate that over drafting is occurring.

### **Balancing Tehama County's Water Supply and Demand**

Early irrigation efforts in Tehama County generally used surface water. The earliest irrigation system known, a gristmill operated on the Rancho Bosque Mexican Land Grant, served sometime between 1847 and 1852 (Gowan, 1967). Even into the early years of the 20<sup>th</sup> century agricultural users primarily depended upon local surface waters, though domestic water generally came from shallow wells. Historically, communities within Tehama County have also heavily depended upon surface water as municipal water source.

Chronic flooding along the Sacramento River inhibited both agricultural and urban development in Tehama County. The desire to control flooding, along with the promise of large amounts of irrigation water, led to the 1935 authorization of the Central Valley Project (CVP). Important elements of the CVP included the completion of Shasta Dam in 1945 and subsequent construction of the Tehama-Colusa and Corning Canals that distributed water through Tehama County and further to the south (Bureau of Reclamation, 2005). Following these projects and the

lessening of flood risk, agriculture development greatly expanded in the county into the 1970s and water usage increased significantly, with surface water continuing to provide a majority of the County's demand. In fact, during the 1970s, two-thirds of the County's water needs were supplied by surface water (TCFCWCD 2003).

As development continued throughout Tehama County and the rest of California, the demand for CVP-provided water occasionally exceeded supply. The best example was the drought of 1976-1977 when CVP contract allocations were reduced 75 percent from normal levels. At the same time the cost of CVP irrigation water increased. (As an example, historically the Corning Water District paid \$2 and charged farmers \$3.40 per acre-foot of CVP water. By 2003 the charge to the District was \$13 per acre-foot and charges to the farmers were \$29.75, amounting to nearly a nine-fold increase in cost.) This has led, over the last quarter-century, to users increasingly turning to the more dependable and cost-effective groundwater alternative. While two-third of Tehama County water needs were supplied by surface water in the 1970s, today it is only one-third (TCFCWCD, 1996).

Efforts have estimated county water needs under a variety of conditions (TCFCWCD, 2003). For an average year (assuming the 2000 crop pattern, precipitation, evapo-transpiration rates, and urban per-capita usage), it is estimated that the county uses approximately 378,000 acre-feet (AF) of water for its total annual needs. Of the total, agriculture uses about 82 percent (308,600 AF), municipal and industry use six percent (23,100 AF), environmental programs use one percent (4,100 AF), and conveyance losses are responsible for 11 percent (42,400 AF).

To meet the average year 378,000 AF demand, supplies come from: local stream diversions (106,300 AF), CVP water (21,300 AF), Sacramento River/CVP water (14,400 AF), Groundwater (172,700 AF), Deep Percolation Reuse (53,500 AF), Reclaimed Wastewater (200 AF), and Surface Water Reuse (9,800 AF).

During an average year scenario, the total water used by Tehama County for all purposes, approximately 59 percent of the use comes from groundwater sources. Local surface water sources supply 28 percent of the county's demand, Sacramento River/Central Valley Project (CVP) projects provide 10 percent, and surface water reuse accounts for about 3 percent (TCFCWCD, 2003).

### PROPOSALS TO INCREASE SURFACE WATER SUPPLIES

The need to provide additional, reasonable-cost surface water has prompted agencies to consider additional water diversion and distribution projects, two of which physically would affect Tehama County. Proposals are being studied to heighten Shasta Dam spillway levels from 6.5 to 18.5 feet in height (Bureau of Reclamation, 2004). Raising the dam elevation by 6.5 feet would increase the reservoir capacity by 290,000 acre-feet to a total of 4.84 million acre-feet, while an increase in 18.5 feet would increase the pool capacity by 636,000 acre-feet to a total of 5.19 million acre-feet. The higher the increase in height, the greater the engineering challenges involved and the larger the amount of infrastructure and public property effects would result. If a project is approved, funding could be made available as 2008-2009 with project completion, depending on the alternative chosen, by four to six years later.

The Red Bank Project lies in Tehama County and could consist of three reservoirs, the largest holding 250,000 acre-feet of water. The project would entail capturing surplus flow from the South Fork of Cottonwood Creek and moving it to the storage facilities on Red Bank Creek, southwest of Red Bluff. This water would be provided to the Corning and Tehama-Colusa Canal systems during the early portion of the growing season (Integrated Storage Investigation, 2000).

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Another project being studied within the county is the Thomes-Newville Project. It would divert water from Thomes Creek and at times from the Sacramento River. A reservoir with capacity between 1.9-3.0 million acre-feet would hold the water.

South of Tehama County, the Colusa Reservoir Complex and Sites Reservoir (located in Glenn and Colusa County, respectively) are also proposed as additional storage facilities. Also, investigations continue of options to increase Millerton and Friant Reservoir pool levels south of Tehama County. All of these projects would affect fish and wildlife habitat, would affect existing infrastructure, may reduce flow periodically to the Sacramento River, and would be very expensive to complete. Environmentalist opposition is almost assured.

