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## **6.13 PUBLIC UTILITIES**

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### INTRODUCTION

This section of the EIR describes the existing water, wastewater, and energy facilities, infrastructure, and demand in Sutter County and evaluates the effects of implementation of the proposed General Plan on those utilities and infrastructure. The public utilities evaluated in this section include:

- Water Supply and Infrastructure,
- Wastewater Infrastructure, and
- Electricity and Natural Gas Infrastructure.
- Public Utilities are addressed in the Infrastructure Element of the Draft General Plan. The goals and policies of the Infrastructure Element are designed to accommodate future development under the General Plan while minimizing any potential adverse effects of development.

Two comment letters received in response to the NOP identified water/wastewater infrastructure concerns. One comment letter (Yuba City) recommended the EIR address how water and wastewater service would be provided to unincorporated areas outside the Yuba City SOI. Another comment letter from an individual identified a concern related to wastewater service in the community Sutter. These issues are addressed in this section.

Information for this section is based on the *2008 Sutter County General Plan Technical Background Report* (TBR), the *Draft Infrastructure Issue Discussion Paper Sutter County General Plan Update* prepared by West Yost (June 2008), *Land Use Alternatives Analysis, Section D: Utilities Analysis* prepared by West Yost (September 2009), *the Sutter Pointe Specific Plan Draft EIR* (prepared by EDAW for Sutter County, December 2008), *Live Oak General Plan Update Draft EIR* (prepared by EDAW for the City of Live Oak, December 2009), *Lincoln East Specific Plan Draft EIR* (prepared by PBS&J for City of Yuba City, April 2009), Department of Water Resources Bulletin 118 *"California's Groundwater"* (2006), and other referenced material cited in the footnotes.

The TBR is available electronically on the County's website, <http://www.co.sutter.ca.us/pdf/cs/ps/gp/tbr/tbr.pdf>, and on CD at the back of this document.

## WATER SUPPLY AND INFRASTRUCTURE

The following summarizes information regarding water supply and infrastructure in the policy area. Unless otherwise noted, information is from the TBR.

### Environmental Setting

#### **Water Supplies**

Most of Sutter County uses groundwater for potable water supplies. In the rural areas, most of the groundwater is pumped by privately owned wells. There are also several municipal and community potable water systems within the county, see Figure 6.13-1. These systems rely on water supplies from either the Feather River or from groundwater. Yuba City utilizes both surface water and groundwater supplies.

#### Groundwater

The groundwater resources in Sutter County consist of three subbasins of the Sacramento Valley Groundwater Basin: East Butte, North American, and Sutter Subbasins (see Figure 6.10-2 in Section 6.10, Hydrology, Flooding, and Water Quality).

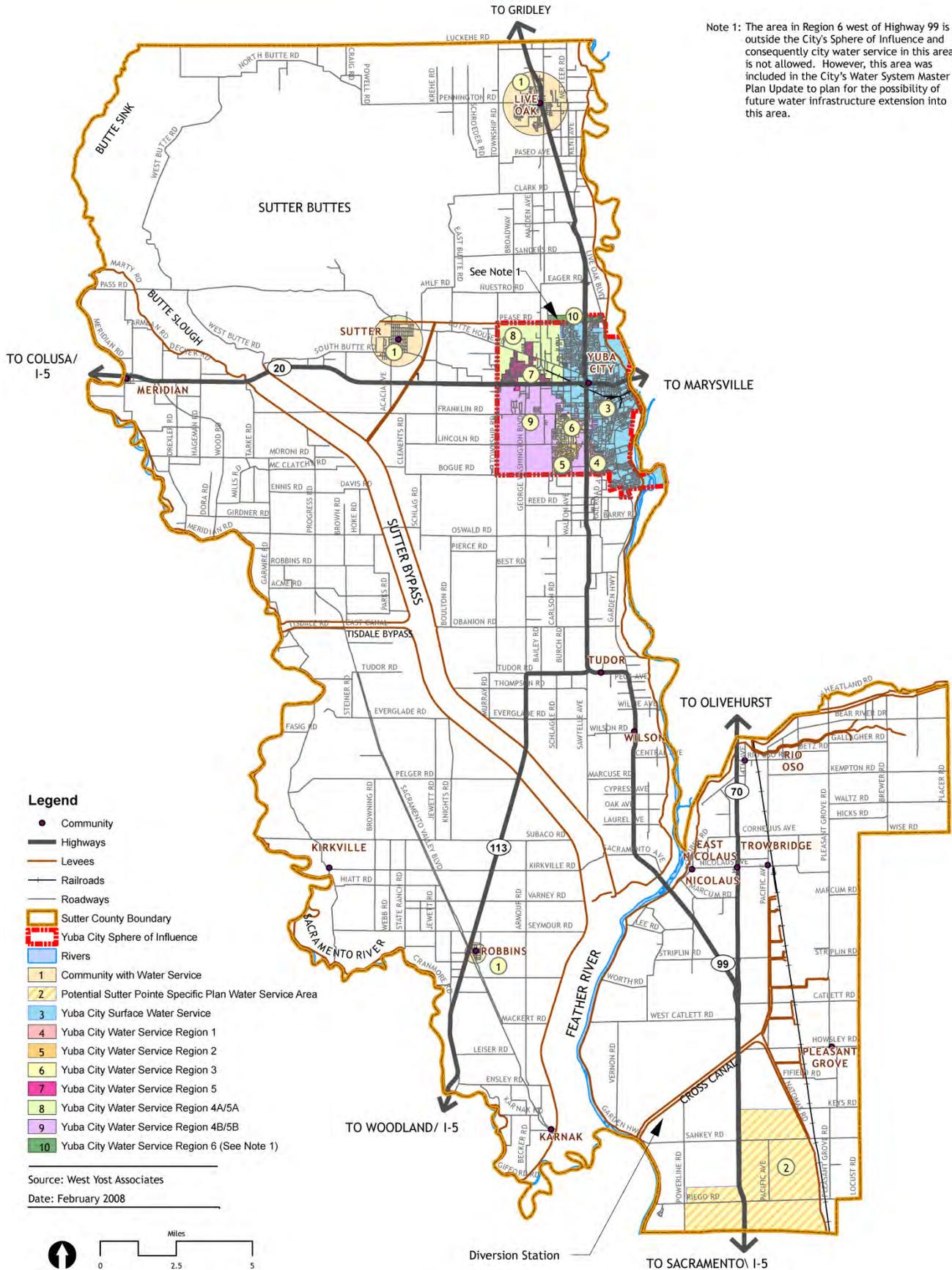
Groundwater in the southern East Butte Subbasin is reported to fluctuate approximately 4 feet during normal years and up to 10 feet during drought years in confined and composite portions of the aquifer. Groundwater fluctuation in confined and semi-confined aquifer systems average 4 feet during normal years and up to 5 feet during drought years. The estimated specific yield is 5.9 percent. The estimated storage capacity to a depth of 500 feet is approximately 3,128,959 acre-feet (ac-ft). Estimates of groundwater extraction for agricultural, municipal and industrial (M&I), and environmental uses are 104,000, 75,000, and 1,300 ac-ft, respectively. The Department of Water Resources (DWR) does not identify the subbasin as overdrafted.<sup>1</sup> The subbasin is not adjudicated.<sup>2,3</sup>

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1 California Department of Water Resources. 2006. California's Groundwater. Bulletin 118. Groundwater Basin 5-21.59. February 27, 2004.

2 The State of California is not authorized by the California Water code to manage groundwater. In some basins, however, the amount of water that can be extracted under that correlative right has been defined by a court. In other basins, each landowners correlative right has not been defined. In these basins, groundwater may be managed by agencies that obtain their authority from the Water Code, or there may be little or no management. In the court decision, the court appoints a Watermaster to oversee the court judgment and specifies how much each of the parties to the decision can extract. The basin boundaries are defined by the court and sometimes do not include an entire basin as defined in Department of Water Resources Bulletin 118, California's Groundwater.

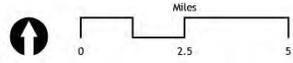
3 California Department of Water Resources. Water Facts, Adjudicated Groundwater Basins in California, April 2004.



Note 1: The area in Region 6 west of Highway 99 is outside the City's Sphere of Influence and consequently city water service in this area is not allowed. However, this area is included in the City's Water System Master Plan Update to plan for the possibility of future water infrastructure extension into this area.

- Legend**
- Community
  - Highways
  - Levees
  - Railroads
  - Roadways
  - ▭ Sutter County Boundary
  - ▭ Yuba City Sphere of Influence
  - ▭ Rivers
  - 1 Community with Water Service
  - 2 Potential Sutter Point Specific Plan Water Service Area
  - 3 Yuba City Surface Water Service
  - 4 Yuba City Water Service Region 1
  - 5 Yuba City Water Service Region 2
  - 6 Yuba City Water Service Region 3
  - 7 Yuba City Water Service Region 5
  - 8 Yuba City Water Service Region 4A/5A
  - 9 Yuba City Water Service Region 4B/5B
  - 10 Yuba City Water Service Region 6 (See Note 1)

Source: West Yost Associates  
Date: February 2008



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Groundwater conditions vary considerably across the North American Subbasin. Groundwater levels have been high and relatively stable in the northern and western portions of the subbasin. This is in contrast to groundwater level declines that have occurred in much of the central, eastern, and southern portions of the subbasin. Overdraft has historically occurred in the latter areas and appears to still be occurring in the central portion of the subbasin east of the county and east of the Natomas Basin. In recent years, groundwater levels have stabilized in other areas where historical overdraft has been reported. This suggests that overdraft conditions have abated in most of the subbasin. Groundwater levels are generally higher in the upper zone, creating a downward gradient for vertical flow. DWR does not identify the North American Subbasin as overdrafted (2006). There are no actual available estimates of groundwater in storage in the North American Subbasin; however, the estimated groundwater storage capacity of the subbasin is 4.9 million ac-ft. This volume does not indicate what portion of the storage can safely be extracted (the safe yield) to meet water demands in the subbasin. The volume of groundwater extraction cannot exceed the rate of groundwater recharge over a period of years without causing a depletion of aquifer storage.<sup>4</sup> The subbasin is not adjudicated.<sup>5</sup>

The Sutter Subbasin groundwater levels have remained on average approximately ten feet below the ground. DWR reports the water table levels are mostly stable. There are no published reports identifying the amount of groundwater in storage. There is an estimated useable storage potential of 5 million ac-ft. Estimated outflows include urban extraction at 3,900 ac-ft and agricultural extraction at 171,400 ac-ft.<sup>6</sup> The subbasin is not adjudicated.<sup>7</sup>

Groundwater supplies are adequate for the current demand in Sutter County; however, arsenic, nitrate, iron, and manganese in groundwater occurs in some locations at levels that exceed State Department of Public Health (DPH) standards. Nitrates are entering the groundwater from agricultural practices and septic systems. The arsenic is naturally occurring, but at some locations it does exceed the state standard. Figures 6.10-4 and 6.10-5, respectively, (in Section 6.10, Hydrology, Flooding, and Water Quality) show areas where nitrate and arsenic contamination has affected groundwater quality.<sup>8</sup>

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4 Sutter County, Sutter Pointe Specific Plan Draft EIR SCH #2007032157, prepared by EDAAW, December 2008, p. 3.9-11.

5 California Department of Water Resources, Water Facts, Adjudicated Groundwater Basins in California, April 2004.

6 California Department of Water Resources. 2006. California's Groundwater. Bulletin 118. Groundwater Basin 5-21.62. January 20, 2006.

7 California Department of Water Resources, Water Facts, Adjudicated Groundwater Basins in California, April 2004.

8 West Yost Associates, Land Use Alternatives Analysis, Chapter 4D, Utilities Analysis, September 2009.

## Surface Water

Surface water is used in Sutter County primarily for agricultural operations. Agricultural water use is described in more detail in “Agricultural Water Systems and Supplies,” below. Surface water also comprises a portion of supply for Yuba City, and has been identified as a part of the water supply strategy for the approved Sutter Pointe Specific Plan (SPSP). Surface water for agricultural and urban uses is obtained from the Sacramento and Feather rivers.

## **Water Supply Infrastructure**

The following describes water supply infrastructure and service providers within the incorporated cities and unincorporated county communities.

### City of Live Oak

A majority of the city of Live Oak is served by the city’s municipal water system; however, several private wells do remain throughout the city. The City receives all of its potable water from groundwater supplied by five groundwater wells located at various locations around the city. Currently, all five groundwater wells exceed the federal limits of arsenic concentrations for potable water. Three greensand arsenic removal systems have constructed to treat the water from four of the wells. Greensand is an iron rich mineral that incorporates oxidation, ion exchange, and adsorption to remove arsenic from water. The fifth well has nitrate contamination in addition to high arsenic levels, and has been abandoned. The City is evaluating funding options for construction of a replacement well. Each existing well produces approximately 1,000 -1,200 gallons per minute (gpm). Two of the wells together supply water for the City’s one million gallon storage tank. The City uses approximately 1,496 ac-ft per year of water and can reliably provide up to 5,885 gpm to meet maximum day demands.<sup>9</sup> The groundwater supply is expected to be sufficient to meet the demands of the City through buildout of its proposed General Plan.

### Sutter

Water service for the community of Sutter is provided by the Sutter Community Service District (CSD). Water is supplied via a looped distribution system that includes three wells and one 750,000-gallon storage tank. The three groundwater wells meet the daily and peak water demands, including fire flow. The water is disinfected at the wells with chlorine prior to entering the distribution system. Currently, the water does not require any additional treatment. The California Department of Public Health tests the water from each well quarterly. If the combined yearly concentrations for any State regulated contaminates are

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<sup>9</sup> City of Live Oak, City of Live Oak 2030 General Plan Draft EIR, prepared by EDAW, December 2009, p. 4.10-12.

higher than allowable, the Sutter CSD would be required to include appropriate treatment measures at the wells. One of the three wells has periodically tested high for arsenic; however, at this time it does not warrant filtration. Sutter CSD tests weekly for bacteria levels.

### Yuba City

Yuba City's primary source of water supply is surface water. The city diverts water from the Feather River throughout the year using four water right permits:<sup>10</sup>

- State Water Resource Control Board (SWRCB) Permit 14045 - This permit allows the City to divert water from the Feather River at a flow of up to 15.6 cubic feet per second (cfs) from January 1 to about July 1 and from September 1 to December 31 of each year, for a total of 6,500 ac-ft per year.
- SWRCB Permit 18558 – This permit allows the City to divert water from the Feather River at a flow of up to 21.0 cfs except during July, August, and September, for a total of 9,000 ac-ft per year.
- Yuba County Water District Contract –This contract allows the City to divert up to 4,500 ac-ft of water from the Feather River in the months of April through October.
- DWR, State Water Project Contract – This contract allows the City to divert up to 9,600 ac-ft of water from the Feather River any time of the year. The City has historically used approximately 975 ac-ft in July and August.

Surface water quantities delivered under the City's existing permitted rights on the Feather River are adequate to meet the City's current surface water demands.<sup>11</sup>

Yuba City maintains one groundwater well, located at the water treatment plant (WTP), as a supplement to its surface water right permits. Within the City's sphere of influence (SOI) there are several smaller water districts supplied by local groundwater wells.

Arsenic levels in much of the groundwater around Yuba City exceed the arsenic maximum contaminant level (MCL) of 10 µg/L.<sup>12</sup> Similarly, nitrate levels exceed the MCL of 45 mg/L (as nitrate) in some areas around the city. Consequently, the City is connecting the area formerly known as the Hillcrest Water Region to surface water supplies.<sup>13</sup>

Yuba City prepared the *City of Yuba City Water System Master Plan Update* in 2004. This document covers the City's surface WTP, groundwater well, water distribution system, and water storage requirements. This document provides an understanding of the City's current

10 HDR, *City of Yuba City Water System Master Plan Update*. Prepared for City of Yuba City Utilities Department, May 2004.

11 Sutter County, *2008 Sutter County General Plan Update Technical Background Report*, prepared by PBS&J, February 2008, p. 3.1-6.

12 Sutter County, *Sutter County General Plan 2015: Background Report*, November 1, 1996.

13 George Musallam, Yuba City Public Works Director, personal communication, June 29, 2010.

and future water needs and provides a plan for achieving those needs. The City has also prepared an Urban Water Management Plan (UWMP) (2005). The UWMP, however, does not include infrastructure improvements for the areas outside the City's SOI.<sup>14</sup>

Although current supply is adequate to meet current demand, the City anticipates that by the year 2015, an additional surface water supply of 15,000 ac-ft per year would be needed for the City to fully develop within its current SOI. This future water demand includes converting the groundwater districts to surface water.

The City's WTP was originally constructed in 1969 to eliminate use of groundwater that had high levels of sulfides, iron, and manganese. The WTP was recently expanded to a capacity of 36 million gallons per day (mgd).<sup>15</sup> The City currently plans to upgrade the plant to 48 mgd with an additional expansion to 65 mgd in response to anticipated demands over the next 20 years.<sup>16</sup> The City has three existing storage tanks located at the water treatment facility for a total of 8 mg of storage. Located throughout the water distribution system are 4 additional tanks with a total volume of 9 mg.

#### Nicolaus, East Nicolaus, Trowbridge, Tudor, Meridian, and Remainder of County

The majority of potable water supplies for these unincorporated communities and the unincorporated county is from privately-owned wells. The East Nicolaus Mutual Water Company provides potable water to customers within a small portion of East Nicolaus.<sup>17</sup>

#### Robbins

Sutter County operates the Water Works District #1 (WWD1), which provides potable water service to the community of Robbins. The water system currently includes one active groundwater well (Well No. 2), one backup groundwater well (Well No. 1), one storage tank, about 5 miles of water pipelines, fire hydrants, and 93 lateral connections (connections to homes or businesses). The active groundwater well (Well No. 2) includes treatment for iron and manganese. During peak demand periods, the back-up well (Well No. 1) is automatically activated; however, this well's usage is restricted to 15 days of production per year by the California DPH due to elevated levels of arsenic in the groundwater. The system delivers an average of 43 million gallons of water per year to single family and multi-family residences and commercial businesses in Robbins. The peak month water demand is in July, when approximately seven million gallons are produced. The maximum daily production is roughly 255,000 gallons. The water service system, as presently configured and operated, is at capacity. It is in need of repair and rehabilitation. The water rates collected

14 Aaron Busch, Community Development Director, Yuba City, "Comments on the Notice of Preparation for the Sutter County General Plan Update," April 20, 2010.

15 PBS&J, Lincoln East Specific Plan Draft EIR, April 2009, p. 4.13-4.

16 PBS&J, Lincoln East Specific Plan, Water Supply Assessment, March 2009, p. 3-4.

17 West Yost Associates, Land Use Alternatives Analysis, Chapter 4D, Utilities Analysis. September 2009.

from the community do not cover the costs of operation and maintenance of these facilities; consequently, adequate funds are not available to plan, design, or construct the improvements. Additional connections to this system have not been allowed in recent years, thereby limiting development to parcels with current water service. Sutter County has begun the process of identifying needed improvements and establishing revised rates.

### Sutter Pointe Specific Plan Area

The Sutter Pointe Specific Plan (SPSP) was adopted by the County in June 2009 and provides a development framework for a 7,528-acre master-planned residential, commercial, and industrial community. The ultimate annual water demand for buildout of the SPSP has been estimated at 25,991 ac-ft per year. All necessary on- and off-site water infrastructure improvements would be paid for by project development. Because planned land uses within the SPSP will exceed 3,000 connections, this new service area will become a public water system. Water supplies for the SPSP would consist of groundwater pumped from new wells to be constructed in the SPSP and surface water obtained from the Natomas Central Mutual Water Company (NCMWC). NCMWC has six water right permits and contracts with the U.S. Bureau of Reclamation<sup>18</sup> that allow 120,200 ac-ft per year of water to be diverted from the Sacramento River. During critical, dry years the available water can be reduced by 25 percent, but even during critical dry years, NCMWC staff has stated that they have an adequate water supply.<sup>19</sup> Groundwater is planned to be the sole supply of water until sometime in 2018 but will be sufficient to supply at least 52 percent of buildout demands. A combination of surface water and groundwater will then serve the SPSP after the necessary infrastructure to deliver and treat surface water is completed.