### PROJECTS TO CONSERVE WATER

In addition to the attempts to acquire new sources of water, conservation and reclamation efforts have been occurring throughout California and Tehama County. As examples, the City of Red Bluff reclaims approximately 13 million gallons per year that is supplied to CalTrans for their road-side landscaping; the City of Corning has replaced 95 percent of its water mains since 1999 to reduce conveyance losses; and the Los Molinos Mutual Company has been converting open ditches to closed pipelines to reduce conveyance losses. Also, the Anderson-Cottonwood Irrigation District has received a DWR water conservation grant to determine the feasibility of lining the very old ditch system that loses up to 20 percent of its flow. Early indications are that the District could reduce annual seepage loss by up to 20,000 acre-feet (TCDCWCD, 2003).

Water Districts with CVP contracts are required to develop conservation plans. In addition, some Districts participate in the Mobile Irrigation Lab project, which determines water requirements of various crops, to help reduce over-watering and increase water use efficiency on farms (DWR, 2005).

#### 4.14.1.2 REGULATORY FRAMEWORK

##### STATE

##### **The Colorado River Compact**

This original agreement between seven western states (California, Arizona, Nevada, Utah, Colorado, Wyoming, and New Mexico) allocated Colorado River water. California was allotted 4.4 million acre feet (AF) per year; however, because there were unused apportionment from Arizona and Nevada allotments in the compact's early years, California also took an additional 0.8 million AF. Over time, Arizona and Nevada developed abilities to use their apportionments and California has been forced to relinquish the extra amounts it was using.

California's Draft Colorado River Water Use Plan proposed that the state's total use of Colorado River water will be reduced to the original 4.4 million AF allotment by the year 2015. A number of conservation and water purchase options have been considered in order for this time-line to be met. Because of the reduction in Colorado River water usage, southern California urban water agencies (Municipal Water District, MWD) have put additional effort into finding replacement water elsewhere. In the recent past, Sacramento Valley water districts have sold water to MWD and it is possible that Tehama County may do so in the future.

### **The Sacramento Valley Water Management Agreement**

With the adoption of the Water Quality Control Plan for the San Francisco/Sacramento-San Joaquin Delta Estuary, the various users of the drainage's water met to determine the responsibilities for meeting flow requirements. Each of the local parties is required to develop and implement a variety of local water management projects that will increase water supplies cumulatively, meeting both in-basin demands and Delta water quality requirements.

Under this agreement, regional water management efforts will emphasize groundwater planning, providing for unmet demands in the Sacramento Valley, providing for water use efficiency measures, and developing water management projects for local use.

### **North-of-the-Delta Off-stream Storage Investigation**

A variety of state, federal, and local regulatory entities, and local stakeholders, formed a partnership to study opportunities for off-stream storage. Off-stream storage typically consists of construction of a dam on a small and usually seasonal stream. Water is diverted out of a major stream at various times of the year and stored in the off-stream facility so that it can be released at periods of time when needed. Four potential projects in the Coast Range foothills have been assessed to date: Sites Reservoir, Colusa Project, Thomas-Newville Project, and Red Bank Project.

Sites Reservoir site would lie approximately 10-miles west of Maxwell. A completed reservoir would cover 14,000 acres and could store up to 1.8 million acre-feet of water. The Colusa Project is located in southern Glenn County. Finally, the Red Bank Project would be southwest of Red Bluff. These projects have the potential of affecting local supply and demand conditions and have a role in basin-wide management options.

### **Integrated Regional Water Management Planning Act of 2002**

This bill authorizes regional water management groups to prepare and adopt regional water plans. The regional plan may include groundwater management, water use efficiency and recycling programs, urban water management planning, fish passage improvements, and flood management.

### **Sacramento and San Joaquin River Basins Comprehensive Study**

Following extensive flood damage in 1997, this program was to develop a comprehensive flood management plan for the Central Valley. This plan would integrate flood damage reduction and ecosystem restoration. The final report will recommend programmatic authorization for projects to be completed in stages. In conjunction with the study, the Sacramento River floodplain within Tehama County was mapped using advanced technology and the data will be incorporated into the Kopta Slough/Woodson Bridge Restoration and River Bridge Protection Project, currently underway in Tehama County.

## LOCAL

### **Tehama County General Plan**

The Tehama County General Plan is used to guide future development in unincorporated areas of the County. State law requires that all local governments prepare a General Plan for future development in their jurisdictions. The County's current General Plan was adopted in 1983. The Tehama County General Plan of 1983 states objectives and policies that relate to the

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management and protection of County water supply. Key objectives and policies that relate to water supply include Objective WS-1, which attempts to locate future development in areas where existing water districts have available resources and in areas deemed suitable on the basis of appropriate field tests for on-site systems. Furthermore, Policy WS-a locates development with respect to type and intensity/density of land use in order to ensure the long-term and adequate water supply. Policy WS-b encourages the use of water conservation techniques for existing and new development.

### **Tehama County Ordinances No. 1552, 1553, and 1671**

In 1992 the Tehama County Board of Supervisors enacted Ordinances No. 1552 and 1553 to prohibit large-scale groundwater export from the County without acquiring a permit issued by the Board. In 1994 landowners challenged the ordinances but following a lengthy trial and appeal, the courts upheld the County Ordinances. Because of this legal challenge and court's interpretation that groundwater management should be addressed at local levels, several counties in California have developed their own ordinances that regulate groundwater use.

In 1994, the Tehama County Board of Supervisors passed Ordinance No. 1617 which removed the sunset clause in the previous ordinances and added provisions requiring a permit if groundwater extracted from one parcel was to be used on another, non-adjacent parcel. In addition, well operations were restricted if they could impact other wells on adjacent properties and mining of groundwater for export was prohibited.

### **Tehama County Flood Control and Water Conservation District (TCFCWCD) Coordinated AB 3030 Groundwater Management Plan**

This plan was adopted in 1998 and a Memorandum of Understanding between TCFCWCD and participating entities recognized their responsibilities in implementing the plan, including:

- Corning Water District
- El Camino Irrigation District
- Rancho Saucos Water District
- Rio Alto Water District
- City of Corning
- City of Red Bluff
- City of Tehama

Tehama County's 2030 Groundwater Management Plan includes three phases. In Phase I only non-intervening activities occur, including performing water level and water quality monitoring; coordinating efforts with other agencies; developing data inventory and evaluation; coordinating with the technical advisory committees; issuing reports; and promoting public outreach. Phase I will continue for the duration of plan implementation. Phase II and III will only be initiated if more directed groundwater management activities are deemed necessary and would require a separate agreement between the TCFCWCD and participating entities signatory to the MOU.

Phase II could include the identification and management of well head protection and recharge areas; development of procedures and processes to interface with land use planning agencies to protect against groundwater contamination; drought and overdraft mitigation planning; replenishment assessment; and protection of in-basin beneficial uses and promotion of conservation programs. Phase III would involve "active management," including control of saline water intrusion; regulation of migration of contamination; facilitation of conjunctive use operation; and assessment, construction, and operations of various groundwater management projects (i.e. contamination cleanup, recharge, storage, conservation, water recycling, or extraction projects).

### 4.14.1.3 IMPACTS AND MITIGATION MEASURES

#### STANDARDS OF SIGNIFICANCE

The County has determined that the project may have significant impacts associated with the County's water supply and water infrastructure if it does any of the following:

- 1) Result in the need for new systems or a substantial expansion or alteration to the local or regional water treatment or distribution facilities that would result in a physical impact to the environment; or
- 2) Result in the need for new systems or a substantial expansion or alteration to the local or regional water supplies that would result in a physical impact to the environment.

This impact analysis focuses on impacts on infrastructure needs to provide water service to the unincorporated areas of the County. The analysis of water supply and its associated environmental effects is addressed in Section 4.9, Hydrology and Water Quality.

#### METHODOLOGY

Evaluation of potential impacts to water supply systems throughout the General Plan Planning Area was based on consultation with the six water agencies that operate within the unincorporated regions of Tehama County as well as a review of the Tehama County General Plan. The analysis for the General Plan considered both projected growth in unincorporated portions of the County by year 2030 and growth under buildout conditions.

#### IMPACTS AND MITIGATION MEASURES

##### Water Treatment and Distribution Facilities

**Impact 4.14.1.1** Implementation the General Plan would result in the need for additional treatment capacity, storage capacity, and other conveyance facilities to meet the projected water demands. This is considered to be a **potentially significant** impact.

An issue of importance for Tehama County is that during dry years, there is not enough water supply capacity to provide its own needs. Part of this problem is one of infrastructure, which additional wells and means of conveyance will help, yet another part of this problem is the lack of adequate groundwater resources. It is possible that the County is reaching its limit to rate of groundwater extraction, based upon groundwater level examinations over the past quarter century.

The need to provide additional, reasonable-cost water has prompted proposals to increase surface water supplies. The Red Bank Project lies in Tehama County and could consist of three reservoirs, the largest holding 250,000 acre-feet of water. The project would entail capturing surplus flow from the South Fork of Cottonwood Creek and moving it to the storage facilities on Red Bank Creek, southwest of Red Bluff. This water would be provided to the Corning and Tehama-Colusa Canal systems during the early portion of the growing season. Another project being studied within the County is the Thomes-Newville Project. It would divert water from Thomes Creek and at times from the Sacramento River. A reservoir with capacity between 1.9-3.0 million acre-feet would hold the water.

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Although additional storage and distribution facilities are very expansive and controversial, processes are in place for study of the options and it is possible that additional surface supply may be potentially beneficial to Tehama County. Surface water production and distribution infrastructure improvements to serve buildout of the Planning Area would include similar facilities as groundwater facilities (raw water pipelines, water storage tanks, pump facilities, treatment, and distribution facilities). Buildout of the 2008-2028 General Plan would require timely expansion of these facilities in order to maintain adequate service. These water supply distribution improvements would result in environmental effects to support General Plan and other regional growth.

### Proposed General Plan Policies and Implementation Measures that Mitigate Potential Impacts

The following Tehama County General Plan policies and implementation measures contained in the General Plan Land Use Element and Public Services Element assist in reducing any potential impacts associated with water supply infrastructure.