### Rio Ramaza Subdivision

The Rio Ramaza subdivision (located in southern Sutter County within the Natomas Basin) has 40 lots. There are eight existing residences in the subdivision. Each home has a privately-owned and operated well on its property.<sup>20</sup> The remaining lots are held in fee title by the County of Sacramento for airport land use compatibility.

## **Agricultural Water Systems and Supplies**

Irrigation water for use within Sutter County is maintained and operated by several irrigation water companies and districts. These entities range in size from as small as 600 acres to over

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18 The U.S. Bureau of Reclamation manages the Central Valley Project, which controls flows in the Sacramento River through discharge from Shasta Dam/Reservoir. A number of entities in Sutter County have settlement agreements/contracts with the U.S. Bureau of Reclamation for water supplies from the Sacramento River.

19 West Yost Associates, Infrastructure Discussion Paper, June 2008, p. 11.

20 Pacific Municipal Consultants, Sutter County Local Agency Formation Commission Municipal Services Reviews and Sphere of Influence Update. Prepared for Sutter County, August 2007.

50,000 acres. The existing agricultural irrigation entities in Sutter County include the following: Garden Highway Mutual Water Company; Meridian Farms Water Company; Natomas Central Mutual Water Company; Pleasant Grove/Verona Mutual Water Company; Sutter Bypass Butte Slough Water User Association; Sutter Extension Water District; Sutter Mutual Water Company; Tisdale Irrigation and Drainage Company; and Tudor Mutual Water Company, Butte Water District, Biggs-West Gridley Water District, Feather Water District, Oswald Water District, Pelger Water District, Tisdale Water District, and Swinford Tract Irrigation District. The water supply, water rights, and operations of several of these entities are identified in more detail in chapter 3, Section 3.1.2 of the TBR.

The main source of irrigation water is diversion from the Feather and Sacramento rivers. Generally, irrigation water supplies throughout the county are adequate. During shortages of surface water, some of the irrigation districts and companies are able to supplement the surface water supplies with use of groundwater or through surface water purchases from other sources. Also, when an agricultural water supply is located within a reclamation district or stormwater management district, it is possible for pumps to be placed in the drainage channels to reuse the drainage water from these channels. However, not all districts/companies are able to meet dry-year demand (or have expressed concern about future dry-year supply), including: Pleasant Grove/Verona Mutual Water Company, Sutter Mutual Water Company, Biggs-West Gridley Water District, Pelger Water District, Tisdale Water District, and South Sutter Water District.<sup>21</sup>

Future strategies for addressing potential shortfalls in agricultural water supply during dry years include increased use of groundwater, conjunctive use programs,<sup>22</sup> reuse of irrigation runoff, or decreasing system losses from unlined irrigation channel seepage. Additional surface water rights for summertime diversions from the Sacramento or Feather rivers or other nearby surface water bodies is unlikely.<sup>23</sup>

## REGULATORY CONTEXT

This section summarizes regulations that are relevant to potable water supply and systems.

### Federal

The U.S. Environmental Protection Agency (EPA) is the lead federal agency responsible for managing water quality. The Clean Water Act (CWA) of 1972 is the primary federal law that governs and authorizes EPA and the states to implement activities to control water quality.

21 West Yost Associates, Infrastructure Discussion Paper, June 2008, p. 11.

22 A conjunctive use program includes use of surface water supplies when they are available (e.g., during normal and wet years). During dry years when the surface water supply is reduced, groundwater is also used. The approach results in an adequate water supply in dry years by recharging the underlying aquifer during normal and wet years.

23 West Yost Associates, Infrastructure Discussion Paper, June 2008, p. 14.

Section 303 of the CWA requires states to adopt water-quality standards for all surface waters of the United States. Section 304(a) requires EPA to publish water-quality criteria that accurately reflect the latest scientific knowledge on the kind and extent of all effects on health and welfare that may be expected from the presence of pollutants in water.

EPA has delegated to the State of California the authority to implement and oversee most of the programs authorized or adopted for CWA compliance through the state's Porter-Cologne Water Quality Control Act of 1969, described below.

The federal EPA regulates contaminants of concern to domestic water supply under the Safe Drinking Water Act (Public Law 93-523), passed in 1974, as amended in 1986. Contaminants of concern relevant to domestic water supply are defined as those that pose a public health threat or that alter the aesthetic acceptability of the water. These types of contaminants are regulated by EPA's primary and secondary MCLs, which are applicable to treated water supplies delivered to the distribution system. EPA has delegated to the DPH the responsibility for administering California's drinking-water program.

### **Public Water Systems**

The EPA has established definitions for public water systems. A Community Water System (CWS) is a public water system that supplies water to the same population year-round. A Non-Transient Non-Community Water System (NTNCWS) regularly supplies water to at least 25 of the same people at least six months per year, but not year-round. Some examples are schools, factories, office buildings, and hospitals which have their own water systems. A Transient Non-Community Water System (TNCWS) provides water in a place such as a gas station or campground where people do not remain for long periods of time. The EPA also classifies water systems according to the number of people they serve: Very Small water systems serve 25-500 people; Small water systems serve 501-3,300 people; Medium water systems serve 3,301-10,000 people; Large water systems serve 10,001-100,000 people; Very Large water systems serve 100,001+ people. If a public water system is used to supply potable water to a community, it must comply with applicable water quality regulations. Water provided by private wells that are not part of a public water system do not have to comply with the federal water quality regulations.

### **State**

#### **Drinking Water Quality Standards**

The State Water Resources Control Board Resolution 88-63, "Sources of Drinking Water" specifies that, except under specifically defined circumstances, all surface water and groundwater of the state are to be protected as existing or potential sources of municipal and domestic supply. The policy lists specific and limited circumstances under which waters

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may be excluded from this policy. The policy has been incorporated as part of each of the nine regional water quality control plans.<sup>24</sup>

Water quality standards are enforceable limits composed of two parts: (1) the designated beneficial uses of water and (2) criteria (i.e., numeric or narrative limits) to protect those beneficial uses. Municipal and domestic supply (MUN) is among the “beneficial uses” as defined in Section 13050(f) of the Porter-Cologne Water Quality Act, which defines them as uses of surface water and groundwater that must be protected against water quality degradation. The California DPH is accountable to the EPA for program implementation and for adopting standards and regulations that are at least as stringent as those developed by EPA. The applicable state primary and secondary MCLs are set forth in Title 22, Division 4, Chapter 15, Article 4 of the California Code of Regulations (CCR). As part of its efforts, the California DPH inspects and provides regulatory oversight for public water systems within California.

Public water system operators are required to regularly monitor their drinking water sources for microbiological, chemical, and radiological contaminants to show that drinking water supplies meet the regulatory requirements listed in Title 22 as primary MCLs. Primary standards are developed to protect public health and are legally enforceable. Among these contaminants are approximately 80 specific inorganic and organic contaminants and six radiological contaminants that reflect the natural environment, as well as human activities. Examples of inorganic chemicals with primary MCLs are arsenic and nitrate.

Public water system operators are also required to monitor for a number of other contaminants and characteristics (secondary MCLs) that deal with the aesthetic properties of drinking water (manganese, for example). Secondary standards are generally associated with qualities such as taste, odor, and appearance, but these are generally non-enforceable guidelines. However, in California secondary standards are legally enforceable for all new drinking water systems and new sources developed by existing public water suppliers. The public water system operators are also required to analyze samples for unregulated contaminants, and to report other contaminants that may be detected during sampling.

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24 The Water Quality Control Plan for the Sacramento and San Joaquin River Basins (Basin Plan) includes the entire Sacramento and San Joaquin River basins (including all the tributary rivers such as the Feather River). Beneficial uses for specific water bodies are developed in the Basin Plan. The Central Valley RWQCB is responsible for protecting the beneficial uses of the state’s waters, including groundwater; this includes municipal drinking water supply, as well as various other uses. See section 6.10, Hydrology, Drainage, and Water Quality, for more information about the RWQCB and Basin Plan.

Drinking water MCLs are directly applicable to public water supply systems<sup>25</sup> “at the tap” (e.g., at the point of use by consumers in their home and office), and are enforceable by California DPH and Sutter County Environmental Health Department.

## **Water Supply Planning Legislation**

### Urban Water Management Plan

California Water Code Section 10610 (et seq.) requires that all public water systems providing water for municipal purposes to more than 3,000 customers, or supplying more than 3,000 ac-ft annually, must prepare an UWMP. DWR provides guidance to urban water suppliers in the preparation and implementation of UWMPs. UWMPs must be updated at least every five years on or before December 31, in years ending in five and zero. The UWMP is required to include information relating to the quantity of existing sources of water available to an urban water supplier over given time periods and the manner in which water quantity affects water management strategies and supply. This information includes, but is not limited to, the historic, current, and future reliability of the supply source and quality of the water source. A plan for what actions would be taken if the quantity or quality of water deteriorates is also required. Additional and supplemental sources of water must also be included in the UWMP.

### SB 610 Water Supply Assessment

Senate Bill (SB) 610 was adopted in 2001 and reflects the growing awareness of the need to incorporate water supply and demand analysis at the earliest possible stage in the land use planning process. SB 610 amended the statutes of the Urban Water Management Planning Act, as well as the California Water Code Section 10910 et seq. A water supply assessment (WSA) is required for projects of a certain size and must include a discussion with regard to whether the total projected water supplies are available during normal, single dry and multiple dry water years during a 20-year projection. The foundation document for compliance with SB 610 is the UWMP, which provides an important source of information for cities and counties as they update their general plans. Likewise, planning documents such as general plans and specific plans form the basis for the demand information contained in an UWMP, as well the WSA. Government Code Section 66473.7(a)(1) requires an affirmative written verification of sufficient water supply prior to approval of a tentative map for projects meeting a certain size threshold. This verification, like the SB 610 WSA, must include documentation of historical water deliveries for the previous 20 years, as well as a description of reasonably foreseeable impacts of the proposed subdivision on the availability of water resources of the region. If a water supply for a project includes groundwater (e.g., for the 2030 General Plan), Section 10910(f) of the Water Code requires

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25 The MCLs do not apply to private wells.

that additional information be included in the WSA about groundwater. This information must include a description of the groundwater basins, an analysis of the amount and location of groundwater pumped by a private water system serving the project, and analysis of the sufficiency of the groundwater from the basin or basins from which a project will be supplied to meet the water demand associated with the project. The WSA and written verification requirements would be imposed (as appropriate) in conjunction with specific development projects for which entitlements are being sought (proposed General Plan implementation measure 3.2).

### Groundwater Management

Assembly Bill 3030, Groundwater Management Act, allows existing local agencies to develop a groundwater management plan (GMP). GMPs are adaptive management tools and represent a critical step in establishing a framework for maintaining a sustainable groundwater resource for the various users overlying the basins. The requirements for a GMP are set forth in the Water Code Section 10750-10750. Typically, GMPs identify management goals and objectives to protect the groundwater resources. These plans also identify management actions that should be implemented to achieve the goals and objectives. Additional information about the County's efforts to develop a GMP is provided in the "Local" subsection, below.

Assembly Bill 303, Local Groundwater Management Assistance Act of 2000, provides public agency grants to study and manage groundwater with the expectation the agency will become better suited to manage the water supply quality, delivery, and storage.

Senate Bill 1938, Amendments to Local Groundwater Management Water Codes, requires any agency requesting funds from DWR to develop a comprehensive plan outlining the agencies objectives for basin management, basin planning, and basin monitoring. The goal of the legislation is that agencies would be more involved in their basin management to ensure proper planning and prevent over utilization of the basin.

### Senate Bill 7 (Urban Per-Capita Water Use Reduction)

Senate Bill 7 (SB 7), which became effective January 1, 2010, requires the state to achieve a 20 percent reduction in urban-per-capita-water use by December 31, 2020. The state is required to make incremental progress towards this goal by reducing per capita water use by at least 10 percent on or before December 31, 2015. The bill requires each urban retail water supplier to develop both long-term urban water use targets and an interim urban water use target. SB 7 also creates a framework for future planning and actions for urban and agricultural users to reduce per capita water consumption 20 percent by 2020.

## **Groundwater Well Standards**

Bulletin 74-90, Water Well Standards for the State of California, establishes requirements for water well construction, use, maintenance, and other services associated with water wells. California Laws for Wells was published March 2003 and relates directly to the construction, operation and maintenance of wells.

### **Local**

#### **Sutter County 2015 General Plan**

The County's 2015 General Plan contains policies and implementation measures relevant to water supply and infrastructure. The 2015 General Plan included policies focusing on reliance on public water systems rather than individual wells where feasible, limiting additional contamination of groundwater and ensuring safe groundwater supply, and requiring new development to demonstrate availability of long-term reliable water supply. Upon approval of the proposed General Plan, all policies and implementation measures in the 2015 General Plan would be superseded. Therefore, they are not included in this analysis.

#### **Sutter County Environmental Health Department**

A permit to install a groundwater well is required from the Sutter County Environmental Health Department. The County also provides guidance for disinfection of private water wells to remove coliform bacteria.

#### **Sutter County Ordinance Code**

Chapter 1710 of the Ordinance Code establishes the requirements for connecting to a water supply system operated by the County. Chapter 700 of the Ordinance Code regulates the use of on-site sewage treatment and disposal systems (septic systems). The purpose of the regulation is twofold: to reduce potential for public exposure to sewage from on-site sewage systems, and to reduce adverse effects to public health that discharges from on-site sewage systems may have on ground and surface waters.

#### **Sutter County Public Works Design Standards**

The Sutter County Public Works Design Standards govern the engineering design of all domestic water systems intended for operation and maintenance by Sutter County or other agencies, such as Community Service Districts, where the Board of Supervisors is the agency board. The County's design standards recommend compliance with Bulletin 74-81, "Water Well Standards: State of California" in the well design section.

## Sutter County Groundwater Management Plan

Sutter County began preparing a GMP per the requirements of Water Code Section 10750-10750. Progress to date includes a basin description, illustrations of geologic subsurface deposits, groundwater elevations with contour maps, monitoring well stations, land subsidence monitoring, and conductance of wells ranging from 150 to 400 feet and 400 to greater than 1,600 feet below ground surface and groundwater constituent information.<sup>26</sup> The GMP is expected to be completed by July 31, 2011.

## IMPACTS AND MITIGATION MEASURES

### Methods of Analysis

Water demand for existing and proposed General Plan conditions was approximated by applying specific water demand factors to existing and proposed total acreages for each of the non-Sutter Pointe Specific Plan land use categories and calculating the estimated potable water demand. The difference between the two values represents the net increase (or decrease) in demand for each of the land use designations between 2009 and 2030. Water demand for the SPSP was previously estimated in the Draft EIR for that project, and the necessary supplies and infrastructure to meet that demand has already been established, as explained later in this subsection.

The following water demand factors<sup>27</sup> were used to estimate potable water demand for the policy area:

General Plan Land Use Designation	Water Demand Factor
AG-20	n/a – private wells
AG-40	n/a – private wells
AG-80	n/a – private wells
AP	n/a – private wells
AG-RC	3,270 gallons per day per acre
ER	3,270 gallons per day per acre
RAN	3,270 gallons per day per acre
LDR	3,270 gallons per day per acre
MDR	3,720 gallons per day per acre
HDR	4,160 gallons per day per acre
COM, IND, I/C, EC	2,670 gallons per day per acre
OS	530 gallons per day per acre <sup>1</sup>
Parks	3,640 gallons per day per acre <sup>1</sup>
Notes:	
1. These land use designations provide for limited facilities that would require potable water.	
Source: Demand factors from proposed revisions (May 1, 2009) to Sutter County Engineering Standards, as reported in Table 1b in Land Use Alternatives Analysis* Section D – Utilities Analysis prepared by West Yost, September 2009.	

26 Sutter County, Groundwater Management Plan <<http://www.co.sutter.ca.us/doc/government/depts/pw/wr/gmp/gmphome>>, accessed December 11, 2008.

27 Demand factors from proposed revisions (May 1, 2009) to Sutter County Engineering Standards, as reported in Table 1b in "Land Use Alternatives Analysis" Section D – Utilities Analysis prepared by West Yost Associates, September 2009.

The demand for potable water to determine potential effects on water supply, treatment, and infrastructure assumes development of the following “residential” land use designations: LDR, MDR, HDR, RAN, ER, and AG-RC; and the following “industrial/commercial” land use designations: IND, COM, I/C, and EC. For all of these land use categories, the analysis assumes groundwater would continue to be used for potable supply for those land use designations, including locations in the Yuba City SOI that would remain in the unincorporated county under the General Plan and would not be served by Yuba City, consistent with current practices. Groundwater is assumed to be the source of potable supply because other options – such as surface water – are not readily available as a source of potable water to most of the growth areas, as explained below.

The conversion of the beneficial use of agricultural surface water rights to municipal and industrial (M&I) use is a potential source of supply for potable demand. However, this is dependent on the ability to acquire such surface water rights for M&I uses. Further, delivery of surface water supply to the growth areas and remainder of the unincorporated county would require construction and operation of surface water treatment facilities, pump stations, and pipelines. This is feasible for cities or large developments that can support the high costs associated with a treated surface water supply system. In the county, this option is feasible only for Yuba City and the SPSP.<sup>28</sup>

For the following land use designations—AG-20, AG-40, AG-80, and AP—the analysis assumes the demand for potable water would continue to be met by private landowner wells.<sup>29</sup> The Utilities Analysis, prepared by West Yost Associates, to support the development of the proposed land use diagram did not identify a specific demand factor for those areas. However, for purposes of determining the total net demand on groundwater from all land uses in the policy area, the analysis assumed a water demand factor of 467 gallons per day/dwelling unit (gpd/du), consistent with a low-density water demand factor used by Yuba City. Demand for agricultural irrigation would continue to be met primarily through surface water, consistent with current practices. No changes in agricultural irrigation practices or water supply are proposed; entitlements and infrastructure related to agricultural irrigation are, therefore, not evaluated.

The apportionment of potable land use acreages (including non-agricultural demand in agricultural land use designations) to the three groundwater basins for purposes of estimating total non-agricultural use subbasin demand was based on estimating the total number of acres within each subbasin using GIS, combined with the land use diagram acreage and potable demand data.

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28 West Yost Associates, Issue Discussion Paper, June 2008, p. 4.

29 West Yost Associates, Land Use Alternatives Analysis, Section D – Utilities Analysis, September 2009.

Water demand for the Yuba City North and Yuba City South SOI is included in the estimates for potable groundwater demand because those areas are not currently within an area of the city connected to the City's potable supply infrastructure, which distributes treated surface water. Those areas would have to be annexed to the city and the water service area. However, the impact analysis does provide a limited discussion on how City supplies could be used.

Water demand for the SPSP is reported in the analysis as estimated for that project in its Water Supply Assessment (WSA). The demand is assumed to be an entirely new potable demand, which would consist of a combination of groundwater and surface water. While the water demand for the SPSP does account for a portion of future countywide water demand for the proposed General Plan, it is shown as a stand-alone value for potable demand and not further evaluated because the approach to securing necessary water supply entitlements and developing associated infrastructure to supply that SPSP have already been completed.