Public Services: PS-3.1, PS-3.1b, PS-3.2, PS-3.2a, PS-3.2b, PS-4, PS-4.1, PS-4.1a, PS-4.1b, PS-4.2, PS-4.2a

Land Use: LU-3.1, LU-3.1a, LU-3.2, LU-3.2a, LU-6.1, LU-6.1a, LU-6.1b

Implementation of PS-3.1 and PS-3.1b would ensure that water supply needs are met in a timely, efficient and logical manner by phasing the development of public facilities in a logical manner that encourages orderly development. Policy PS-3.2 and associated Implementation Measures PS-3.2a, and PS-3.2b requires the County to ensure sufficient water supplies and delivery system capabilities are available to support new development in conjunction with existing development. PS-4, PS-4.1, PS-4.1a, and PS-4.1b promote development in areas of the General Plan Planning Area that possesses sufficient water resources in order to ensure the long-term, economically feasible and environmentally sound provision of adequate water supply and quality. This is done in large part through coordination water providers. Furthermore, Policy LU-3.1 and Implementation Measure LU-3.1a require the use of existing infrastructure for new development whenever possible. Policy LU-3.2 and associated Implementation Measure LU-3.2a seeks to develop a land use pattern that minimizes the expenditure of public funds for water supply infrastructure. This would be achieved by identifying and mapping existing County water facilities and infrastructure and using this information to develop a land use pattern that maximizes this infrastructure. LU-6.1, LU-6.1a, LU-6.1b, PS-4.2 and PS-4.2a require that new development funds its fair share portion of its impacts to all water supply related services and facilities.

The policies and implementation measures in the General Plan provide for future water supply in the unincorporated portions of Tehama County and complement the existing standards and guidelines as well as ensure sufficient water supplies and delivery system capabilities are available to support new development in conjunction with existing development. However, impacts associated with the development of expanded water supply facilities could still be considered substantial and the only mitigation to truly remove this impact would be to not allow growth the County, which is not consistent with the objectives outlined in Section 3.0 of this DEIR. Therefore, implementation of the General Plan would result in water supply related impacts that are considered **significant and unavoidable**.

### Mitigation Measures

None feasible.

#### 4.14.1.4 CUMULATIVE SETTING, IMPACTS AND MITIGATION MEASURES

##### CUMULATIVE SETTING

The cumulative setting for water supply includes all of the unincorporated areas of Tehama County. Potential future development of these areas would also result in cumulative demand for water resources and associated facilities.

##### CUMULATIVE IMPACTS AND MITIGATION MEASURES

###### Cumulative Water Service Impacts

**Impact 4.14.1.2** Implementation of the General Plan in combination with other reasonably foreseeable development would increase the population within the County contributing to the cumulative demand for water resources and associated facilities. As a result additional water supply resources would be required. This is considered a **cumulatively considerable** impact.

Buildout of the Tehama General Plan could increase the population of the County to 416,967 residents. The California Water Plan estimates that internal per capita use of water is approximately 80 gallons per person per day which, at full buildout, would increase the water need by 33,357,360 gallons per day for internal (non-irrigation) use. Irrigation needs could increase the water demand by another 40 gallons per person per day or more<sup>1</sup>. This could result in another 16,678,680 gallons per day for a rough total of over 50 million gallons per day. This equates to approximately 154 AF per day, or approximately 56,210 AF per year. Since some or all of the additional buildout development will occur on irrigated farm land, some of the water demand might be off-set by the conversion of irrigated farm land to developed land. However, potable water wells are often deeper than agricultural wells to assure a higher quality of water. If the land develops to very low density, there is a potential for housing to occur with a continued need to irrigate. This would result in no off-set of water usage.

As discussed in Section 3.0 Project Description, full buildout of the General Plan is a mathematical calculation and very unlikely to occur within the 2028 planning horizon. The population growth estimates, (defined in Section 4.0 of this EIR) identify that the 2028 population of unincorporated Tehama County will be 63,647. Using the above figures, the County will need to provide water for the additional 22,711 residents by 2028. Again using the above, this equates to approximately 1.817 million gallons per day. Irrigation use could add 9.084 million gallons per day.

Generally, the larger the parcel size, the more water that is used for irrigation, and in Tehama County, development within the unincorporated area often involves use of a groundwater well to supply the water. While lot sizes in more urban areas have become smaller, the rural lifestyle in Tehama County is typified by homes on larger, often several acre, parcels of land. These larger parcels often require substantial irrigation that is ornamental, rather than agricultural, purposes.

As noted in the Tehama County Flood Control and Water Conservation District Water Inventory and Analysis, there is sufficient water to meet the needs of the County during normal years. However, during dry or drought years, the County would need to rely more heavily on

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<sup>1</sup> Record and internet search for a per-capita water consumption figure provided a wide range of numbers depending on geographic area, climate, housing type and density. These figures, taken from the California Water Plan were used because they divided the overall 'per capita' figure into internal/external figures.