The availability of treatment systems and infrastructure to serve the growth areas relies on information presented in the "*Land Use Alternatives Analysis, Section D: Utilities Analysis*" prepared by West Yost (2009). The approach to serving future growth, including the need for connecting to community water systems and issues concerning infrastructure expansion, are as reported in that document. The analysis also considers how the proposed General Plan policies and implementation measures would facilitate such improvements.

An issue related to the increased pumping of groundwater to meet future potable demand is the potential environmental impact on the underlying groundwater basin. This hydrogeologic issue is addressed in Impact 6.10-6 in Section 6.10, Hydrology, Flooding, and Water Quality.

The impact analysis analyzes buildout of the proposed General Plan under both the adjusted buildout scenario as well as full buildout.

## **Proposed Sutter County General Plan Goals and Policies**

The following goals and policies from the proposed General Plan relevant to water supply within the entire planning area are listed below.

### **INFRASTRUCTURE ELEMENT (I)**

#### **Water**

**Goal I 1 Ensure the availability of an adequate, reliable, and safe potable water supply for current and future County residents, businesses, and other water users.**

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Policies

- I 1.1 **Availability.** Require new development to study, coordinate and plan the provision of potable water services to support the new development and demonstrate the availability of a long-term, safe, and reliable potable water supply.
- I 1.2 **Infrastructure Planning.** Require the establishment of potable water master plans for areas served, or to be served, by County-owned or County-operated water systems, and private water companies. Ensure that the required infrastructure is successfully planned and designed.
- I 1.3 **Capital Funding.** Require new development to construct or fully fund its needed potable water infrastructure.
- I 1.4 **Efficient Infrastructure.** Require potable water infrastructure that is to be owned or operated by the County to be designed and constructed to minimize the long-term life cycle costs of the infrastructure. Require the plans and design of potable water infrastructure to be owned or operated by another public agency or private utility be approved by the servicing agency/utility.
- I 1.5 **Dedications.** Require fee title dedication of land (or easements if determined appropriate by the Public Works Director) to the County to ensure adequate space for, access to, operation of, maintenance of, and repair of the potable water infrastructure.
- I 1.6 **Operations and Maintenance Funding Plans.** Require new development to establish funding plans to cover the long-term operation, maintenance, and repair of the development's potable water infrastructure.
- I 1.7 **Provision of Services.** Minimize County operated potable water systems serving urbanized areas. Transfer County operated potable water systems in urban areas to incorporated cities or public community service districts where and when feasible and beneficial to the customers.
- I 1.8 **New Development.** Require new development to provide water systems supporting the development based on the following guidelines for water supply:
- a. Urban development, and suburban development on parcels less than one acre in size, shall utilize community water systems. Demonstrate adequate and safe long-term water supply can be provided without negatively impacting adjacent land uses or water supplies prior to development of new or expanded community water systems.
  - b. Rural development, and suburban development on parcels one acre or larger in size, shall utilize community water systems where feasible and cost effective as determined by the County. If utilizing a community water system is not feasible, individual wells may be used where the water demand/intensity of new development is appropriately limited and where adequate and safe long-term water supply can be provided without negatively impacting adjacent land uses or water supplies.

c. Agricultural areas may utilize individual water wells.

- I 1.9 **Connection to Community Water System.** Connect existing developed areas to community water systems where practical.
- I 1.10 **Individual Water Wells.** New individual wells shall meet County well construction and water quality standards.
- I 1.11 **Improve Water Availability.** Support the creation of new water projects in appropriate locations that improve water availability for urban, rural, and agricultural water uses in Sutter County, including recycled water projects.
- I 1.12 **Water Conservation.** Support water conservation programs that increase water use efficiency, and provide incentives for adoption of water-efficiency measures.
- I 1.13 **Water-Efficient Landscaping.** Require the use of water-efficient landscaping in new development.

#### Implementation Programs

- I 1-A Review new development applications in unincorporated areas to ensure that adequate water service will be available through the County, or other service providers, to serve the new development. Require evidence of service availability.
- I 1-B Condition new development to perform a water supply assessment in accordance with the requirements of state law.
- I 1-C Develop potable water service guidelines and possible agreements with the cities of Live Oak and Yuba City for the provision of potable water within the cities' spheres of influence.
- I 1-D Apply, and update as necessary, County improvement standards for potable water infrastructure planning, design, and construction.
- I 1-E Develop a Countywide potable water master plan consistent with this General Plan. The design and construction of potable water systems are to be consistent with the approved master plan.
- I 1-F Condition new development to construct infrastructure and dedicate land to support development as identified in the Countywide potable water master plan or other development studies. Condition new development to construct necessary potable water infrastructure prior to the issuance of building permits for residential development or certificate of occupancy for non-residential development; or if appropriate, ensure the potable water infrastructure is adequately financed through development impact fees or by agreement, or other mechanisms.
- I 1-G Where the development's contribution to the potable water infrastructure exceeds its fair share, require the development to fully fund the infrastructure and

be reimbursed as the County receives impact fees/funding from other future development benefitting from the improvements.

- I 1-H Condition new development to develop and implement a financing mechanism to fund the long-term operations and maintenance needs of potable water infrastructure. Funding plans shall ensure the collection of sufficient funds to cover current and anticipated future expenditures, capital replacements, and cost increases.
- I 1-I Review new development to ensure that proposed water systems are adequate and appropriate for the type of development and are consistent with federal, state, and local codes and standards, and master plans.
- I 1-J Require a groundwater study prior to development of new well systems serving urban/suburban and rural/suburban development to identify potential effects on aquifer volume and groundwater levels and the extent to which existing municipal and agricultural wells could be affected. The results of the study shall be used to develop the proper siting, design, and operation of new or expanded well systems, including a process for ongoing monitoring and contingency planning.
- I 1-K Require existing development currently utilizing private wells for potable water supply to connect to a community water system when the community system is within 200 feet of the development, the community system agrees to allow the connection, and the private well no longer complies with applicable regulations or requires significant repairs.
- I 1-L Support the California State Regional Water Quality Control Board's efforts to monitor known groundwater contamination areas and ensure that existing water sources are protected and contamination is as limited as is feasible.
- I 1-M Apply the County's water well standards and applicable development standards to ensure safe and sanitary water supplies for development utilizing wells for potable water. Update the County's water well standards as needed.
- I 1-N Develop water conservation standards for new development to increase water use efficiency.

## ENVIRONMENTAL RESOURCES ELEMENT (ER)

### Water Resources and Quality

- ER 6.5 **Regional Coordination on Groundwater Use.** Coordinate with local and regional jurisdictions on groundwater use to minimize overdraft conditions of aquifers.
- ER 6.7 **Water Rights.** Support the protection of the existing water rights of water agencies and providers within Sutter County. Do not support out-of-area water transfers where they could adversely impact water supply within Sutter County.
- ER 6.8 **Recycled Water.** Explore the feasibility of utilizing recycled water, where appropriate, cost effective, and safe.

ER 6.9 **Water Use Reduction.** Implement, as appropriate, the reduction measures in the Climate Action Plan targeted to reduce water use. Such measures may include: adopting a per capita water use reduction goal; implementing a water conservation and efficiency program; providing incentives for new development to reduce potable water use; installing water meters for uses not using wells; encouraging water suppliers to adopt a water conservation pricing schedule; encouraging upgrades in water efficiency; providing training and education on water efficiency; and increasing recycled water use.

#### **Implementation Programs**

ER 6-A Develop a Countywide Groundwater Management Plan and participate in the development and implementation of an Integrated Regional Water Management Plan.

ER 6-B Conduct a study to determine the feasibility of utilizing recycled water, where appropriate, cost effective, and safe.

### **Standards of Significance**

For the purposes of this EIR, impacts to water supply are considered significant if the proposed General Plan would:

- increase demand for potable water in excess of existing entitlements and sources; or
- require or result in the construction of new water treatment facilities or expansion of existing facilities to increase capacity, the construction of which could cause significant environmental effects.

### **Impacts and Mitigation Measures**

#### **6.13-1 Implementation of the proposed General Plan would increase the demand for potable water.**

Implementation of the proposed General Plan would increase the number of dwelling units and commercial and industrial square footage, as identified in Table 3-2 in Chapter 3, Project Description. Additional residential and non-residential development in the policy area would require potable water. Excluding the SPSP, for which sources of supply have been previously determined and evaluated, and AG-20, AG-40, AG-80, and AP, which would continue to use individual private wells, the net increase in potable demand associated with the growth areas and remainder of the unincorporated county is approximately 10,443 ac-ft/yr for residential uses and approximately 759 ac-ft/yr for industrial/commercial uses (Table 6.13-1). As indicated by the data in Table 6.13-1, for some existing land uses (OS, Parks, Highway, FPARC [Food Processing, Agricultural and Recreation Combining District]), there would be no change in potable water demand.

General Plan Land Use Designation	Existing (2009) Estimated Demand (Acre-Feet/Year)	Adjusted Buildout Demand (Acre-Feet/Year)	Net Change – Increase/(Decrease) (Acre-Feet/Year)
LDR	5,595	7,676	2,081
MDR	375	50	(325)
HDR	0	84	84
AG-RC	0	2,583	2,583
A-P <sup>2</sup>	129	0	(129)
RAN	641	2,506	1,865
ER	1,088	5,372	4,283
<b><i>Subtotal residential</i></b>	<b>7,828</b>	<b>18,271</b>	<b>10,443</b>
COM	1,269	996	(272)
IND	1,613	1,726	114
I/C	0	219	219
EC	0	700	700
<b><i>Subtotal industrial/commercial</i></b>	<b>2,882</b>	<b>3,641</b>	<b>759</b>
<b><i>SUBTOTAL all residential and industrial/commercial</i></b>	<b>10,710</b>	<b>21,912</b>	<b>11,202</b>
OS	26,152	26,152	0
Parks	2,615	2,615	0
Highway ROW	362	362	0
FPARC	5,433	5,433	0
Sutter Pointe Specific Plan	-	25,199	25,199
<b>TOTAL POLICY AREA</b>	<b>45,272</b>	<b>81,673</b>	<b>36,401</b>
Notes:			
1. AG-20, AG-40, AG-80, and AP would use individual private wells and are, therefore, not included in total potable demand.			
2. A-P is agricultural preserve: a land use designation that is no longer used in the proposed General Plan.			
Source: PBS&J, 2010.			

Including the SPSP (buildout of Phase A and Phase 1), the countywide potable demand would increase from 45,272 ac-ft/yr to 81,673 ac-ft/yr, for a net increase of 36,401 ac-ft/yr. Of that total net increase, the 25,199 ac-ft/yr increase attributable to the SPSP would account for approximately 70 percent of the total policy area demand.

Table 6.13-2 shows how potable demand would change, by specific growth area.

With the exception of the SPSP, the increased demand for potable water supply in the policy area would be met through the use of groundwater, consistent with current practices. It would not be feasible to provide the supply through a single water supply source.<sup>30</sup> The County is also not considering surface water as a potential potable supply for those areas because the level of development would not be sufficient to justify the cost associated with constructing this infrastructure (with the exception of the SPSP).<sup>31</sup> For the Yuba City SOI, there is currently no infrastructure that could supply treated surface water to

30 Ibid., p. 16.

31 West Yost Associates, Infrastructure Discussion Paper, June 2008, p. 4.

serve the North and South SOI growth areas. Unless and until those areas are annexed into

General Plan Planning Area	Existing (2009) Estimated Demand (Acre-Feet/Year)	Adjusted Buildout Demand (Acre-Feet/Year)	Net Change – Increase/(Decrease) (Acre-Feet/Year)
Live Oak	103	256	153
Sutter	2,116	3,628	1,512
FPARC	5,433	5,433	0
Yuba City SOI North	57	380	323
Yuba City SOI South	775	3,009	2,234
Tudor	102	212	110
East Nicolaus/Trowbridge	123	1,402	1,279
Robbins	247	317	70
Nicolaus, Rio Oso, and remainder of unincorporated policy area	36,316	41,837	5,521
<i>Subtotal</i>	<b>45,272</b>	<b>56,474</b>	<b>11,202</b>
Sutter Pointe Specific Plan	0	25,199	25,119
<b>TOTAL POLICY AREA</b>	<b>45,272</b>	<b>81,673</b>	<b>36,401</b>
Note: 1. AG-20, AG-40, AG-80, and AP would use individual private wells and are, therefore, not included in total potable demand. See Table 6.13-3. Source: PBS&J, 2010.			

Yuba City, those locations are assumed to operate and maintain independent water systems that rely on groundwater. Please see the discussion under the “Growth Areas” subheading for Yuba City for additional explanation.

There are three major DWR-defined groundwater subbasins underlying Sutter County that would continue to be the source of groundwater to meet potable demand in the residential and industrial/commercial areas in the policy area: East Butte subbasin, North American subbasin, and the Sutter Basin. Within those basins, in addition to proposed development with potable water demands listed in Table 6.13-2, there would also be agricultural designations (AG-20, AG-40, AG-80, and AP) that would generate demand for groundwater associated with residential development at densities allowable under the proposed General Plan. Those domestic uses would not generate potable demand in the context of infrastructure planning, but they would use groundwater via private wells for domestic uses. Irrigation water for agricultural uses is assumed to be obtained from surface water, consistent with existing practices. Dry-year shortages, in which groundwater could be used, are not considered because it would not be a component of potable groundwater supply.

Table 6.13-3 summarizes the net change in groundwater use for residential land uses in the AG-20, AG-40, AG-80, and AP land use designations, by each of the three subbasins.<sup>32</sup>

<b>Groundwater Subbasin</b>	<b>Existing (2009) Estimated Demand (Acre-Feet/Year)</b>	<b>Adjusted Buildout Demand (Acre-Feet/Year)</b>	<b>Net Change - Increase/(Decrease) (Acre-Feet/Year)</b>
East Butte Subbasin	371	348	(23)
Sutter Subbasin	1,519	1,411	(108)
North American	517	496	(21)

Source: PBS&J, 2010.

As indicated by the data in Table 6.13-3, there would be a projected estimated net decrease in groundwater use for domestic purposes in the large-parcel agricultural land use designations in each of the subbasins. However, the decrease would be offset by increased groundwater use for potable demand in the remainder of the policy area in those basins.

The aggregate of the residential and non-residential land use designations for the specific growth areas and the remaining unincorporated area within each basin (including the groundwater demand for domestic uses in the large-parcel agricultural land use designations) would represent the estimated total groundwater demand on the basin for non-agricultural uses in the policy area. Table 6.13-4 summarizes the total groundwater demand for each basin for the sum of all land uses for which groundwater is assumed to be the source of domestic supply.<sup>33</sup>

The following describes the groundwater availability for each of those subbasins.

There would be an increase in demand for potable supply for the Live Oak SOI, but the demand on the East Butte subbasin associated with the Live Oak SOI would not represent a substantial contribution to withdrawals from that source because minimal growth is proposed, which is reflected in the low net increase in potable demand. For the remainder of the unincorporated area land uses apportioned to the area encompassed by the East Butte subbasin boundaries, most of the water use would be associated with agricultural irrigation, which is supplied by surface water; the demand of any rural developed uses that Sutter, Tudor, Robbins, Meridian, Yuba City SOI, and the remainder of the unincorporated

32 Two small areas of the Colusa and West Butte subbasins are within the policy area boundary; however, there would be a negligible change in residential units, resulting in a minimal change in groundwater use. Therefore, those amounts are not included in the totals.

33 For purposes of identifying demand on each subbasin, no distinction is made between potable demand requiring infrastructure and potable demand met by private wells.

Subbasin	2009 Estimated Demand			
	Communities and Growth Areas <sup>1</sup> (ac-ft/yr)	Remainder of Policy Area Unincorporated County <sup>1</sup> (ac-ft/yr)	Agricultural Residential <sup>2</sup> (ac-ft/yr)	Total (ac-ft/yr)
East Butte	103	5,031	371	5,505
North American	123	8,613	517	9,253
Sutter	8,729	22,455	1,519	32,703
			<b>Total</b>	<b>47,461</b>
	Adjusted Buildout Demand			
East Butte	256	5,797	348	6,401
North American	1,402	9,925	496	11,824 <sup>3</sup>
Sutter	12,980	25,875	1,411	40,265
			<b>Total</b>	<b>58,490<sup>3</sup></b>
	Net Change			
East Butte	153	766	(23)	896
North American	1,279	1,312	(21)	2,570
Sutter	4,251	3,420	(108)	7,562
			<b>Total</b>	<b>11,029<sup>4</sup></b>
Notes:				
1. Includes sum of demand of all land use designations except agricultural.				
2. Sum of AG-20, AG-40, AG-80, and AP.				
3. Does not include demand for SPSP because the water supply program for SPSP indicates groundwater would only be used in initial phases of development, then combined with surface water. Ultimately, groundwater would only be used in winter. (West Yost, 2009)				
4. Value differs slightly from Tables 6.13-1 and 6.13-2 due to rounding and because there are a few hundred acres of agricultural residential use in smaller basins adjoining the three main subbasins not included in the subbasin total. Acreages (and associated domestic demand) in those subbasins (Colusa, West Butte, and South Yuba) comprise less than 1 percent of the total policy area.				
Source: PBS&J, 2010.				

county apportioned to the area encompassed by the Sutter subbasin. The Sutter subbasin has not been identified as experiencing an overdraft and is not adjudicated, and, therefore, is assumed to continue to be an available groundwater supply source. The net demand on the subbasin would represent approximately 4 percent of the total subbasin withdrawals reported by DWR in Bulletin 118 (175,300 ac-ft/yr). The increase in demand in the policy area (7,562 ac-ft/yr) would be approximately twice the DWR-reported outflow urban extraction calculated on 1990 levels of development (3,900 ac-ft/yr).

For the East Nicolaus, Nicolaus, Trowbridge, Rio Oso, and remaining unincorporated areas east of the Feather River (North American subbasin), there would be an increased demand on groundwater supply. This is the same subbasin underlying the SPSP, for which a comprehensive groundwater analysis has shown that even with implementation of the SPSP (which has a potable demand of 25,199 AFA) groundwater availability is not anticipated to be affected. For the remainder of the unincorporated county apportioned to the area encompassed by the North American subbasin boundaries, most of the water use would be associated with agricultural irrigation, which would continue to be supplied by surface water; the demand of any rural developed uses that would be met with private wells would

not be substantial. The North American subbasin has not been identified as experiencing overdraft and is not adjudicated, and, therefore, is assumed to continue to be a groundwater supply source. The net demand on the subbasin would represent less than 1 percent of the total subbasin withdrawals reported by DWR in Bulletin 118 (399,000 ac-ft/yr).

### **Potable Water Supply and Infrastructure Planning to Meet Future Growth**

Although there are no reported existing or known constraints to future groundwater use from these subbasins, the County recognizes that regional water supply planning is critical to ensure the availability of a long-term, safe, and reliable potable water supply for the policy area. The County believes the most effective approach to providing water supply and infrastructure for development areas (versus agricultural land, which will provide their own individual water wells for domestic use) is through implementation of a comprehensive planning process that would involve (1) identifying appropriate water supply sources and the physical effect of obtaining and using those supplies on groundwater and/or surface water, as appropriate, over the long-term, including completion of the GMP; (2) preparing water master plans for specific development projects, a countywide water master plan; (3) establishing a system to ensure new development provides necessary funding to support obtaining water supplies, including treatment, as needed, and delivering potable water to the development areas; (4) ensuring long-term maintenance of potable water supply infrastructure, including necessary dedications; and (5) encouraging increased water conservation and recycling.

The proposed General Plan includes numerous policies and implementation measures that, taken as a whole, establish the County's approach to providing water for future development summarized above. Those policies and implementation measures are listed in their entirety under the "Proposed Sutter County General Plan Goals and Policies" subheading, above. Policies relevant to water supply planning in the future are embodied in Infrastructure policies I 1.1, I 1.8, I 1.11, ER 6.5 and ER 6.7 and their corresponding implementation programs. In particular, with regard to future groundwater demand, policy I 1.1 and Implementation Program I 1-B would ensure future projects comply with Section 10910 of the Water Code, which requires an analysis of the sufficiency of the groundwater from the basin or basins from which a proposed project would be supplied to meet the projected water demand of the project. Policies I 1.3, I 1.4, I 1.5, I 1.6, I 1.7, I 1.9, and I 1.10 and their corresponding implementation programs would ensure appropriate infrastructure is constructed and funded, including long-term maintenance. Water conservation and recycling are addressed in policies I 1.12, I 1.13, and ER 6.8.

With implementation of the proposed policies and implementation programs, there would not be an increased demand for potable water that would exceed existing entitlements and sources, and impacts would be *less than significant*.

### Full Buildout Analysis

Under full buildout, additional growth beyond the 2030 horizon would generate additional demand for potable water. If that development were allowed to happen without the provision of additional facilities then the effects would be adverse. However, the proposed General Plan includes policies which require a comprehensive planning process that identifies and plans for how to supply water to serve new development, as discussed above. At this time, however, the exact nature of those future effects are unknown, and it would be speculative to attempt a more detailed analysis at this time.

In addition, any future development would be subject to rigorous review to determine potential impacts to water infrastructure and the availability of water in accordance with CEQA. The additional growth that could occur under full buildout would go beyond 2030 and future planning efforts and environmental analysis would address this additional growth and the potential implications of this growth.

### Mitigation Measure

*None required.*

However, as stated previously, the groundwater quality is an area of concern. The contaminants of concern are naturally occurring arsenic, iron, manganese, nitrate and other pollutants from septic systems, and agricultural chemicals. The increased demand on groundwater for the policy area could result in the need for new or expanded water treatment facilities, which is evaluated in the following impact.

An issue related to the increased pumping of groundwater to meet future demand is the potential environmental impact on the underlying groundwater basin. This hydrogeologic issue is addressed in Impact 6.10-6 in Section 6.10, Hydrology, Flooding, and Water Quality.

#### **6.13-2 Implementation of the proposed General Plan would result in an increase in demand for potable water that could require the construction or expansion of water treatment facilities.**

Increased demand for potable water in the growth areas and unincorporated areas (with the exception of the SPSP) would be met through increased groundwater pumping, as explained in Impact 6.13-1. Groundwater in some locations in the county contains certain chemicals such as nitrate and naturally occurring arsenic, which are health hazards, and other chemicals such as iron and manganese. If new wells are sited in locations where groundwater extracted for potable use could contain levels of nitrate and arsenic, contaminants that could present a health risk, groundwater treatment could be necessary.

In general, protecting existing groundwater quality from further degradation and minimizing the potential for future actions to exacerbate poor groundwater quality by contributing additional sources of contaminants is the preferred and environmentally beneficial approach to ensuring future groundwater supply for potable uses. Nitrate contamination from septic systems, in particular, can be effectively managed through proper planning and design of wastewater systems.

Privately owned septic systems provide for the treatment and disposal of wastewater throughout much of the rural areas of Sutter County. Also many homes and businesses in the small communities within Sutter County use septic systems, including the communities of Sutter, Rio Oso, Nicolaus, East Nicolaus, and Trowbridge. Yuba City, the city of Live Oak, and the community of Robbins are the only areas in the county with sanitary sewer collection systems and wastewater treatment facilities. All other areas rely on on-site septic systems.

Some of the ways that groundwater and its use can be protected from nitrate contamination include:<sup>34</sup>

- Restricting the use of septic systems. This could be accomplished by limiting future development in the county or by connecting ranchettes and houses near Yuba City and the City of Live Oak to the cities' sewer systems. Similarly, these ranchettes and houses could be connected to the cities' water systems to reduce the impact of contaminated groundwater.
- Ensuring proper siting, design, operation, and maintenance of septic systems, consistent with County ordinance and SB 885 Onsite Wastewater Treatment System (OWTS) requirements or equally effective or more stringent measures adopted by the county.
- Constructing community wastewater treatment systems and eliminating septic systems. (This issue is further discussed in Impact 6.13-3).
- Providing proper operations and maintenance of sewer systems.
- Implementing best management practices for agricultural chemical usage.
- Ensuring proper design, construction, and maintenance of wells, including locating wells away from septic systems.

There are several General Plan policies and implementation programs addressing protection of groundwater quality from septic system use and other potential sources of groundwater contamination that could affect potable supply. These include policies I 1.8, I 1.9, and I 1.10. Corresponding implementation programs are I 1-I through I 1-M.

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34 West Yost Associates, Infrastructure Issues Paper, June 2008.

While protecting groundwater quality in place is the environmentally preferred approach, the following explains potential options to addressing groundwater quality as it pertains to the need for treatment to ensure a potable water supply is available.

Construction of new potable water systems that meet current MCL and other regulatory requirements is most cost effective when a system can be constructed that serves large numbers of properties (e.g., 10,000 connections) or when water service can be extended from an existing large system. The County's approach to obtaining potable water through master planning, as described in Impact 6.13-1 and associated policies and implementation programs, would achieve this goal. The County does not plan on providing water infrastructure or treatment facilities to serve future development within the unincorporated county. The intent is for future development to provide their own water infrastructure to serve proposed development. Systems serving only a few hundred connections are significantly less cost effective. However, the cost for small, isolated systems can be reduced through planning and design of a cost-efficient water system through preparation of development master plans and applicable requirements of a countywide water master plan, similar to a large system, but at a reduced scale. The General Plan includes the following specific policies and implementation programs that address water treatment planning and infrastructure: I 1.1, I 1.2, I 1.4, I 1.7, I 1.8, and I 1.9 (implementation programs I 1-A through I 1-F, and I 1-I through I 1-K).

Proper well siting and construction is another method to ensure a safe potable water supply. While well construction and siting relative to septic systems is governed by existing state regulations and county ordinance, the General Plan also contains policies addressing this. These include policy I 1.10 and implementation programs I 1-L and I 1-M.

The construction of new water treatment facilities associated with a specific development project (either as a community water system, private system, or county system), or expansion of existing facilities, could involve installation of wellhead treatment or treatment and/or storage facilities at storage/distribution locations. From an environmental impact perspective, the footprint of such facilities would tend to be limited in extent. However, there are environmental resources that could be affected, including but not limited to biological resources and cultural resources, aesthetics/visual resources, and construction could generate short-term air emissions and noise. To the extent new or expanded water treatment facilities could be necessary to support future development in the policy area, and because the facilities are assumed to be in the proposed land use designations supported by potable water from the treatment facilities, the topical analyses in this Draft EIR (i.e., Cultural Resources, Biological Resources, etc) identifies the range and magnitude of environmental impacts that could occur. The development that could occur contemplated under the proposed General Plan is addressed in the other technical

sections of this EIR, see Sections 6.3, Agricultural Resources, 6.4, Air Quality, 6.5, Biological Resources, 6.7, Cultural Resources, etc.

Implementation of the proposed General Plan could require or result in the construction of new water treatment facilities or expansion of existing facilities to accommodate new development, the construction of which could cause significant environmental effects. However, it should be noted when the locations and design of specific facilities have been determined, supplemental environmental review in accordance with CEQA would be prepared. Compliance with the General Plan policies and Implementation Programs would ensure impacts associated with additional facilities would be *less than significant*.

### Full Buildout Analysis

Under the full buildout scenario, there would be an additional demand on groundwater supplies and the need for water treatment. Additional growth beyond the 2030 horizon would generate additional demand for water treatment facilities. However, the General Plan includes policy I 1.7(Provision of Services) that minimizes County operated potable water systems serving urbanized areas and transfers County operated potable water systems in urban areas to incorporated cities or public community service districts where and when feasible and beneficial to the customers. Policy I 1.8 (New Development) requires new development to provide their own water systems to support development because the County does not plan on providing any central water treatment facilities or water infrastructure to support new development.

If that development were allowed to happen without the provision of additional facilities then the effects would be adverse. However, the proposed General Plan includes policies which require new development to provide its own water facilities. At this time the exact nature of those future effects on any new facilities are unknown, and it would be speculative to attempt a more detailed analysis at this time.

In addition, any future development would be subject to rigorous review to determine potential impacts to water infrastructure in accordance with CEQA. The additional growth that could occur under full buildout would go beyond 2030 and future planning efforts and environmental analysis would address this additional growth and the potential implications of this growth.

### Mitigation Measure

*None required.*

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## Growth Areas

### **Rural Planned Communities**

#### Community of Sutter

The estimated adjusted buildout annual average potable water demand for the LDR, COM, and IND land use designations, including the FPARC land use designation (assumed as an existing condition with no net change in water demand) would be approximately 9,061 ac-ft/yr (7.1 mgd), representing an increase of 1,512 ac-ft/yr (1.35 mgd) over existing conditions, as shown in Table 6.13-2.

Potable water for the community of Sutter is currently provided by the Sutter CSD from three existing groundwater wells. This water supply could be developed by drilling additional wells to meet the future water demands.<sup>35</sup> This would be a less-than-significant impact on groundwater supplies with implementation of General Plan policies and implementation programs, as described in Impact 6.13-1. General Plan policies I 1.1, I 1.3, I 1.8. and Implementation Programs I 1-A, I 1-B, and I 1-F, in particular, demonstrate how potable water supply for new development in Sutter should be accomplished. This could involve installing and operating new wells.

The new wells, along with the existing wells, could require an expanded or new treatment system, the construction and/or operation of which could result in significant environmental impacts. This is a potentially significant impact. As described in Impact 6.13-2, implementation of the General Plan policies would address the provision of water treatment facilities.

#### East Nicolaus/Trowbridge

The estimated 2030 adjusted buildout annual average potable water demands for the AG-RC, LDR, MDR, ER, COM, IND, and EC land use designations is approximately 1,402 ac-ft/yr (1.25 mgd), representing an increase of approximately 1,279 ac-ft/yr (1.14 mgd). Of that demand, approximately 85 percent would be associated with the AG-RC land use.

Currently, the potable water supplies for these communities are mostly provided by privately owned wells, and it is likely that this approach will continue to be used for the residential potable water demands. However, the East Nicolaus Mutual Water Company provides potable water to customers within a small portion of East Nicolaus. Formation of a Community Services District or expansion of the East Nicolaus Mutual Water Company could be considered to serve the future growth in this area.<sup>36</sup>

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35 West Yost Associates, Land Use Alternatives Analysis, Section D – Utilities Analysis, September 2009.

36 Ibid.

This would be a less-than-significant impact on groundwater supplies with implementation of General Plan policies and implementation programs, as described in Impact 6.13-1. Policies I 1.1, I 1.3, I 1.8 and Implementation Programs I 1-A, I 1-B, and I 1-F, in particular, how potable water supply for new development in the East Nicolaus/Trowbridge growth area could be accomplished.

The new wells, along with the existing wells, could require an expanded or new treatment system, the construction and/or operation of which could result in significant environmental impacts. This is a potentially significant impact. As described in Impact 6.13-2, implementation of the General Plan policies would address the provision of water treatment facilities.

## Spheres of Influence

### Yuba City – North and South

The estimated adjusted buildout annual average potable water demands for the IND and EC land use designations in the Yuba City SOI North growth area is approximately 380 ac-ft/yr (0.34 mgd), an approximately 323 ac-ft/yr increase. For the Yuba City SOI South, the estimated buildout demand for the RAN, ER, LDR, MDR, COM, IND, I/C, and EC land use designations is approximately 3,009 ac-ft/yr (2.7 mgd). This is an approximately 2,234 ac-ft/yr increase. The combined total demand for both areas would be approximately 3,389 ac-ft/yr (3.02 mgd). Of that demand, approximately 80 percent would be associated with the residential land use categories, and the remaining 20 percent associated with non-residential commercial and industrial land uses.

Yuba City currently provides customers potable water from treated surface water supplies. Yuba City prepared a Water System Master Plan Update in 2004. This document covers the City's surface WTP, groundwater well, water distribution system, and water storage requirements. This document establishes the City's current and future water needs and provides a plan for achieving those needs. The City has also prepared an UWMP (2005). The UWMP, however, does not include infrastructure improvements for the areas outside the City's SOI.<sup>37</sup> Further, the I/CR land uses both north and south of the city are in elongated areas along Highway 99. This elongated configuration would require the extension of water mains into this area. Extension of long reaches of pipelines is very expensive, and is most cost effective if the water line can serve all of the properties along the pipeline.<sup>38</sup> Therefore, it is assumed unless and until the growth areas are annexed into the City's service area, groundwater would continue to be the potable water supply for the north and south growth areas.

37 Aaron Busch, Community Development Director, Yuba City, "Comments on the Notice of Preparation for the Sutter County General Plan Update," April 20, 2010.

38 West Yost Associates, Land Use Alternatives Analysis, Section D – Utilities Analysis, September 2009.

This would be a less-than-significant impact on groundwater supplies with implementation of General Plan policies and implementation programs, as described in Impact 6.13-1. Policies I 1.1, I 1.3, I 1.8. and Implementation Programs I 1-A, I 1-B, and I 1-F, in particular, how potable water supply for new development in the Yuba City SOI north and south growth areas could be accomplished.

The new wells, along with the existing wells, could require an expanded or new treatment system, the construction and/or operation of which could result in significant environmental impacts. This is a potentially significant impact. As described in Impact 6.13-2, implementation of the General Plan policies would address the provision of water treatment facilities.

Proposed General Plan policies I 1.1, I 1.2, I 1.8, and I 1.9 and Implementation Programs I 1-A and I 1-C provide guidance for future consideration of connecting the Yuba City SOI north and south growth areas to city-provided services. Such an approach would require those areas be annexed into the city or into the city's SOI.<sup>39</sup> Annexing into the city and use of treated surface water is not being considered in this analysis. However, the following is provided to inform the decision-making process regarding water supply availability in Yuba City. In the event a decision is made by the County to pursue annexation of the SOI growth areas into the Yuba City service area, additional environmental review, including preparation of a WSA and related documentation would be required.

As stated in the Environmental Setting, Yuba City's surface water supplies are adequate for average year demands, but the City will need to acquire additional surface water supplies to meet its buildout water demand beginning in 2015. Yuba City intends on converting its entire service area to surface water supplies and using groundwater supplies from existing wells as backup supplies. Yuba City's WTP has a current treatment capacity of 36 mgd. Maximum day demand to date is 24 mgd. The City is currently considering the conversion of approximately 3,000 homes from groundwater to surface water. If this were to occur, there would be an additional demand of approximately 4.5 mgd maximum, bringing the WTP's total maximum day demand to 28.5 mgd. The facility is located on approximately 25 acres in north Yuba City. There is still sufficient space to more than double the capacity of the existing plant.<sup>40</sup>

### **Sutter Pointe Specific Plan Area**

The estimated annual average water demand at buildout of the SPSP is 25,199 ac-ft/yr (22.5 mgd). Because planned land uses would exceed 3,000 connections, this new service area would become a public water system. Sutter County would initially provide groundwater for the early phases of development, and a combination of ground and

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39 Ibid.

40 Yuba City, Lincoln East Specific Plan Draft EIR, pp. 4.13-1 through 4.13-21.

surface water would be required to meet the ultimate needs of the development. Based on the WSA prepared as part of the SPSP EIR, water supplies for the SPSP area will consist of surface water to be obtained from NCMWC and groundwater to be pumped from new wells to be constructed in the plan area. Groundwater supplied from wells will be pumped from the North American Groundwater Subbasin (North American Subbasin), and a portion of the Sacramento Valley Groundwater Basin as defined by DWR. The proposed potable water system to serve the SPSP would use 18 groundwater wells that would pump to two treatment facilities. A surface WTP would be constructed at one of the groundwater treatment plant sites. From there, the treated water will be distributed throughout the community in a system of water transmission mains and pipelines. Also located throughout the system would be 12 water storage tanks located at six sites that would provide a total storage volume of 32 million gallons. The environmental effects of obtaining and treating water supplies were evaluated in the SPSP EIR.

Because the potable water supply and treatment demands of the SPSP have already been identified and the water master planning is in process, there would no new or additional significant impacts associated with the SPSP.

### **Industrial/Commercial (I/C)**

The total policy area-wide estimated adjusted buildout demand for the I/C land use designation is approximately 219 ac-ft/yr (0.2 mgd), which is entirely new demand for that land use designation. Most of the demand (212 ac-ft/yr) would be in the community of Tudor. The remaining acres are in the Yuba City SOI south growth area, and is accounted for in that analysis.

Currently, the potable water supply for Tudor is mostly provided by privately owned wells, and it is likely that this approach would continue to be used for the I/C potable water demands. A water system could be developed (preferably as identified in a specific plan and potable water master plan for the area), and/or formation of a CSD could also be considered to serve the future growth in this area.<sup>41</sup>

This would be a less-than-significant impact on groundwater supplies with implementation of General Plan policies and implementation programs, as described in Impact 6.13-1. Policies I 1.1, I 1.3, I 1.8 and Implementation Programs I 1-A, I 1-B, and I 1-F in particular, demonstrate how potable water supply for new development in the Tudor growth area could be accomplished.

New wells, along with the existing wells, could require an expanded or new treatment system, the construction and/or operation of which could result in significant environmental

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41 West Yost Associates, Land Use Alternatives Analysis, Section D – Utilities Analysis, September 2009.

impacts. As described in Impact 6.13-2, implementation of the General Plan policies would address the provision of water treatment facilities.

### **Employment Corridor (EC)**

The total policy area estimated 2030 adjusted buildout demand for the EC land use designation is approximately 700 ac-ft/yr (0.63 mgd), which is entirely new demand for that land use designation. Most of the demand (667 ac-ft/yr) would be in the Yuba City SOI north and south growth areas. Impacts would be as described for the Yuba City SOI north and south growth areas, above. The remaining demand would occur in the East Nicolaus/Trowbridge growth area (approximately 13 ac-ft/yr) and in the unincorporated county (approximately 20 ac-ft/yr). Impacts would be as described for the East Nicolaus/Trowbridge growth area, above, and for the unincorporated county, as described in Impacts 6.13-1 and 6.13-2.

### **Cumulative Impacts and Mitigation Measures**

The context for addressing cumulative impacts on potable water supply and treatment includes full buildout of the General Plan as well as other development within the groundwater subbasins underlying the policy area.

#### **6.13-3 Full buildout of the proposed General Plan, in combination with other development within the groundwater subbasins, would result in increased demand for potable water that could require the construction or expansion of water treatment facilities.**

The General Plan would result in a net increase in the demand for potable water of approximately 36,401 ac-ft/yr. Excluding the SPSP demand of 25,199 ac-ft/yr (for which cumulative water demand has already been analyzed), the total estimated net increase in demand for the policy area assumed to use groundwater is 11,202 ac-ft/yr. Within the portion of the county in the Sutter subbasin, this would further increase extraction of groundwater in that basin; however, this basin does not extend into neighboring counties, so the cumulative demand in that basin would only be attributable to the county's full buildout demand. For the East Butte and North American subbasins, future growth relying on groundwater as a sole or supplemental source of water supply could occur in Butte County to the north and Yuba and Placer counties to the east. This would place additional demands on the basin. Future growth, exclusive of the policy area, could also increase the demand for surface water supplies and related treatment. The availability of future water supplies and entitlements to serve regional growth remains a concern. However, assuming full buildout growth relies on groundwater because the county does not currently consider treated surface water to be a viable option, and the county's demand on groundwater represents a small percentage of basin withdrawals, as explained in Impact 6.13-1, the

county's contribution to the demand for water supply is not cumulatively considerable and the cumulative impact would be *less than significant*.