## 4.14 UTILITIES AND SERVICE SYSTEMS

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groundwater, which appears to be adequate, but in some cases lacks the infrastructure needed to convey supply to demand. (TCFCWCD, 2003)

The 2008-2028 General Plan addresses water needs at several different locations. First is to direct development to areas with existing services. (Policy LU-3.1, Goal PS-4, Policy PS-4-1) Next is the encouragement of infill development within areas that may already have adequate services and establish an inventory of available areas. (Policy LU-1-2 and Implementation Measure LU-1-2a) The General Plan also allows and encourages increased densities for these infill projects to ensure that maximum advantage is taken of the availability of services. (Policy LU-1.3, Implementation Measure LU-1.3a, LU-3.2a) The General Plan also requires that development demonstrate its ability to provide water service in a timely fashion at project approval. (Implementation Measure PS-3.2a) Finally, the 2008-2028 General Plan requires that adequate funding be available, from the development itself, or other identified sources, for all infrastructure prior to approval of the project. (Implementation Measure PS-4.2a)

Implementation of the 2008-2028 General Plan, as well as compliance with current water law, should ensure that new projects not be approved unless a reliable water source is identified, therefore impacts associated with development on water quantity in the County should be less than significant. While the Plan includes numerous goals, policies and implementation measures, these primarily apply to new development. Development within existing general plan designations and zone districts could occur that would be below levels that would trigger local, state and federal laws governing water supplies. These small projects, such as single family homes, small offices or small industrial developments, would typically be exempt from CEQA, and would not trigger the need for water supply analysis. Individually, these types of developments would result in a less than significant impact on water supply, however cumulatively there is the potential for these small projects to have a significant impact on the water supply. Because there is the potential for numerous small development projects to have a cumulative impact on water supply in Tehama County even with implementation of the policies in the General Plan and implementation of state and federal law, this impact is considered significant and unavoidable.

Implementation of Public Services Element policies and implementation measures listed under **Impact 4.14.1.1** would substantially reduce the General Plan's contribution to cumulative impacts on water supply. However, this impact would remain **cumulatively considerable** and is considered a **significant and unavoidable** impact.

### Mitigation Measures:

None feasible.

### 4.14.2 WASTEWATER SERVICE

Domestic wastewater is generated through the use of toilets, urinals, bathroom sinks, showers and bathtubs, kitchen sinks, garbage disposals, dishwashers, and washing machines. Wastewater from toilets and urinals is often referred to as black water while the other types of wastewater from residential buildings are often called grey water. Wastewater contains dissolved organic and inorganic materials, suspended solids, and microorganisms, including bacteria and viruses. Other important characteristics to consider include the amount or flow of wastewater produced, the type of treatment provided by onsite or centralized treatment plants, and the amount and type of pollutant loadings contained in wastewater as it exits the treatment system.

### 4.14.2.1 EXISTING CONDITIONS

#### WASTEWATER TREATMENT IN THE PLANNING AREA

Two methods of wastewater treatment and disposal are utilized within Tehama County. The first consists of community collection and treatment systems with discharge into the Sacramento River. The second method is individual treatment at the site with return to the ground, using either septic/leach-field systems or seepage pits. These are known as onsite wastewater treatment systems (OWTS). OWTS are either connected to individual residences and nonresidential buildings in areas not served by a wastewater collection system, or are small, community collection and disposal systems that also rely upon septic tanks and onsite, underground disposal using leach fields and other types of soil absorption systems.

#### **Rio Alto Water District**

As mentioned previously, the Rio Alto Water District was formed in 1968 to provide water and sewer facilities to the residents of the Lake California area, which is located approximately 20 miles north of Red Bluff. The district currently serves 764 sewer customers, which are almost exclusively residential, with the exception of five commercial uses.

To process wastewater, the District utilizes a Tertiary treatment system with a multi-media filtration structure, prior to chlorination/de-chlorination and eventual discharge into the Sacramento River. The biological system is an Oxidation Ditch (Lakeside) followed by secondary clarification, filtration, and then disinfection prior to discharge. The plant's capacity is currently at 0.64 MGD, with a current average daily flow of approximately 0.2 MGD, according to officials.

#### **Gerber-Las Flores Community Services District**

The Gerber-Las Flores Community Services District (GLFCSD) was formed in 1974 when several services consolidated. The Gerber and Las Flores area is located between State Highway 99 and Interstate 5 approximately 12 miles southeast of Red Bluff and two miles west of the Sacramento River. The GLFCSD began providing wastewater services in 1989. The utility serves the unincorporated communities of Gerber and Las Flores with a district population of approximately 1,200. Wastewater services are funded with monthly user charges. Wastewater service is provided to approximately 500 connections. The GLFCSD uses surface treatment ponds to treat the daily average of 84,000 gallons of wastewater. The wastewater system is capable of processing 134,000 gallons per day.

#### **County Wide Wastewater System**

Community wastewater disposal outside of these areas is handled primarily by septic tank and leach field systems or by seepage pits. Onsite wastewater systems are limited by soil conditions throughout the County. Percolation tests are required to test acceptability of soils for septic systems. Constraints upon the success of percolation tests include rocky soils, high water tables and extremely porous soil conditions.