Mitigation Measure

*None required.*

## WASTEWATER

### Environmental Setting

Wastewater in Sutter County is either treated at individual parcels with septic systems (on-site wastewater treatment systems [OWTS]) or at community or city-owned publicly owned treatment works (POTW). Privately owned septic systems provide for the treatment and disposal of wastewater throughout much of Sutter County. The cities of Yuba City, Live Oak, and the communities of Robbins, and Rio Ramaza are the only areas with sanitary sewer collection systems and wastewater treatment facilities within the county.

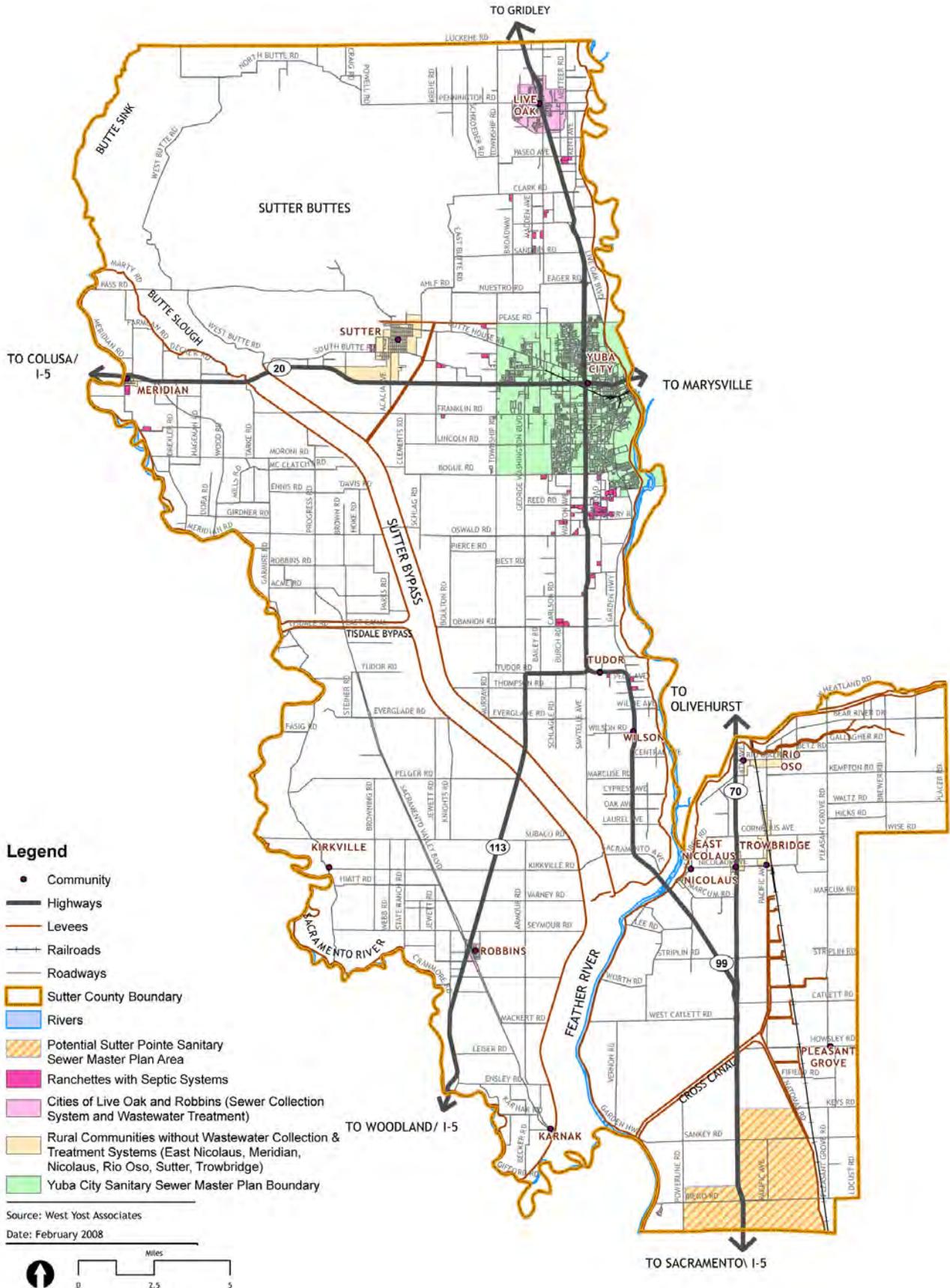
The following summarizes information regarding wastewater management in the policy area. Unless otherwise noted, information is from the Technical Background Report. Figure 6.13-2 shows the areas served by sewer systems and wastewater treatment plants. Also shown on Figure 6.13-2 are the Ranchette parcels within the county that are served by individual septic systems.

### **City of Live Oak**

The city of Live Oak operates and maintains its own sewer system and wastewater treatment plant (WWTP). The Live Oak WWTP currently provides secondary treatment, discharging treated effluent to an irrigation drain (RD 777 Lateral Number 1), which flows through two canals to the Sutter Bypass and eventually to the Sacramento River. The majority of Live Oak residents are connected to the City's system. Some individual septic systems are still in use throughout the city. However, the City's Municipal Code (section 13.32) requires that individual septic systems connect to the city's sewer system when Live Oak facilities are within 200 feet of the septic system.

The existing WWTP has not met certain effluent limitations, and, as a result, was issued a Cease and Desist Order by the RWQCB in 2004. To address these problems as well as to achieve additional effluent discharge requirements, the WWTP will be upgraded to a tertiary treatment system to comply with a new discharge permit issued by the RWQCB. The WWTP upgrade is planned for completion by December 2011, with phased expansions planned to increase capacity and in anticipation of future water quality regulations.

The existing average daily wastewater flow (ADWF) is approximately 0.7 mgd (one-half of the current 1.4-mgd capacity). The City estimates full buildout of its general plan within the city limits would result in an additional 0.4 mgd ADWF. Development outside the city limits (but in the Live Oak SOI) is estimated to add 2.8 mgd ADWF. With full buildout of the Live Oak General Plan, the ADWF would be approximately 4 mgd. The City is preparing a wastewater master plan to identify necessary WWTP and conveyance infrastructure



improvements to serve existing developed portions of the city as well as new growth areas.<sup>42</sup>

### City of Yuba City

The City of Yuba City operates a sewer collection system and wastewater treatment plant. The City's wastewater treatment plant was expanded in 2005 to provide an average daily capacity of 10.5 mgd. For the summer of 2007, average daily flows were approximately 5.5 mgd, and the current peak day wet weather flow rate was approximately 8.5 mgd. The plant discharges secondary, disinfected effluent to the Feather River.

Yuba City's Wastewater System Master Plan Update (March 2006)<sup>43</sup> covers the sewer collection system and the wastewater treatment plant. This report estimates future flows to the plant through year 2030 and identifies the sewer collection system and treatment facilities that will be required to treat future flow rates. The required sewer lines have been evaluated in the City's Wastewater System Master Plan Update.<sup>44</sup> Currently, there are no existing sanitary sewer facilities extending beyond the City's sphere of influence in the unincorporated county.<sup>45</sup>

### Robbins

The existing wastewater collection and treatment system for the community of Robbins is operated by the County. The community of Robbins wastewater system is a Septic Tank Effluent Pumping (STEP) system. Wastewater flows to septic tanks owned by Water Works District #1 but located at each home, where solids settle out and the liquid waste (grey water) is pumped from the septic tank into a six or eight inch sewer force main. The sewers convey the grey water to a 15-acre treatment plant north of Robbins. The effluent is then pumped into sand filters providing secondary treatment. After being treated, the effluent is released into four unlined evaporation ponds. The effluent is disposed of through these evaporation ponds. The County maintains four monitoring wells at the evaporation ponds. The monitoring wells have not shown any signs of contamination of the underlying groundwater. This system is currently at capacity and is in need of repairs and renovation. The General Plan proposes limited development in this community.

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42 City of Live Oak, Draft 2030 General Plan Draft EIR, Section 4.10 (Public Utilities), December 2009.

43 Kennedy/Jenks Consultants Engineers & Scientists, *Wastewater System Master Plan Update*, prepared for Yuba City, revised March 2006.

44 Ibid.

45 Aaron Busch, Community Development Director, Yuba City, "Comments on the Notice of Preparation for the Sutter County General Plan Update," April 20, 2010.

## Rio Ramaza Subdivision

Currently, the residences in the Rio Ramaza Subdivision are served by 1.5 miles of sewer line, a sewer lift station and two wastewater ponds owned and operated by the county. Treatment capacity is 10,000 gpd, but the existing ADWF is only 1,400 gpd.

## Sutter Pointe Specific Plan

The SPSP is a proposed development in the southern most area of the county that includes a total area of approximately 7,500 acres. Proposed land uses include residential (17,500 dwelling units) and approximately 50 million square feet of employment (commercial and industrial). The SPSP is estimated to generate 11.2 mgd ADWF and a peak wet weather flow of 27.0 mgd. The project will include a sewer collection system consisting of a combination of gravity flow sewers and pump stations to convey flow to a central pump station, which will pump the wastewater to the Sacramento Regional County Sanitation District's (SRCSD) Upper Northwest Interceptor (UNWI) sewer. The SRCSD interceptor system will convey flows to the Sacramento Regional Wastewater Treatment Plant (SRWTP), where it will be treated and discharged to the Sacramento River. The pump station will include a 3.9-million-gallon wastewater storage facility for use during large storm events when the UNWI is at capacity.<sup>46</sup> This system will operate independently of any existing county- or city/ community-operated system in Sutter County.

## Remaining Unincorporated County Areas

Throughout the remaining portion of the unincorporated county, wastewater from individual homes or businesses (or small groups of homes/businesses) is treated and disposed of through OWTS, or "septic systems."

### On-Site Wastewater Treatment Systems (Septic Tanks)

Septic tanks are typically designed with a 1,000-gallon liquid capacity, but can vary depending upon the amount of waste generated. Raw wastewater flows into the tank where the solids separate from the liquid. The heavier solids settle to the bottom of the tank where they are gradually decomposed by bacteria. The liquid waste flows into the drain field. Further treatment of wastewater occurs in the soil beneath the drain field. The drain field consists of underground perforated pipes or tiles connected to the septic tank. The soil below the drain-field provides the final treatment and disposal of the septic tank effluent. After the effluent has passed into the soil, most of it percolates downward and outward, eventually entering the groundwater. Chemical and biological processes treat the effluent before it reaches groundwater, or a restrictive layer, such as hardpan, bedrock, or clay soils.

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46 West Yost Associates, Land Use Alternatives Analysis, Section D - Utilities Analysis, September 2009, p. 13.

Sutter County ensures that septic systems are designed and installed appropriately by requiring that the system be permitted by the Community Services Department (Environmental Health Division). Please see also Sections 6.9, Hazards and Hazardous Materials and 6.10, Hydrology, Flooding and Water Quality for more information pertaining to septic systems.

### *Groundwater Quality*

To function successfully, septic systems must only be installed at locations with appropriate soil conditions and be properly operated and maintained. Appropriate soil conditions include permeable soils with adequate depth to groundwater. Much of the flat Sacramento Valley floor in Sutter County has soils with high clay content and very shallow groundwater. Some of these areas also have hardpan soil layers, which completely prevent percolation of septic tank effluent. In areas with clay or hardpan soils, failure of septic systems often leads to untreated or partially treated tank effluent rising to the ground surface. In areas with high groundwater, failure of septic systems often results in contamination of the groundwater with untreated or partially treated tank effluent. Both of these failure types do occur periodically in Sutter County. Nitrates, salts, bacteria, viruses, household chemicals, and other contaminants are typical contaminants that can then enter potable water supplies through pumping of the contaminated water via water supply wells.

As noted in the “Water Supply” environmental setting, there are areas in Sutter County that have elevated levels of nitrate in groundwater. Septic systems have been identified as one of the main contributors to the nitrate levels.

## **REGULATORY CONTEXT**

### **Federal**

The Federal Clean Water Act (CWA), established by Congress in 1972, is the cornerstone of surface-water-quality protection in the United States. The statute employs a variety of regulatory and non-regulatory tools to sharply reduce direct discharges of pollutants into waterways, finance municipal wastewater-treatment facilities, and manage polluted runoff. The CWA prohibits the discharge of pollutants to navigable waters from a point source unless authorized by a National Pollutant Discharge Elimination System (NPDES) permit. The NPDES permit system was established in the federal CWA to regulate municipal and industrial discharges to surface waters of the United States. Each NPDES permit contains limits on allowable concentrations and mass emissions of pollutants contained in the discharge.

## State

The Clean Water Act (CWA) authorizes EPA and the states to implement activities to control water quality. EPA has delegated to the State of California the authority to implement and oversee most of the programs authorized or adopted for CWA compliance through the state's Porter-Cologne Water Quality Control Act of 1969.

Under the state's Porter-Cologne Water Quality Control Act (Section 13260), the quality of the effluent that can be discharged to waterways within the Sacramento area is established by the Central Valley RWQCB through Waste Discharge Requirements (WDRs) that implement the federal NPDES permit system regulations. WDRs are updated at least every five years. A new permit must be issued in the event of a major change or expansion of a wastewater treatment facility. Yuba City, the City of Live Oak, Robbins, and Rio Ramaza all operate wastewater treatment plants under individual WDRs.

The private septic systems in the county do not require WDRs because Section 13260 of the Porter-Cologne Water Quality Control Act provides for waivers (exemptions) for OWTS in certain cases. Section 13260 provides minimum standards for OWTS, and it also establishes that control of the individual on-site disposal systems is best accomplished by local county environmental health agencies, providing local OWTS ordinances are strictly enforced. The standards were developed to ensure consistency with the Water Quality Control Plan beneficial uses and water quality objectives.

### **Onsite Wastewater Treatment System (OWTS) Regulations**

California does not have a statewide OWTS regulation. However, Assembly Bill 885 (AB 885), passed into law in 2000 and anticipated to be enacted in 2010,<sup>47</sup> will regulate all new and existing OWTSs including their design, operation, and maintenance. The County Environmental Health Division will be responsible for implementing the requirements of AB 885, or the County may adopt more stringent measures.

The objective of the AB 885 legislation and its implementing regulations is to prevent contamination of the surrounding groundwater resources from OWTSs. Local governing bodies may pass more stringent rules in addition to the ones listed by AB 885. AB 885 aims to prevent further pollution from OWTSs by minimizing the concentrations of contaminants like nitrates, total coliforms, iron, manganese, total suspended solids (TSS), and biochemical oxygen demands (BOD) in the effluent. Some of the requirements include:

- All treatment systems must be inspected at least every five years.

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47 State Water Resource Control Board, OWTS Regulations <[www.swrcb.ca.gov/ab885/index.html](http://www.swrcb.ca.gov/ab885/index.html)>, 2010.

- If an OWTS exists on a property also containing a domestic well, groundwater monitoring is needed. Two samples are required; one from a monitoring well 100 feet down gradient of the system and the other from the existing domestic well. The first sample must be taken within 30 days of the OWTS installation. Both wells must be monitored at least once every five years thereafter.
- All new OWTS must be designed to maximize the zone of unsaturated treatment and increase the aerobic decomposition of the effluent.
- All new OWTS must be designed by a licensed professional.
- New tanks must reduce solids to one-eighth (1/8) an inch prior to passing into the dispersal system.
- Cesspools are not allowed anywhere within the state.
- Additional treatment will be required for systems with insufficient soil depth, high BOD or high TSS levels, and systems requiring nitrogen reduction or disinfection.
- At least a three-foot separation will be required between the dispersal system and any bedrock, high groundwater levels or impermeable strata. The three feet must be a continuous soil that has been undisturbed and is unsaturated. The soil may not contain more than thirty percent of rock.
- If the effluent has undergone additional treatment prior to entering the dispersal system, a reduced separation of two feet may be allowed.
- For systems unable to meet the minimum separation requirement engineered fill is recommended to elevate the system. A foot and a half of engineered fill is the equivalent of one foot of natural soil.

### Local

Sutter County has adopted an on-site sewage ordinance, Ordinance No. 700. The goals of the Ordinance are to protect the public from on-site sewage hazards, regulate the design, installation, maintenance and removal of on-site sewage systems and minimize the effect of on-site sewage systems on groundwater supplies and waters of the State.

The County Environmental Health Division issues permits for septic systems to serve residential, industrial and commercial projects in Sutter County. However, depending on the flows and composition of the waste, additional permitting from the State and Federal government may be required.

Sutter County includes specific criteria for sanitary sewer design to ensure that new systems are designed properly to handle flows associated with new development. The criteria identifies the requirements for planning and designing sewer systems within the county with a Peak Wet Weather Flow (PWWF) of up to 10 mgd.

## Sutter County 2015 General Plan

The County's 2015 General Plan contains policies and implementation measures relevant to the preservation and protection of water supplies necessary to accommodate projected growth. The 2015 General Plan included policies focusing on wastewater systems. Upon approval of the proposed General Plan, all policies and implementation measures in the 2015 General Plan would be superseded. Therefore, they are not included in this analysis.

## IMPACTS AND MITIGATION MEASURES

### Methods of Analysis

The evaluation of wastewater impacts is based on a review of data presented in the TBR prepared for the General Plan, environmental documents prepared for the SPSP, City of Live Oak General Plan update, Lincoln East Specific Plan, and planning documents prepared by West Yost ("Land Use Alternatives Analysis," September 2009 and Issue Discussion Paper (June 2008). Demand factors used by West Yost in the Land Use Alternatives Analysis (September 2009) were applied to the land use designations to estimate wastewater flows for all land use designations where such factors apply. The following factors were used to estimate existing (2009) and future (2030) demand in the policy area. The difference between the two represents the net change (increase or decrease) in demand for wastewater management.

General Plan Land Use Designations	Wastewater Flow Factor
AG-20, AG-40, AG-80, AG-RC, AP, LDR, ER, RAN	310 gallons per day per dwelling unit (du)
HDR	232 gallons per day per du
IND, COM, I/C, EC, FPARC	1,860 gallons per day per acre
OS, Parks	150 gallons per day <sup>1</sup>
Notes: 1. These land use designations provide for limited facilities that could generate wastewater. Source: Demand factors from proposed revisions (May 1, 2009) to Sutter County Engineering Standards, as reported in Table 1b in "Land Use Alternatives Analysis" Section D – Utilities Analysis prepared by West Yost, September 2009.	

The impact analysis analyzes buildout of the proposed General Plan under both the adjusted buildout scenario as well as full buildout.

### Proposed Sutter County General Plan Goals and Policies

The following goals and policies from the proposed General Plan relevant to wastewater conveyance and treatment and within the entire policy area are listed below.

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**INFRASTRUCTURE ELEMENT (I)**
**Wastewater**

**Goal I 2 Ensure efficient and safe collection, treatment, and disposal of wastewater, biosolids, and septage.**

Policies

- I 2.1 **Availability.** Require new development to study, coordinate and plan the provision of wastewater services to support the new development and demonstrate the availability of long-term, safe, and reliable wastewater collection, treatment, and disposal.
- I 2.3 **Capital Funding.** Require new development to construct or fully fund its needed wastewater infrastructure.
- I 2.7 **Provision of Services.** Minimize County operated wastewater systems serving urbanized areas. Transfer County operated wastewater systems in urban areas to incorporated cities or public community service districts where and when feasible and beneficial to the customers.
- I 2.8 **New Development.** Require new development to provide wastewater systems supporting the development based on the following guidelines for wastewater collection and disposal:
- a. Urban development shall utilize publicly-owned treatment works [POTW].
  - b. Rural development and suburban development shall utilize POTW when feasible and cost effective as determined by the County. If utilizing a POTW is not feasible, individual wastewater treatment and disposal systems may be used where soil conditions are acceptable; all County, state, and federal requirements can be met; the wastewater generation/intensity of new development is appropriately limited; and long-term disposal can be provided without negatively impacting adjacent land uses or groundwater supplies.
  - c. Agricultural areas may utilize individual wastewater treatment and disposal systems where soil conditions are acceptable and all County, state, and federal requirements can be met.
- I 2.9 **Connection to Publicly-Owned System.** Connect existing developed areas to publicly-owned treatment works where practical.
- I 2.10 **Groundwater Protection.** Continue to regulate the siting, design, construction and operation of wastewater disposal systems in accordance with County regulations to minimize contamination of groundwater supplies.