## 4.14 UTILITIES AND SERVICE SYSTEMS

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### 4.14.2.2 REGULATORY FRAMEWORK

#### COUNTY

##### **Tehama County General Plan**

The Tehama County General Plan is used to guide future development in unincorporated areas of the County. State law requires that all local governments prepare a General Plan for future development in their jurisdictions. The County's current General Plan was adopted in 1983. The Tehama County General Plan of 1983 states a number of objectives and associated policies that relate to the management of wastewater. Key policies that relate to wastewater issues include WT-a, which locates development with respect to type and intensity/density of land use in order to ensure adequate wastewater treatment facilities for existing and future residents. Policy WT-b states that the County shall investigate and permit experimentation with alternative wastewater systems for individual and community systems.

### 4.14.2.3 IMPACTS AND MITIGATION MEASURES

#### STANDARDS OF SIGNIFICANCE

The County has determined that the project may have significant wastewater impacts if it results in the following:

- 1) Require or result in the construction of new wastewater treatment facilities or expansion or existing facilities, the construction of which could cause significant environmental effects.

#### METHODOLOGY

Evaluation of potential impacts on wastewater facilities and services was based on consultation with the above-mentioned agencies. The impact analysis considers buildout of the entire planning area.

#### IMPACTS AND MITIGATION MEASURES

##### **Wastewater Conveyance and Treatment**

**Impact 4.14.2.1** Implementation of the 2008-2028 General Plan would substantially increase wastewater flows and require additional infrastructure and may require additional treatment capacity to accommodate anticipated demands that would result in a physical effect on the environment. This impact is considered a **significant impact**.

The Rio Alto Water District was formed in 1968 to provide water and sewer facilities to the residents of the Lake California area, approximately 20 miles north of Red Bluff. The district currently serves 764 sewer customers. To process wastewater, the District utilizes a Tertiary treatment system (Lake California Wastewater Treatment Plant). The plant's capacity is currently at 0.64 MGD, with a current average daily flow of approximately 0.2 MGD. The Gerber-Las Flores Community Service District began providing wastewater services in 1989. The utility serves the unincorporated communities of Gerber and Las Flores. Wastewater service is provided to approximately 500 connections. The Gerber-Las Flores Community Service District uses surface

treatment ponds to treat the daily average of 84,000 gallons of wastewater. The wastewater system is capable of processing 134,000 gallons per day.

Implementation of the 2008-2028 General Plan would allow for increased development, especially the Lake California area, which would require improvements and modifications to existing Rio Alto Water District facilities and require new wastewater conveyance infrastructure including collectors, trunks and interceptor sewer lines and appurtenances. Implementation of the 2008-2028 General Plan would also require improvements and modification to existing Gerber-Las Flores Community Services District facilities.

Community wastewater disposal outside of the jurisdictions of the Rio Alto Water District and the Gerber-Las Flores Community Service District is handled primarily by septic tank and leach field systems or by seepage pits. Onsite wastewater systems are limited by soil conditions throughout the County. Percolation tests are required to test acceptability of soils for septic systems. Constraints upon the success of percolation tests include rocky soils, high water tables and extremely porous soil conditions.

### Proposed General Plan Policies and Implementation Measures that Mitigate Potential Impacts

The following 2008-2028 General Plan policies are contained in the General Plan Land Use Element and Public Services Element to ensure that proposed land uses associated with the General Plan do not adversely affect wastewater related services in the Planning Area. However, impacts associated with the need for expanded wastewater conveyance and treatment facilities would still be considered significant.

Public Services: PS-5.1, PS-5.1a, PS-5.1b, PS-5.1c, PS-5.3, PS-5.3a

Land Use: LU-3.1, LU-3.1a, LU-3.2, LU-3.2a, LU-6.1, LU-6.1a

Policy PS-5.1 and Implementation Measure PS-5.1a and PS 5.1b encourage future development in areas where existing community wastewater treatment systems have unused capacity. Agencies proposing to provide sewer service to a subdivision shall demonstrate prior to the approval of the Final Map by the County that sufficient capacity would be available to accommodate the subdivision plus existing development. Sewage conveyance systems within the proposed subdivision shall be in place and connected to the sewage disposal system prior to the issuance of any occupancy permits by the County. Implementation Measure PS-5.1c requires new industrial and commercial developments to provide their own wastewater treatment or pre-treatment facilities where industrial and commercial byproducts would impact existing facilities. Policy PS-5.3 and Implementation Measure PS-5.3a seek to minimize visual impacts and physical impediments of wastewater infrastructure and equipment for all areas of the County by coordinating with wastewater conveyance agencies to underground, strategically place, and screen equipment to the maximum extent feasible.