**Implementation Programs**

- I 2-B Develop wastewater service guidelines and possible agreements with the cities of Live Oak and Yuba City for the provision of wastewater service within the cities' spheres of influence.

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- I 2-C Apply, and update as necessary, County improvement standards for wastewater infrastructure planning, design, and construction.
- I 2-D Develop a Countywide wastewater master plan consistent with this General Plan; require design of wastewater systems to be consistent with the approved master plan; and ensure wastewater systems are constructed consistent with the approved designs.
- I 2-E Condition new development to construct infrastructure and dedicate land to support development as identified in the Countywide wastewater master plan or other development studies. Condition new development to construct necessary wastewater infrastructure prior to the issuance of building permits for residential development or certificate of occupancy for non-residential development; or if appropriate, ensure the wastewater infrastructure is adequately financed through development impact fees or by agreement.
- I 2-F Where the development's contribution to the wastewater infrastructure exceeds its fair share, require the development to fully fund the infrastructure and be reimbursed as the County receives impact fees/funding from other future development benefitting from the improvements.
- I 2-G Condition new development to establish and implement a financing mechanism to fund the long-term operations and maintenance needs of the wastewater infrastructure. Funding plans shall ensure the collection of sufficient funds to cover current and anticipated future expenditures, capital replacements, and cost increases. Funding should normally be collected through service fees and assessments.
- I 2-H Review new development to ensure that proposed wastewater systems are adequate and appropriate for the type of development and are consistent with federal, state, and local codes and standards, and master plans.
- I 2-I Apply, and update as necessary, County code and development standards regarding on-site wastewater disposal. Permit on-site wastewater treatment and disposal on existing lots only when appropriate for the type of development, where a publicly-owned collection system is not reasonably available, and where such disposal will not constitute a hazard to health or water supplies.
- I 2-J Condition new development, where authorized to utilize individual wastewater treatment and disposal systems as an interim measure, to connect to a publicly-owned wastewater collection system and treatment works when the publicly-owned collection system is within 200 feet of the development, and the system owner agrees to allow the connection.
- I 2-K Require existing development using individual wastewater treatment and disposal systems to connect to a publicly-owned wastewater collection system and treatment works when the publicly-owned collection system is within 200 feet of the development, the system owner agrees to allow the connection, and the

individual system no longer complies with applicable regulations or requires significant repairs.

- I 2-L Restrict new development use of septic systems in areas that are prone to flooding or that have a seasonal high water table and/or water seepage problems.

### **Standards of Significance**

For the purposes of this EIR, impacts to wastewater conveyance and treatment systems are considered significant if the proposed General Plan would:

- require or result in the construction of new wastewater treatment facilities or expansion of existing facilities to accommodate for inadequate capacity, the construction of which could cause significant environmental effects; or
- exceed wastewater treatment requirements of the applicable RWQCB.

### **Impacts and Mitigation Measures**

#### **6.13-4 Implementation of the proposed General Plan would generate additional wastewater that could require the expansion of existing conveyance and treatment facilities.**

Wastewater in Sutter County is either treated at individual parcels with septic systems (OWTS) or at community or city wastewater treatment plants. Privately owned septic systems provide for the majority of treatment and disposal of wastewater throughout much of rural Sutter County. The cities of Yuba City and Live Oak, the community of Robbins, the Rio Ramaza subdivision, and the SPSP are the only areas with either existing or proposed sanitary sewer collection systems and wastewater treatment facilities within the county. These sewer collection systems convey the wastewater from the homes and business to a wastewater treatment plant.

The proposed General Plan would generate an increase in wastewater due to the addition of new residences and commercial and industrial uses. As stated above, this analysis assumes that 100 percent of the potable water delivered to homes and business throughout Sutter County is returned as wastewater effluent. The analysis also assumes that even though potable water is not conveyed to agricultural residential land use categories (i.e., AG-20, AG-40, AG-80, and AP) through conventional infrastructure from a public or private water provider, those land uses would generate wastewater.

Table 6.13-5 summarizes estimated wastewater demand and projected estimated demand for 2030 adjusted buildout by land use designation. Table 6.13-6 summarizes estimated wastewater generation by growth area.

As shown in Table 6.13-5, wastewater generated in the policy area is expected to be approximately 28,317,000 gpd (28.3 mgd) under the adjusted buildout, including Development of Phase 1 and Phase A of the Sutter Pointe Specific Plan. This would represent a nearly 100 percent increase in wastewater flows compared to estimated existing (2009) conditions. However, approximately 80 percent of those flows would be associated with the Sutter Pointe Specific Plan.

General Plan Land Use Designation	Existing (2009) Estimated Flows (ADWF gpd) <sup>1</sup>	2030 Adjusted Buildout Flows (ADWF gpd)	Net Change – Increase/(Decrease) (ADWF gpd)
LDR	1,183,425	2,597,000	1,414,375
MDR	223,200	44,640	(178,560)
HDR	0	104,400	104,400
AG-RC	0	87,420	87,420
A-P	4,805	0	4,805
RAN	12,710	53,010	40,300
ER	62,310	454,460	392,150
AG-20	870,503	346,514	(523,989)
AG-40	0	304,724	304,724
AG-80	640,618	751,676	111,058
AP	3,147	0	(3,147)
<i>Subtotal residential</i>	<b>3,000,718</b>	<b>4,744,644</b>	<b>1,743,926</b>
COM	788,640	619,380	(169,260)
IND	1,002,540	1,073,220	70,680
I/C	0	136,189	136,189
EC	0	435,240	435,240
<i>Subtotal industrial/commercial</i>	<b>1,791,180</b>	<b>2,264,029</b>	<b>472,849</b>
<i>SUBTOTAL all residential and industrial/ commercial</i>	<b>4,791,848</b>	<b>7,008,673</b>	<b>2,216,775</b>
OS	6,605,250	6,605,250	0
Parks	96,150	96,150	0
Highway ROW	-	-	-
FPARC	3,387,000	3,387,000	0
Sutter Pointe Specific Plan	0	11,220,000 <sup>2</sup>	11,220,000
<b>TOTAL POLICY AREA</b>	<b>14,880,298</b>	<b>28,317,073</b>	<b>13,436,775</b>
Notes:			
1. ADWF gpd: average dry weather flow, gallons per day			
2. From Sutter Pointe Specific Plan Draft EIR, p.3.10-16.			
3. A-P is for Agricultural Preserve; a land use designation no longer used in the proposed General Plan.			
Source: PBS&J, 2010.			

TABLE 6.13-6

ESTIMATED WASTEWATER GENERATION BY GROWTH AREA<sup>1</sup>

General Plan Planning Area	Estimated Existing (2009) Wastewater Flows (gallons per day)	2030 Adjusted Buildout Wastewater Flows (gallons per day)	Net Change – Increase/(Decrease) (gallons per day)
Live Oak	55,924	152,846	96,922
Sutter	583,034	1,022,594	439,560
FPARC	3,387,000	3,387,000	0
Yuba City SOI North	39,184	236,220	197,036
Yuba City SOI South	225,286	603,131	377,875
Tudor	65,370	132,060	66,690
East Nicolaus/Trowbridge	56,353	102,551	46,198
Robbins	99,383	65,624	(33,759)
Nicolaus, Rio Oso, and remainder of unincorporated policy area	10,368,764	11,395,017	1,026,254
<b>Subtotal</b>	<b>14,880,298</b>	<b>17,097,073</b>	<b>2,216,775</b>
Sutter Pointe Specific Plan	0	11,220,000	11,220,000
<b>TOTAL POLICY AREA</b>	<b>14,880,298</b>	<b>28,317,073</b>	<b>13,436,775</b>
Notes:			
1. includes wastewater flows from AG-20, AG-40, AG-80, and AP as an indicator of the relative magnitude of septic flows in agricultural areas.			
Source: PBS&J, 2010.			

As stated above, with the exception of Yuba City, Live Oak, the community of Robbins, and the Rio Ramoza subdivision, wastewater is treated through on-site septic systems. Much of the rural areas in the county would continue to use septic systems to treat wastewater from individual homes and small businesses. In areas of increased urban development (e.g., Yuba City SOI north and south, Sutter, East Nicolaus/Trowbridge, and Tudor) where existing infrastructure is not in place to connect those growth areas to a POTW such as Yuba City, as described in Impact 6.13-3, it is assumed additional or expanded OWTS would be constructed and operated if the areas cannot be annexed into a municipal service area (e.g., Yuba City SOI and possibly Sutter). The General Plan includes policies, specifically policies I 2.1, I 2.3, and I 2.8, that require new development to fund and construct wastewater systems to accommodate wastewater treatment and disposal. For specific information about the demand in each of the growth areas and options to manage increased wastewater flows, please refer to the individual growth area analyses, below.

The construction of new or expanded wastewater facilities associated with a specific development project (either as a municipal or private wastewater system or through a CSD) could involve ground-disturbing activities and long-term operations that could have an effect on the environment. From an environmental impact perspective, the footprint of such facilities would tend to be limited in extent. However, there are environmental resources that could be affected, including but not limited to biological resources and cultural resources, aesthetics/visual resources, and construction could generate short-term

air emissions and noise. To the extent new or expanded wastewater conveyance and treatment facilities could be necessary to support future development in the policy area, and because the facilities are assumed to be in the proposed land use designations generating the wastewater, the topical analyses in this Draft EIR identify the range and magnitude of environmental impacts that could occur associated with full development of the areas designated for future development under the proposed General Plan.

Because implementation of the General Plan could require or result in the construction of new wastewater conveyance and treatment facilities or expansion of existing facilities to accommodate for inadequate capacity, the potential development effects associated with construction and operation could be significant. However, it should be noted when the location and design of specific facilities have been determined, supplemental environmental review in accordance with CEQA would be prepared. Compliance with the General Plan policies and Implementation Programs would ensure impacts associated with additional facilities would be *less than significant*.

#### Full Buildout Analysis

Under full buildout, there would be an additional demand on wastewater infrastructure and treatment. Additional growth beyond the 2030 horizon would generate additional demand for wastewater treatment. However, the General Plan includes policy I 2.3 that requires new development to construct or fully fund its needed wastewater infrastructure. In addition, policy I 2.7, requires the county to minimize any County-operated wastewater systems serving urbanized areas and to transfer County operated wastewater systems in urban areas to incorporated cities or public community service districts where and when feasible and beneficial to the customers. Policy I 2.8 requires new development to provide a wastewater system that supports the development.

If development were allowed to happen without the provision of additional facilities then the effects would be adverse. The construction and operation of publicly owned treatment works and county-, CSD-, or privately operated and owned Onsite Wastewater Treatment System could result in impacts on natural resources that could be significant. Resources that could be affected include, but would not be limited to biological resources, cultural resources, aesthetics/visual resources, air quality, and noise. However, the proposed General Plan policies require new development to provide and fund its own wastewater facilities as development occurs. At this time the exact nature of those future effects on any new facilities are unknown, and it would be speculative to attempt a more detailed analysis at this time.

In addition, any future development would be subject to rigorous review to determine potential impacts to wastewater infrastructure in accordance with CEQA. The additional growth that could occur under full buildout would go beyond 2030 and future planning

efforts and environmental analysis would address this additional growth and the potential implications of this growth.

### Mitigation Measure

*None required.*

#### **6.13-5 Implementation of the proposed General Plan would generate additional wastewater that could be discharged to on-site wastewater treatment systems that, if not properly sited and designed, could conflict with Basin Plan water quality objectives, beneficial uses, or other RWQCB standards by causing or contributing to groundwater quality degradation.**

Impact 6.13-4 identifies the demand for wastewater systems and potential options to address those facility needs. Until growth areas such as Yuba City and possibly the community of Sutter can be annexed into an existing service area (e.g., Yuba City), it is presumed the only option for managing increased wastewater flows would be individual wastewater systems. Such systems, which could be operated by a public or private entity or a CSD, could be septic systems or small wastewater treatment plants (package plants). In either case, use of these small systems has the potential to degrade groundwater quality or contribute to already degraded water quality (e.g., nitrate contamination) if the systems are not properly designed, constructed, operated, and maintained. If nitrate contamination, for example, is increased in the growth areas as a result of OWTS operation, it could reduce the availability of potable water and increase the demand for treatment. But more importantly, increasing nitrate levels (or other contaminants) in groundwater could violate water quality objectives and standards for beneficial uses established in the Basin Plan by the Central Valley RWQCB (the applicable RWQCB). At such time that individual areas in the policy area are connected to a permitted wastewater treatment plant, this impact could be reduced or avoided altogether because treated wastewater discharge (effluent) is highly regulated under federal and state laws and regulations.

The siting, design, construction, and operation of OWTS is regulated by the County, which is required to implement state regulations governing the use of OWTS (see Regulatory Setting). In addition, the General Plan contains several policies and implementation programs that are intended to help minimize the potential for increased wastewater flows directed to OWTSs to be new or additional source of groundwater quality impairment. These policies include I 2.1, I 2.7, I 2.8, I 2.9, and I 2.10 and Implementation Programs I 2-B through I 2-L. Additionally, completion of the GMP (Implementation Program ER 6-A) would ensure a countywide approach to managing groundwater quality within the context of the larger groundwater region.

Implementation of established laws and regulations, in combination with the proposed General Plan policies and implementation programs identified above would ensure proposed development in the policy area does not exceed wastewater treatment requirements of the applicable RWQCB. Impacts would be *less than significant*.

### Full Buildout Analysis

Under the full buildout scenario, there would be additional wastewater generated that could contribute to a degradation of groundwater quality. Additional growth beyond the 2030 horizon would generate additional wastewater flows requiring treatment. However, the General Plan includes policies as well as state requirements to ensure that new growth does not exceed mandated wastewater treatment requirements.

If development were allowed to happen without the provision of additional facilities then the effects would be adverse. The enactment of AB 885 for OWTS is an important element to ensure consistency among the regulated community for protecting groundwater quality from further degradation associated with OWTS use. However, the proposed General Plan policies along with state requirements require new development to meet specific requirements to ensure groundwater quality is not compromised. However, at this time the exact nature of those future effects on groundwater are unknown, and it would be speculative to attempt a more detailed analysis at this time.

In addition, any future development would be subject to rigorous review to determine potential impacts to groundwater associated with any new wastewater treatment systems in accordance with CEQA. The additional growth that could occur under full buildout would go beyond 2030 and future planning efforts and environmental analysis would address this additional growth and the potential implications of this growth.

### Mitigation Measures

*None required.*

## **Growth Areas**

### **Rural Residential Communities**

#### Community of Sutter

The estimated adjusted buildout annual wastewater flow for the Sutter growth area is approximately 1,022,594 gpd, representing an increase of approximately 439,560 gpd.<sup>48</sup> Of the total demand, approximately 82 percent (842,174 gpd) would be associated with

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48 The FPARC land use designation assumes no net increase in wastewater demand and is, therefore, not included in the wastewater flow total for the growth area.

residential land use designations. The remaining 17 percent (180,420 gpd) would be associated with industrial and commercial land uses. For the residential areas, approximately 11,575 gpd would be generated in the AG-20 and AG-80 land uses.

For the agricultural land use areas (AG-20 and AG-80), wastewater would likely be provided by privately owned septic systems. For the developed residential and industrial/commercial land use areas, a wastewater treatment facility would be needed, or the growth area would need to be connected to Yuba City's wastewater collection system and treatment plant. This would likely require formation of a CSD to operate and maintain the new wastewater infrastructure. Without access to wastewater treatment facilities, the types of industrial uses would be limited to relatively dry industries.<sup>49</sup>

The City of Yuba City operates a sewer collection system and a wastewater treatment plant. The City's wastewater treatment plant was expanded in 2005 to provide an average daily capacity of 10.5 mgd. For the summer of 2007, average daily flows were approximately 5.5 mgd, and the current peak day wet weather flow rate was approximately 8.5 mgd. The plant discharges secondary, disinfected effluent to the Feather River. Yuba City's Wastewater System Master Plan Update (March 2006)<sup>50</sup> covers the sewer collection system and the wastewater treatment plant. This report estimates future flows to the plant through year 2030 and identifies the sewer collection system and treatment facilities that will be required to treat the future flow rates. The required sewer lines have been evaluated in the City's Wastewater System Master Plan Update.<sup>51</sup> However, there are no existing sanitary sewer facilities extending beyond the City's sphere of influence in the unincorporated county to which the Sutter growth area could connect.<sup>52</sup> Implementation Program I 2-B does, however, provide direction that wastewater service guidelines and an agreement with Yuba City for provision of service should be developed.

Nonetheless, it assumed unless and until the Sutter growth area is annexed into the City's service area for wastewater conveyance and treatment, a wastewater treatment facility would be needed to convey and treat wastewater generated by the Sutter growth area. General Plan policies I 2.1, I 2.3, I 2.8, I 2.9 and Implementation Programs I 2-B, I 2-H, I 2-J, and I 2-L in particular, provide direction how wastewater collection and treatment for new development in the Sutter growth area could be accomplished. These policies and implementation measures, along with others, identify the process for planning, funding/construction, and maintaining wastewater service for the Sutter growth area. This could include the development of new or expanded wastewater systems.

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49 West Yost Associates, Land Use Alternatives Analysis, Section D – Utilities Analysis, September 2009.

50 Kennedy/Jenks Consultants Engineers & Scientists, *Wastewater System Master Plan Update*, prepared for Yuba City, revised March 2006.

51 Ibid.

52 Aaron Busch, Community Development Director, Yuba City, "Comments on the Notice of Preparation for the Sutter County General Plan Update," April 20, 2010.

While implementation of the General Plan policies would address the provision of wastewater treatment facilities, the environmental impacts of constructing or expanding those facilities could be significant, as described in Impact 6.13-3. Less-than-significant impacts associated with the use of OWTS to serve new development would be as described in Impact 6.13-4.

### East Nicolaus/Trowbridge

The estimated adjusted buildout annual wastewater flow for the East Nicolaus/Trowbridge growth area is approximately 102,551 mgd, representing an increase of approximately 46,198 mgd. Of the total demand, approximately one-half would be associated with residential (ER and AG-RC) land use designations. The other half would be associated with industrial and commercial land uses.

Currently, the wastewater treatment and disposal for these communities is provided by privately owned septic systems, and it is likely that the approach would continue to be used for the residential wastewater flow. However, formation of a CSD should be considered. These flows could not effectively be treated using a septic system. The best way to provide a cost efficient wastewater service for the industrial and commercial area would be identified through preparation of a specific plan for the area and the associated wastewater master plan. This could identify the need to include construction of a small wastewater treatment plant and disposal facility, as allowed under General Plan policy 3.B-8(b). If this system could not be permitted and constructed, the industries that could locate in this area would have to be restricted to relatively dry industries.<sup>53</sup>

General Plan policies I 2.1, I 2.3, I 2.8, and I 2.9 and Implementation Programs I 2-B, I 2-H, I 2-J, and I 2-L in particular, provide direction how wastewater collection and treatment for new development in the East Nicolaus/Trowbridge growth area could be accomplished. This could include the development of new or expanded wastewater systems.

While implementation of the General Plan policies would address the provision of wastewater treatment facilities, the environmental impacts of constructing or expanding those facilities could be significant, as described in Impact 6.13-3. Less-than-significant impacts associated with the use of OWTS to serve new development would be as described in Impact 6.13-4.

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53 West Yost Associates, Land Use Alternatives Analysis, Section D – Utilities Analysis, September 2009.

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## Spheres of Influence

### Yuba City North and Yuba City South

The estimated 2030 adjusted buildout wastewater flow estimate for Yuba City SOI North growth area is approximately 236,220 gpd, an approximately 197,036 gpd increase over estimated 2009 conditions. For the Yuba City SOI South growth area, the estimated demand is approximately 603,161 gpd, representing a 377,875 gpd increase. The combined total wastewater flow demand for both areas would be approximately 839,381 gpd. Of that total demand, approximately 249,761 gpd (30 percent) would be associated with the residential land use categories, and the remaining 70 percent (589,620 gpd) would be associated with non-residential commercial and industrial land uses.

Only a small portion of the residential demand (521 gpd) would be in an agricultural land use designation (AG-20). For that area, privately owned septic systems would be used for wastewater, consistent with current practices.

For the developed residential and industrial and commercial areas, a wastewater treatment facility will be needed, or this area will need to be connected to Yuba City's wastewater system. This would likely require formation of a CSD to operate and maintain the new wastewater infrastructure.

The EC designation would generate a substantial amount of the non-residential flows (414,780 gpd, or approximately one-half the total estimated flows). The EC land uses north and south of the City are in elongated areas along Highway 99. This elongated configuration would require the extension of wastewater conveyance lines into this area. Extension of long reaches of pipelines is very expensive, and is most cost effective if the wastewater collection system can serve all of the properties along the pipeline. Without access to wastewater treatment facilities, the types of industrial uses would be limited to relatively dry industries.

Yuba City's Wastewater System Master Plan Update (March 2006)<sup>54</sup> covers the sewer collection system and the wastewater treatment plant. This report estimates future flows to the plant through year 2030 and identifies the sewer collection system and treatment facilities that will be required to treat the future flow rates. The required sewer lines have been evaluated in the City's Wastewater System Master Plan Update.<sup>55</sup> However, there are no existing sanitary sewer facilities extending beyond the City's sphere of influence in the unincorporated county to which the Yuba City SOI north and south growth areas could

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54 Kennedy/Jenks Consultants Engineers & Scientists, *Wastewater System Master Plan Update*, prepared for Yuba City, revised March 2006.

55 Ibid.

connect.<sup>56</sup> Implementation Program I 2-B does, however, provide direction that wastewater service guidelines and an agreement with Yuba City for provision of service should be developed.

Therefore, it assumed unless and until the growth areas are annexed into the City's service area, individual wastewater systems operated by a public or private entity would be needed to serve the north and south growth areas. General Plan policies I 2.1, I 2.3, I 2.8, I 2.9 and Implementation Programs I 2-B, I 2-E, I 2-F, and I 2-G, in particular, provide direction how wastewater collection and treatment for new development in the Yuba City growth areas could be accomplished. This could include the development of new or expanded wastewater systems. Under policy I 2.8(a), this would require a POTW.

However, construction and operation of new or expanded wastewater systems could result in significant environmental impacts. As described in Impact 6.13-3, implementation of the 2030 General Plan policies would address the provision of wastewater treatment facilities, but environmental impacts of constructing or expanding those facilities could be significant.

Less-than-significant impacts associated with the use of OWTS to serve new development would be as described in Impact 6.13-4.

### **Sutter Pointe Specific Plan Area**

The SPSP would generate wastewater; however, environmental review and planning for the wastewater conveyance system has already been completed. Flows from the SPSP would be managed independently from the other growth areas and unincorporated county. The estimated ADWF at buildout of Sutter Pointe is 11.2 mgd, and the peak wet weather flow is 27.0 mgd. This wastewater will be collected in a system of 8-inch to 36-inch diameter sewer pipelines. This system includes six pump stations distributed through the community and one central pump station/storage facility. The central pump station will pump the wastewater to the Sacramento Regional County Sewer District's (SRCSD) UNWI. In the UNWI, the wastewater will flow (along with wastewater from several other communities) to the Sacramento Regional Wastewater Treatment Plant, where it will be treated and discharged to the Sacramento River. The Sutter Pointe wastewater storage facility will provide a storage volume of 3.9 million gallons. Wastewater will be stored in this tank during large storm events when the UNWI is flowing at capacity and cannot accept flow from Sutter Pointe. The tank will not be needed initially, but will likely be constructed within 20 years of the date of connection to the UNWI, or when one of several other criteria occurs.

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56 Aaron Busch, Community Development Director, Yuba City, "Comments on the Notice of Preparation for the Sutter County General Plan Update," April 20, 2010.

There would be no new significant environmental wastewater impacts that have not been previously identified and analyzed or that would differ from the assumptions in the SPSP Draft EIR.

### **Industrial/Commercial (I/C)**

The total policy area-wide estimated 2030 adjusted buildout demand for the I/C land use designation is approximately 136,189 gpd, which is an entirely new demand for that land use designation. Most of the demand (132,060 gpd) would be in the community of Tudor. The remaining acres are in the Yuba City SOI south growth area, and is accounted for in that analysis. Currently, wastewater is managed using septic systems. For this area, a small wastewater treatment system could be used (preferably as identified in a specific plan and/or wastewater master plan for the area). If this system could not be permitted and constructed, the industries that could locate in his area would likely be restricted to relatively dry industries.<sup>57</sup>

This would be a less-than-significant impact on the need for new or expanded wastewater facilities with implementation of 2030 General Plan policies and implementation programs, as described in Impact 6.13-3. Policies I 2.1, I 2.3, I 2.8, and I 2.9 and Implementation Programs I 2-B, I 2-H, I 2-J, and I 2-L in particular, provide direction how wastewater collection and treatment for new development in the Tudor growth area could be accomplished. This could include the development of new or expanded wastewater systems.

While implementation of the General Plan policies would address the provision of wastewater treatment facilities, the environmental impacts of constructing or expanding those facilities could be significant, as described in Impact 6.13-3. Less-than-significant impacts associated with the use of OWTS to serve new development would be as described in Impact 6.13-4.

### **Employment Corridor (EC)**

The total policy area-wide estimated 2030 adjusted buildout wastewater flow demand for the EC land use designation is approximately 435,240 gpd, which is an entirely new demand for that land use designation. Most of the demand (414,780 gpd) would be in the Yuba City SOI north and south growth areas. Impacts would be as described for the Yuba City SOI north and south growth areas, above. The remaining demand would occur in the East Nicolaus/Trowbridge growth area (approximately 8,184 gpd) and in the unincorporated county (approximately 12,276 gpd). Impacts would be as described for the East Nicolaus/Trowbridge growth area, above, and for the unincorporated county, as described in Impacts 6.13-3 and 6.13-4.

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57 West Yost Associates, Land Use Alternatives Analysis, Section D – Utilities Analysis, September 2009.

### **Cumulative Impacts and Mitigation Measures**

A cumulative impact or effect results when two or more individual effects are combined together, which when taken together are considerable. For the proposed General Plan the effects of buildout of the general plan and the increase in population is considered as the “project.” The provision of wastewater infrastructure facilities to support future growth is evaluated in Impacts 6.13-4 and 6.13-5. There are no other projects with the policy area that when combined together along with the project would compound or increase the demand for wastewater facilities. Therefore, the cumulative effects are addressed in Impacts 6.13-4 and 6.13-5 and a separate cumulative discussion is not necessary.

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## ELECTRICITY AND NATURAL GAS

### INTRODUCTION

Pacific Gas & Electric Company (PG&E) provides electrical and gas service to customers within the policy area. Sutter County contains extensive natural gas deposits around the Sutter Buttes and in the Meridian and Robbins basins. Natural gas service is provided only to the urbanized areas of the cities of Yuba City and Live Oak, and to the community of Nicolaus. This section describes the sources and transmission methods used to provide Sutter County with electricity and natural gas.

### ENVIRONMENTAL SETTING

Senate Bill 1389 requires the California Energy Commission (CEC) conduct “assessments and forecasts of all aspects of energy industry supply, production, transportation, delivery and distribution, demand, and prices.” The CEC reports the results of these assessments and forecasts every two years to the Governor, the Legislature, and the California public in the *Integrated Energy Policy Report*. In the alternate years, the CEC prepares the *Integrated Energy Policy Report Update* to discuss the status of energy issues identified in the previous *Integrated Energy Policy Report* and to identify energy issues that may have emerged since that report was completed.

In the most recent *Energy Policy Report* (2009),<sup>58</sup> the CEC indicated that the State’s demand for electricity was lower than the forecast in the 2007 *Integrated Energy Policy Report*, primarily because of the lower expected economic growth. The Energy Commission staff is forecasting that electricity consumption will grow by 1.2 percent annually from 2010-2018.

Electricity demand is still expected to grow over time as the economy recovers and the state must continue to develop renewable technologies. In 2008, Governor Schwarzenegger issued Executive Orders that established the Renewable Energy Action Team to develop a plan for renewable development in sensitive desert habitat and accelerated the Renewable Portfolio Standard requirement from meeting renewable energy goals to generate 20 percent of the state’s electricity from renewable resources by 2010 and 33 percent by 2020.

Conservation and energy efficiency is also needed to reduce the demand for electricity and to reduce greenhouse gas emissions. The state’s 2008 Building Efficiency Standards went into effect on January 1, 2010 and require a 15 percent increase in energy efficiency savings compared to the 2005 Building Efficiency Standards. The Energy commission plans

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58 California Energy Commission, *2009 Integrated Energy Policy Report*, December 2009.

to adopt and enforce building appliance standards that put California on the path to zero net energy residential buildings by 2020 and zero net energy commercial buildings by 2030.

### **Electricity Provider**

Electricity purchased from PG&E by local customers is generated and transmitted to the County by a large network of power plants and transmission lines located throughout California. Most of the electrical service in the County is carried through above-ground lines. However, new urban development is now typically served by underground service. In addition, PG&E maintains a program to underground existing service lines. PG&E has two public utilities yards located in Sutter County to aid with service calls, maintenance and area outages. One maintenance yard is located on Central Street in the community of Meridian and the other yard is located on North Live Oak Boulevard in Yuba City. Sutter County has six energy generation facilities composed of two peaker facilities (the Yuba City Energy Center and the Feather River Energy Center) and four cogeneration facilities that sell excess power to PG&E and the open market. PG&E currently has sufficient energy supplies and distribution facilities to meet anticipated demands and growth in the county.

### **Yuba City Energy Center**

The Yuba City Energy Center is owned and operated by the Calpine company and is contracted by the State of California as a "peaker facility", to provide additional power to the Department of Water Resources (DWR) during periods of high power demand in the state. The facility began operation in 2002 and consists of a single combustion turbine with a base load capacity with peaking at 47,000 kilowatts (kW) of energy.<sup>59</sup> The electricity from the Yuba City Energy Center is dedicated for 10 years to DWR. The contract expires in 2012 and is currently under renegotiation.<sup>60</sup>

### **Feather River Energy Center**

The Feather River Energy Center is also a peaker facility owned and operated by Calpine Corporation. The facility began operation in 2002 and consists of a single combustion turbine with a base load capacity at 47,000 kW of energy. The facility provides electricity to DWR during times of peak demand. The electricity from the Feather River Energy Center is dedicated for 10 years to DWR. The contract expires in 2012 and is currently under renegotiation.<sup>61</sup>

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59 Calpine Corporation, <http://www.calpine.com/power/plants.asp>, accessed March 24, 2010.

60 Gable, May, Calpine Corporation, personal communication, June 24, 2010.

61 Ibid.

## **Transmission Lines and Substations**

Electricity purchased from PG&E by local customers is generated and transmitted to the county by a large network of power plants and transmission lines located throughout California. Sutter County is presently crossed and served by two general types of transmission lines, comprised of regional and local lines.

The first type is the 500 kV regional transmission lines that are part of the Pacific Intertie, which forms part of the backbone of California's high voltage grid which is interconnected with other states around the west. The second type is the 60 kV-220 kV local transmission lines that serve the specific energy needs in the county. These lines serve to move power from the larger regional transmission lines through area transformers down into the smaller local lines that ultimately serve the businesses and residents of Sutter County.

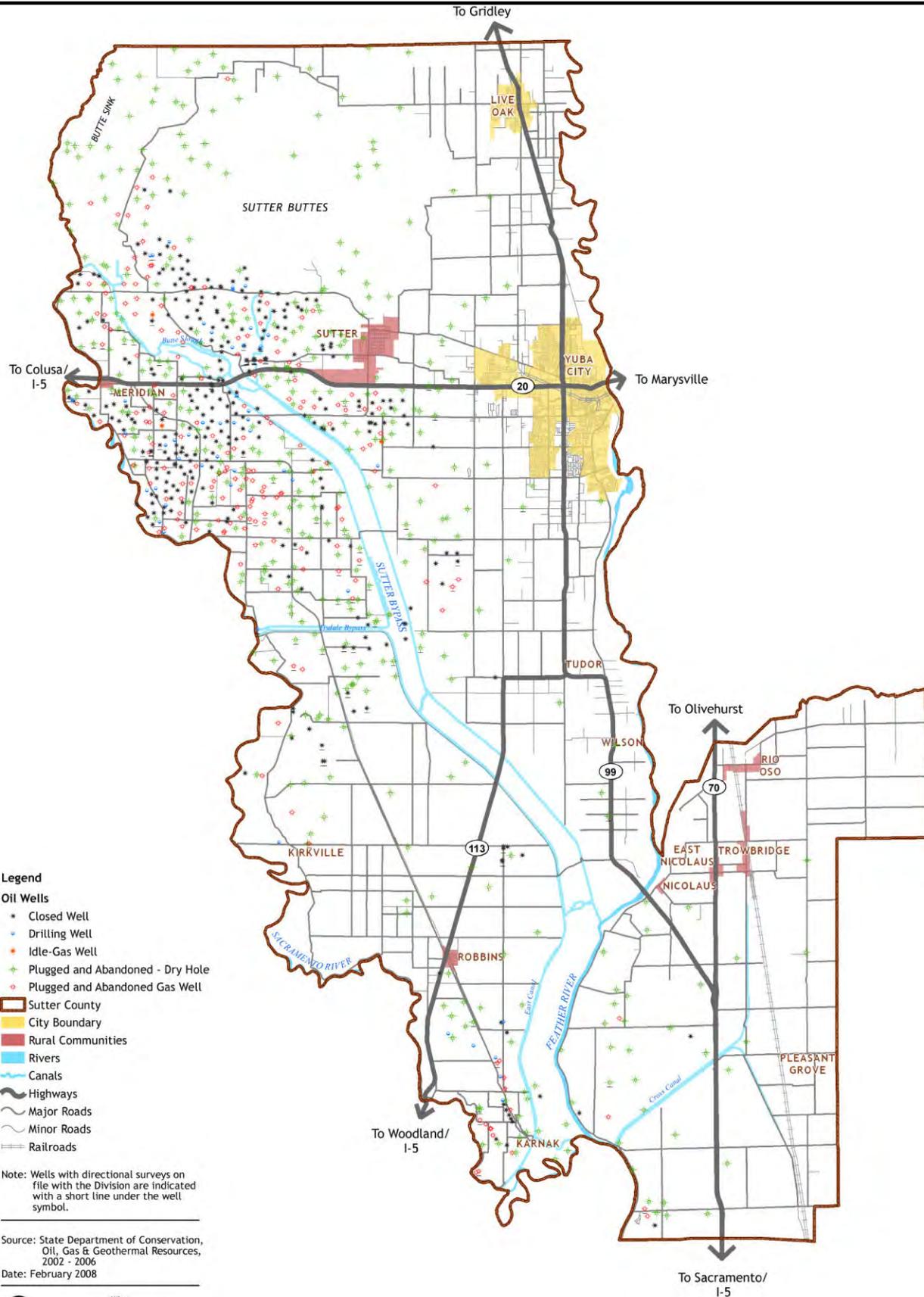
The siting of new transmission lines is regulated by the Public Utilities Commission (PUC). Currently, there are no designated transmission line corridors in the county. Any new transmission facilities would need to be evaluated on a case-by-case basis. According to PG&E, there is no immediate need for new transmission lines or substations in the county. Future development of these facilities will continue to be demand driven, based on the location, type and number of new electricity users in the county.

## **Natural Gas Resources**

Natural gas service in Sutter County is provided by PG&E through portions of PG&E's 46,000 miles of natural gas distribution pipelines. Sutter County has extensive natural gas resources located throughout the western portion of the county, with the majority of the operational gas wells located in the Meridian Basin, Robbins Basin and the area around the Sutter Buttes, as shown on Figure 6.13-3. One of the largest natural gas pockets is centered around the community of Grimes (Colusa County) in the Meridian Basin, just west of the western boundary of Sutter County. Please refer to Section 3.1, Infrastructure, of the TBR for more specific information pertaining to natural gas sources.

## **Cogeneration**

Cogeneration is defined as electricity and heat production that is on-site or close to the load center that could be interconnected at distribution, sub-transmission, or transmission system voltages. Cogeneration has been used to in recent years in the county as an alternative power source that conserves energy, while making industries more self sufficient. Electricity can be produced through cogeneration of waste heat in business, industry, and governmental facilities, thus saving money and conserving energy.



The four existing cogeneration facilities in Sutter County are Greenleaf 1 and 2 owned by LFC Systems, a plant owned by Yuba City Cogeneration, and a plant owned by the Yuba City Racquet Club. All four facilities are fueled by natural gas, supporting industrial or commercial uses, and generate surplus electricity. Electricity generated at Greenleaf 1 is sold as thermal energy, in the form of hot exhaust, to a thermal host that is owned and operated by Calpine. Electricity generated by the Greenleaf 2 Power plant is sold to PG&E under a power sales agreement until the year 2019, which includes payment provision for capacity and energy. In addition to the sale of electricity to PG&E, the Greenleaf 2 faculty sells thermal energy to Sunsweet Growers, Inc. pursuant to a 30-year contract.

Please refer to Section 3.1, Infrastructure, of the TBR for more specific information pertaining to cogeneration.

### **Potential Energy Sources**

Several potential energy sources have been identified as viable energy production systems for Sutter County these include several forms of waste to energy and solar energy. Other energy production systems were looked at for the county and found to be not viable for large scale energy production; these include hydroelectric, geothermal and wind energy. Please refer to Section 3.1, Infrastructure, of the TBR for more specific information pertaining to potential energy sources.

### **Current Projects**

According to PG&E, the existing transmission system in the Sacramento Valley region would require additional transmission facilities to provide reliable natural gas service to existing customers or to extend service to future planned development in the area. PG&E anticipates that customer reliability could be at risk as early as 2009. As a result, PG&E is planning to construct the Line 406 and Line 407 Pipeline Project in Yolo, Sutter, Sacramento, and Placer counties. PG&E anticipates that the Line 406/407 project would provide greater capacity and service reliability to the existing natural gas transmission and distribution pipeline system and would extend natural gas service to planned residential and commercial developments in Placer, Sutter, and Sacramento counties. This natural gas pipeline project involves a new 30-inch transmission pipeline that would be approximately 40 miles long (identified as Line 406 and Line 407 East and Line 407 West) and a new distribution feeder main at Powerline Road in Sacramento County. Line 406 is currently under construction (July 2010). Line 407 East and Line 407 West are expected to be constructed in 2011, depending on population growth and natural gas demands.