Policy LU-3.1 and Implementation Measure LU-3.1a require the use of existing wastewater infrastructure for new development whenever possible. Policy LU-3.2 and associated Implementation Measure LU-3.2a seeks to develop a land use pattern that minimizes the expenditure of public funds for wastewater related infrastructure. This would be achieved by identifying and mapping existing County wastewater facilities and infrastructure and using this information to develop a land use pattern that maximizes this infrastructure. LU-6.1 and LU-6.1a require that new development funds its fair share portion of its impacts to all wastewater related services and facilities.

## 4.14 UTILITIES AND SERVICE SYSTEMS

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Implementation of the 2008-2028 General Plan Land Use Element and Public Services Element policies and associated implementation measures listed above will ensure sufficient capacity would be available to accommodate proposed residential development plus existing development. Furthermore, 2008-2028 General Plan policies and implementation measures require new industrial and commercial developments to provide their own wastewater treatment or pre-treatment facilities where industrial and commercial by-products would impact existing facilities. However, impacts associated with development of expanded wastewater conveyance and treatment facilities would still be considered substantial and the only mitigation to truly remove this impact would be to not allow growth the County, which is not consistent with the objectives outlined in Section 3.0 of this DEIR. Therefore, implementation of the General Plan would result in wastewater conveyance and treatment related impacts that are considered **significant and unavoidable**.

### Mitigation Measures

None feasible.

### 4.14.2.4 CUMULATIVE SETTING, IMPACTS AND MITIGATION MEASURES

#### CUMULATIVE SETTING

The cumulative setting for wastewater treatment includes all of the unincorporated areas of Tehama County. Potential future development of these areas would also result in cumulative demand for wastewater treatment and associated facilities.

#### CUMULATIVE IMPACTS AND MITIGATION MEASURES

##### Cumulative Wastewater Impacts

**Impact 4.14.2.2** Implementation of the 2008-2028 General Plan, in addition to other reasonably foreseeable development in the Cities of Red Bluff and Corning, would substantially increase wastewater flows and require additional infrastructure and treatment capacity that would result in a physical effect on the environment. This is considered **cumulatively considerable**.

Potential development constructed as a result of implementation of the 2008-2028 General Plan land use designations and other development planned in Tehama County would substantially increase cumulative demands for wastewater services and related facilities. Although the majority of Tehama County utilizes the use of onsite wastewater treatment systems, the contribution of growth under the 2008-2028 General Plan would likely trigger the need for new wastewater conveyance and treatment expansion of the wastewater treatment systems of Rio Alto Water District and Gerber-Las Flores Community Service District. The physical effects of constructing new trunk systems and treatment facilities will be analyzed by Rio Alto Water District and Gerber-Las Flores Community Service District under separate environmental documents. All new development projects are required to pay connection fees and construct necessary wastewater improvements to ensure adequate financing. Potential environmental effects associated with additional wastewater facility expansion include, but are not limited to, air quality, biological resources, cultural resources (depending on location), hazardous materials, land use, noise, traffic, visual resources, waste management, water and soil resources, and health hazards.

Implementation of the General Plan Land Use Element and Public Services Element policies and associated implementation measures listed under Impact 4.12.2.1 will assist in reducing the General Plan's cumulative wastewater related impacts, however; not to a level that is less than significant. General Plan impacts to wastewater conveyance and treatment are considered to be **cumulatively considerable** and therefore a **significant and unavoidable** impact. This conclusion is applicable to both the potential impacts that could be caused by cumulative conditions and the project's incremental effects.

### Mitigation Measures

None feasible.

## **4.14.3 ELECTRICAL, NATURAL GAS AND TELEPHONE SERVICE**

### **4.14.3.1 EXISTING CONDITIONS**

#### ELECTRICAL SERVICES

Residents of the unincorporated regions of Tehama County obtain their electrical service from Pacific Gas and Electric (PG&E). PG&E owns and operates electricity infrastructure in the County and throughout Northern California that includes power lines, powerhouses, and substations. PG&E no longer owns all of its facilities, having sold some recently as a result of legislative deregulation. PG&E produces some of its own power and purchases some of its electricity through the Independent System Operator, which in turn obtains electricity from a number of companies that operate power plants throughout the Western Grid. The Western Grid is a multi-state grid that provides electricity from as far away as Washington State and Canada.

#### NATURAL GAS

Pacific Gas and Electric Company (PG&E) provides natural gas to customers within the unincorporated portions of the Planning Area. The existing facilities in the Planning Area consist of 4½-inch to 16-inch pipelines delivering service to all residential, commercial, and industrial customers that are not served by private propane tanks. As with telephone and cable service, natural gas lines are typically co-located with other utilities in trenches to reduce construction costs and environmental impacts. All construction and maintenance activities for natural gas facilities are the responsibility of PG&E.

#### **Cable Television Service/Telephone Service**

There are several purveyors providing cable television and other cable related services (i.e., internet) to the County's Planning Area. Cable fibers are generally co-located and installed concurrently with other utility infrastructure. This infrastructure is installed underground within new development in order to reduce visual and aesthetic impacts and any potential safety hazards.

There are several purveyors (i.e., SBC, Comcast, etc.) providing telephone service to Tehama County. Telephone facilities in the Planning Area include both aerial and underground fiber and copper transmission lines. Most of the underground and aerial telephone transmission lines are generally co-located with other utilities on poles or underground trenches and are constructed in public and roadway rights of way to reduce visual and aesthetic impacts and potential safety hazards. The environmental review of providing telephone and cable services is typically handled on a case-by-case basis in conjunction with individual development projects.

## 4.14 UTILITIES AND SERVICE SYSTEMS

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The County of Tehama General Plan is currently undergoing an update. The County General Plan policies and implementation measures apply to development within the Tehama County General Plan Planning Area. The Public Services Element within the County General Plan includes policies and implementation measures relevant to electrical, natural gas, and telephone services within Tehama County. The General Plan contains the following policies and implementation measures which relate to these services.

### 4.14.3.2 REGULATORY FRAMEWORK

STATE

#### California Building Energy Efficiency Standards

Title 24, Part 6 of the California Code of Regulations, known as the Building Energy Efficiency Standards, were established in 1978 in response to a legislative mandate to reduce California's energy consumption. The standards are updated periodically to allow consideration and possible incorporation of new energy efficiency technologies and methods. After adoption of the California Energy Security and Reliability Act of 2000 (AB 970), the California Energy Commission produced changes to the Building Energy Efficiency Standards. In November 2003 the California Energy Commission adopted these updated standards. The California Building Standards Commission adopted the 2005 changes in July 2003 and the updated standards took effect on October 1, 2005. Included in the update were requirements identified under Senate Bill 5X, part of which requires the California Energy Commission to adopt energy efficiency standards for outdoor lighting.

### 4.14.3.3 IMPACTS AND MITIGATION MEASURES

STANDARDS OF SIGNIFICANCE

The County has determined that the project may have significant impacts on the electrical, natural gas and or telephone system if it results in the following:

- 1) Result in the need for new systems or supplies or a substantial expansion or alteration to electricity, natural gas, or telephone that results in a physical impact on the environment or would result in inefficient, wasteful and unnecessary consumption of energy.

METHODOLOGY

Evaluation of potential impacts on electrical, natural gas, telephone and cable services resulting from the proposed project is based on consultation with the service providers, review of California Energy Commission policies, State standards, and the Tehama County 2008-2028 General Plan.

IMPACTS AND MITIGATION MEASURES

#### Electrical, Natural Gas, and Infrastructure

**Impact 4.14.3.1** Implementation of the 2008-2028 General Plan would substantially increase demand for electrical, natural gas, telephone and related infrastructure. This is considered a **potentially significant** impact.

Electrical service infrastructure extensions would be required to serve development proposed under the 2008-2028 General Plan, which may include additional sub-stations, distribution lines and transmission lines. New substations would require new transmission lines, new transmission poles and other related distribution facilities. The extension of natural gas infrastructure would also be required to accommodate the development proposed under the 2008-2028 General Plan. Natural gas infrastructure would be extended to proposed development when sufficient development to pay the costs for hooking into the locally available infrastructure is proposed. Typically natural gas pipelines are located within road or utility rights-of-ways. Locating them within existing rights-of-way would eliminate potential environmental impacts resulting from new trenches. Implementation of the 2008-2028 General Plan would also require the extension of telephone infrastructure within the General Plan area.

### Proposed General Plan Policies and Implementation Measures that Mitigate Potential Impacts

The following 2008-2028 General Plan policies are contained in the General Plan Public Services Element to ensure that proposed land uses associated with the General Plan do not adversely affect electrical, natural gas, and telephone services in the Planning Area.

Public Services: PS-3.1, PS-3.1b, PS-4.2, PS-5.3, PS-5.3a

Implementation of PS-3.1 and PS-3.1b would ensure that electrical, natural gas, and television service needs are met in a timely, efficient and logical manner by phasing the development of public facilities in a logical manner that encourages orderly development. PS-4.2 states that the County shall ensure adequate funding is available for all infrastructure and public facilities, and make certain that the cost of improvements is equitably distributed. Policy PS-5.3 and associated Implementation Measure PS-5.3a seeks to minimize visual impacts and physical impediments of wastewater infrastructure and equipment for all areas of the County by coordinating with utility agencies to underground, strategically place, and screen equipment to the maximum extent feasible.

Implementation of the General Plan Public Services Element policies and associated implementation measures listed above will assist in reducing the General Plan's electrical, natural gas, telephone, and cable related impacts to a level that is **less than significant**.

### Mitigation Measures

None required.

#### **4.14.3.4 CUMULATIVE SETTING, IMPACTS AND MITIGATION MEASURES**

##### CUMULATIVE SETTING

The cumulative setting for electrical, natural gas and cable services encompass the service areas of the each particular service provider (i.e., PG&E, SBC, Comcast, etc.). The cumulative setting for electric service and natural gas also includes Northern California, which is currently experiencing a great amount of growth and a subsequent cumulative demand for these services and related infrastructure.

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### CUMULATIVE IMPACTS AND MITIGATION MEASURES

The cumulative effects associated with energy and communication services are similar to the impacts described above. No specific cumulative impacts associated with these services were identified.

#### 4.14.4 REFERENCES

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