## REGULATORY CONTEXT

### Federal

The Federal Energy Regulatory Commission regulates the transmission and sale of electricity in interstate commerce, licensing of hydroelectric projects, and oversight of related environmental matters.

### State

The California Public Utilities Commission (CPUC) sets forth specific rules that relate to the design, installation, and management of California's public utilities, including electric, natural gas, water and transportation, and telecommunications. CPUC Decision #77187 and #78500 state that utilities must be underground if the developable lots are less than three acres in size. CPUC Decision #81620 states that lots over three acres (large lot subdivision) are not required to underground utilities. CPUC Decision 95-08-038 governs the planning and construction of new transmission facilities, distribution facilities, and substations.

### **Title 20 and Title 24, California Code of Regulations (CCR)**

New buildings constructed in California must comply with the standards contained in Title 20, Energy Building Regulations, and Title 24, Energy Conservation Standards, of the CCR. Title 24 (AB 970) also contains energy efficiency standards for residential and nonresidential buildings based on a State mandate to reduce California's energy demand.

### **Warren-Alquist Energy Resources Conservation and Development Act**

The State Energy Commission regulates energy resources by encouraging and coordinating research into energy supply and demand problems to reduce the rate of growth of energy consumption (Warren-Alquist Energy Resources Conservation and Development Act Government Code section 25000 et seq.).

### Local

#### **Sutter County 2015 General Plan**

The County's 2015 General Plan contains policies and implementation measures relevant to electricity and natural gas services. The 2015 General Plan included policies focusing on encouraging energy conserving land use forms and practices. Upon approval of the proposed 2030 General Plan, all policies and implementation measures in the 2015 General Plan would be superseded. Therefore, they are not included in this analysis.

## Sutter County Zoning Code

Natural gas wells within the county are subject to Sutter County siting and operational requirements under Sections 1500-8018 of the County Zoning Code. Sutter County has regulatory power over power generation facilities to ensure compliance with local general plan and zoning provisions. For projects under 50,000 kW, the County would be the lead agency and would conduct the environmental review required under CEQA.

## IMPACTS AND MITIGATION MEASURES

### Methods of Analysis

Evaluation of potential impacts on electrical and natural gas services resulting from the proposed Sutter County General Plan is based on consultation with service providers, review of CEC policies, and compliance with state standards. Table 6.13-7 includes the projected demand for electricity and natural gas associated with buildout of the General Plan.

	Demand Rate	Unit/Square Feet		Demand per Year	
		Adjusted Buildout	Full Buildout	Adjusted Buildout	Full Buildout
<b>ELECTRICITY</b>					
Residential	6,983 kWh/unit/year	13,415	23,077	93,676,945	161,146,691
Employment (retail, office, industrial)	12.96 kWh/sq ft/year	17,703,401	72,481,415	229,436,077	939,359,138
<b>NATURAL GAS</b>					
Residential	80,665 cf/unit/year	13,415	23,077	1,082,120,975	1,861,506,205
Employment (retail, office, industrial)	35.41 cf/sq ft/year	17,703,401	72,481,415	626,877,429	2,566,566,905
Source: Sutter County, Sutter Pointe Specific Plan DEIR, prepared by EDAW, December 2008; PBSJ, 2010.					

The impact analysis analyzes buildout of the proposed General Plan under both the adjusted buildout scenario as well as full buildout.

### Proposed Climate Action Plan Policies

The following policies from the proposed Climate Action Plan relevant to electricity and natural gas within the entire policy area are listed below.

#### **Building/Energy:**

R1-E1A and R1-E1B: **Renewable Portfolio Standard for Building Energy Use.** Senate Bills (SBs) 1075 (2002) and 107 (2006) created the State's Renewable Portfolio Standard (RPS), with an initial goal of 20 percent renewable energy production by 2010.

Executive Order (EO) S-14-08 establishes a RPS target of 33 percent by the year 2020 and requires State agencies to take all appropriate actions to ensure the target is met. The 33 percent RPS by 2020 goal is supported by the California Air Resources Board (CARB), though its feasibility is not certain due to current limitations in production and transmission of renewable energy.

R1-E2 and R1-E3: **AB1109 Energy Efficiency Standards for Lighting (Residential and Commercial Indoor and Outdoor Lighting)**. Assembly Bill (AB1109) mandated that the California Energy Commission (CEC) on or before December 31, 2008, adopt energy efficiency standards for general purpose lighting. These regulations, combined with other State efforts, shall be structured to reduce State-wide electricity consumption in the following ways:

- R1-E2: At least 50 percent reduction from 2007 levels for indoor residential lighting by 2018; and
- R1-E3: At least 25 percent reduction from 2007 levels for indoor commercial and outdoor lighting by 2018.

R1-E4: **Electricity Energy Efficiency (AB32)**. This measure captures the emission reductions associated with electricity energy efficiency activities included in CARB's AB32 Scoping Plan that are not attributed to other R1 or R2 reductions, as described in this report. This measure includes energy efficiency measures that CARB views as crucial to meeting the State-wide 2020 target, and will result in additional emissions reductions beyond those already accounted for in California's Energy Efficiency Standards for Residential and Non-Residential Buildings (Title 24, Part 6 of the California Code of Regulations; hereinafter referred to as, "Title 24 Energy Efficiency Standards"), the County's adopted Green Building ordinance (effective January 1, 2011), etc. By 2020, this requirement will reduce emissions in California by approximately 21.3 MMTCO<sub>2</sub>e, representing 17.5 percent of emissions from all electricity in the State. This measure includes the following strategies:

- "Zero Net Energy" buildings (buildings that combine energy efficiency and renewable generation so that they, based on an annual average, extract no energy from the grid);
- Broader standards for new types of appliances and for water efficiency;
- Improved compliance and enforcement of existing standards;
- Voluntary efficiency and green building targets beyond mandatory codes;
- Voluntary and mandatory whole-building retrofits for existing buildings;
- Innovative financing to overcome first-cost and split incentives for energy efficiency, on-site renewables, and high efficiency distributed generation;
- More aggressive utility programs to achieve long-term savings;
- Water system and water use efficiency and conservation measures;
- Additional industrial and agricultural efficiency initiatives; and
- Providing real time energy information technologies to help consumers conserve and optimize energy performance.

R1-E5: **Natural Gas Energy Efficiency (AB32).** This measure captures the emission reductions associated with natural gas energy efficiency activities included in CARB's AB32 Scoping Plan that are not attributed to other R1 or R2 reductions, as described in this report. This measure includes energy efficiency measures that CARB views as crucial to meeting the State-wide 2020 target, and will result in additional emissions reductions beyond those already accounted for in California's Energy Efficiency Standards for Residential and Non-Residential Buildings (Title 24, Part 6 of the California Code of Regulations; hereinafter referred to as, "Title 24 Energy Efficiency Standards"), the County's adopted Green Building ordinance(effective January 1, 2011), etc. By 2020, this requirement will reduce emissions in California by approximately 4.3 MMTCO<sub>2</sub>e, representing 6.2 percent of emissions from all natural gas combustion in the State. This measure includes the following strategies:

- "Zero Net Energy" buildings (buildings that combine energy efficiency and renewable generation so that they, based on an annual average, extract no energy from the grid);
- Broader standards for new types of appliances and for water efficiency;
- Improved compliance and enforcement of existing standards;
- Voluntary efficiency and green building targets beyond mandatory codes;
- Voluntary and mandatory whole-building retrofits for existing buildings;
- Innovative financing to overcome first-cost and split incentives for energy efficiency, on-site renewables, and high efficiency distributed generation;
- More aggressive utility programs to achieve long-term savings;
- Water system and water use efficiency and conservation measures;
- Additional industrial and agricultural efficiency initiatives; and
- Providing real time energy information technologies to help consumers conserve and optimize energy performance.

R1-E6: **Increased Combined Heat and Power (AB32).** This measure captures the reduction in building electricity emissions associated with the increase of combined heat and power activities, as outlined in CARB's AB32 Scoping Plan. The Scoping Plan suggests that increased combined heat and power systems, which capture "waste heat" produced during power generation for local use, will offset 30,000 GWh State-wide in 2020. Approaches to lowering market barriers include utility-provided incentive payments, a possible CHP portfolio standard, transmission and distribution support systems, or the use of feed-in tariffs. By 2020, this requirement will reduce emissions in California by approximately 6.7 MMTCO<sub>2</sub>e, representing 7.6 percent of emissions from all electricity in the State.

R1-E7: **Industrial Efficiency Measures (AB32).** This measure captures the reduction in industrial building energy emissions associated with the energy efficiency measures for industrial sources included in CARB's AB32 Scoping Plan. By 2020, this requirement will reduce emissions in California by approximately 1.0 MMTCO<sub>2</sub>e,

representing 3.9 percent of emissions from all industrial natural gas combustion in the State. CARB proposes the following possible State-wide measures:

- Oil and gas extraction;
- GHG leak reduction from oil and gas transmission;
- Refinery flare recovery process improvements; and
- Removal of methane exemption from existing refinery regulations.

R1-E8 **Renewable Portfolio Standard (33 percent by 2020) Related to Water Supply and Conveyance.** This measure would increase electricity production from eligible renewable power sources to 33 percent by 2020. A reduction in GHG emissions results from replacing natural gas-fired electricity production with zero GHG-emitting renewable sources of power. By 2020, this requirement will reduce emissions from electricity used for water supply and conveyance in California by approximately 21.3 MMTCO<sub>2e</sub>, representing 15.2 percent of emissions from electricity generation (in-State and imports).

R2-E1 **Residential Energy Efficiency Program.** This measure involves the adoption of a program that facilitates energy efficient design for all new residential buildings within the Sutter Pointe Specific Plan to be 20% beyond the current Title 24 Standards which will implement the new development requirements set forth in the Sutter Pointe Specific Plan EIR. This energy efficiency requirement for the Sutter Pointe Specific Plan is equal to that of the LEED for Homes and ENERGY STAR programs.

The 2008 Title 24 Energy Standards were adopted by the Energy Commission on April 23, 2008, with the 2008 Residential Compliance Manual adopted by the Commission on December 17, 2008. Compliance with the 2008 standards went into effect January 1, 2010. In an effort to meet the overall goal of the California Energy Efficiency Strategic Plan of reaching zero net energy for residential buildings by 2020, the stringency of the Title 24 Energy Standards as regulated and required by the State will continue to increase every three years. As energy efficiency standards increase the County may want to periodically re-evaluate their percentage beyond Title 24 goal to ensure it is still a feasibly achievable goal.

As described in the Sutter Point Specific Plan DEIR and to facilitate the implementation of this program, the County could provide all developers with a list of potentially feasible GHG reduction measures that reflect the current state of the regulatory environment prior to design development. The developer will then submit to the County a mitigation report demonstrating which of the proposed reduction measures are feasible as well as why the unselected measures are infeasible. The County will develop a menu of options with points assigned to them. As long as a developer meets the required point allotment (100 points) the developer will meet the requirements of this measure. This system will assure flexibility in the implementation of this reduction measure. Although not limited to these actions, this reduction goal can be achieved through the incorporation of the following:

- Install energy efficient appliances, including air conditioning and heating units, dishwashers, water heaters, etc
- Install solar panels and solar water heaters;
- Install top quality windows and insulation;
- Install energy efficient lighting;
- Optimize conditions for natural heating, cooling and lighting by building siting and orientation.
- Use features that incorporate natural ventilation;
- Include clean alternative energy features to promote energy self-sufficiency (e.g., photovoltaic, solar-thermal electricity systems, small wind turbines;
- Install light-colored “cool” pavements, and strategically located shade trees along all bicycle and pedestrian routes; and
- Incorporate skylights; reflective surfaces, and natural shading in building design and layouts.

Sutter Pointe is implementing a pilot solar program which will offer solar as a standard feature on a percentage of homes in the Phase 1 development stage and as an upgrade for all homes. Given the success of the program it will be continued through the additional phases of the specific plan development.

Residential developments within the unincorporated portions of Sutter County that are not within the Sutter Pointe Specific Plan are encouraged to participate in the volunteer Residential Energy Efficiency Program. This volunteer program would set a minimum goal of achieving energy efficiency of 5% greater than current Title 24 Standards. Incentives to participate in this volunteer program include prioritization and streamlining of the application process for residential projects that achieve the minimum goal. The County will develop a menu of options with points assigned to them. As long as a developer meets the required point allotment (33 points) the developer will meet the requirements of this measure. This system will assure flexibility in the implementation of this reduction measure. Although not limited to these actions, this reduction goal can be achieved through the incorporation of the strategies outlined in the bullet points above.

- R2-E2 **Residential Renewable Energy Program.** This measure facilitates the voluntary incorporation of renewable energy (such as photovoltaic panels) into new residential developments. For participating developments, renewable energy application should be such that the new home’s projected energy use from the grid is reduced by 50%. The California Energy Commissions’ New Solar Homes Partnership is a component of the California Solar Initiative and provides rebates to developers of 6 or more units where 50% of the units include solar power. In addition this measure would encourage that all residents be equipped with “solar ready” features where feasible, to encourage future installation of solar energy systems. These features should include the proper solar orientation (south facing roof sloped at 20O to 55O from the horizontal), clear access on south sloped roofs, electrical conduit installed for solar electric system wiring, plumbing installed for

solar hot water systems, and space provided for a solar hot water tank. The incentive program should provide enough funding and other incentives as shown in the R3 measures to result in approximately fifty percent of new residential development participation in this program, thereby resulting in a 25% reduction in electrical consumption from new residential developments.

As an alternative to, or in support of, providing onsite renewable energy, the project proponent can buy into an offset program that will allow for the purchase of renewable energy resources offsite. Purchased energy offsets (or a combination of incorporated renewables and purchased offsets) must be equal to 50% of the total projected energy consumption for the development. See R3-E3 for further details on the financing program.

**R2-E3 Residential Retrofit Implementation Program.** This measure would initiate a County program that facilitates the incorporation of energy reduction measures for residential buildings undergoing major renovations. AB 811 is a potential funding source to the County for implementing incentive programs to encourage residences within the County to undertake energy efficiency retrofitting and reducing energy consumption in retrofitted homes by a minimum of 15%. As with the new development, The County will develop a menu of options with points assigned to them. As long as a developer meets the required point allotment (100 points) the developer will meet the requirements of this measure. This system will be provided to assure flexibility in the implementation of this reduction measure. Although not limited to these actions, this reduction goal can be achieved through the incorporation of the following:

- Replace inefficient air conditioning and heating units with new energy efficient models;
- Replace older, inefficient appliances with new energy efficient models;
- Replace old windows and insulation with top-quality windows and insulation;
- Install solar panels and/or solar water heaters;
- Replace inefficient and incandescent lighting with energy efficient lighting; and
- Weatherize the existing building to increase energy efficiency.

**R2-E4 Residential Renewable Retrofit Program.** This measure will initiate an incentive program that encourages residents to retrofit their homes with photovoltaic panels such that 50% of all of the home's electrical usage is offset. The California Energy Commission's Solar Initiative has incentives available to home owners.

**R2-E5 Commercial Energy Efficiency Program.** This measure involves the adoption of a County Program that facilitates the energy efficient design for all new commercial buildings within Sutter Pointe to be 20% beyond the current Title 24 Standards which expands the new development requirements set forth in the Sutter Pointe Specific Plan EIR. This voluntary energy efficiency requirement is 10% greater than the minimum requirements of the LEED and ENERGY STAR programs. As energy

efficiency standards increase the County may want to periodically re-evaluate their percentage beyond Title 24 goal to ensure it is still a feasibly achievable goal.

As described in R2-E1 above, the County could provide all developers with a list of potentially feasible GHG reduction measures that reflect the current state of the regulatory environment. The County will develop a menu of options with points assigned to them. As long as a developer meets the required point allotment (100 points) the developer will meet the requirements of this measure. This system will provide flexibility in the implementation of this reduction measure. Although not limited to these actions, this reduction goal can be achieved through the incorporation of the following:

- Install energy efficient appliances, including air conditioning and heating units, dishwashers, water heaters, etc.;
- Install solar panels and solar water heaters;
- Install top quality windows and insulation;
- Install energy efficient lighting;
- Optimize conditions for natural heating, cooling and lighting by building siting and orientation.
- Use features that incorporate natural ventilation;
- Include clean alternative energy features to promote energy self-sufficiency (e.g., photovoltaic, solar-thermal electricity systems, small wind turbines);
- Install light-colored "cool" pavements, and strategically located shade trees along all bicycle and pedestrian routes; and
- Incorporate skylights; reflective surfaces, and natural shading in building design and layouts.

The Sutter Pointe Specific Plan requires all non-residential buildings (25,000 sq feet or more) to install Energy Star (or equivalent) cool roofing systems and energy efficient furnaces. These features are intended to reduce energy consumption for non-residential projects.

Commercial developments within the unincorporated portions of Sutter County that are not within the Sutter Pointe Specific Plan are encouraged to participate in the volunteer Commercial Energy Efficiency Program. This volunteer program would set a minimum goal of achieving energy efficiency of 5% greater than current Title 24 Standards. Incentives to participate in this volunteer program include prioritization and streamlining of the application process for commercial projects that achieve the minimum goal. The County will develop a menu of options with points assigned to them. As long as a developer meets the required point allotment (33 points) the developer will meet the requirements of this program. This system will assure flexibility in the implementation of this reduction measure. Although not limited to these actions, this reduction goal can be achieved through the incorporation of the strategies outlined in the bullet points above.

R2-E6 **Commercial/Industrial Renewable Energy Program.** This measure would facilitate the voluntary incorporation of renewable (solar or other renewable) energy generation into the design and construction of new commercial, office, and industrial developments. Renewable energy generation shall be incorporated such that a minimum of 20% of the project's total energy needs are offset. In addition this measure would encourage all facilities be equipped with "solar ready" features where feasible, to facilitate future installation of solar energy systems. These features should include the proper solar orientation (south facing roof sloped at 20O to 55O from the horizontal), clear access on south sloped roofs, electrical conduit installed for solar electric system wiring, plumbing installed for solar hot water systems, and space provided for a solar hot water tank.

As an alternative to, or in support of, providing onsite renewable energy, the project proponent can buy into an offset program that will allow for the purchase of renewable energy resources offsite. Purchased energy offsets (or a combination of incorporated renewables and purchased offsets) must be equal 20% of the total projected energy consumption for the development. See R3-E3 for further details on the financing program.

R2-E7 **Commercial/Industrial Retrofit Program.** This measure encourages all commercial or industrial buildings undergoing major renovations to reduce their energy consumption by a minimum of 20%. As with the new development, a menu of options will be provided to assure flexibility in the implementation of this reduction measure. Although not limited to these actions, this reduction goal can be achieved through the incorporation of the following:

- Replace inefficient air conditioning and heating units with new energy efficient models;
- Replace older, inefficient appliances with new energy efficient models;
- Replace old windows and insulation with top-quality windows and insulation;
- Install solar panels and/or solar water heaters;
- Replace inefficient and incandescent lighting with energy efficient lighting; and
- Weatherize the existing building to increase energy efficiency.

R2-E8 **Agricultural Alternative Energy Programs.** This program combines Agricultural Draft Policies AG 3.6 (Alternative Energy), and AG 4.3 (New Technologies) to support the incorporation and expansion of existing and new technologies to increase the energy efficiency and profitability of agricultural processes throughout Sutter County.

R2-E9 **Water Use Reduction Initiative.** This initiative would reduce emissions associated with electricity consumption for water treatment and reduction and therefore are included with the energy reductions. This measure encourages the County to adopt a per capita water use reduction goal in support of the Governors Executive Order S-14-08 which mandates the reduction of water use of 20 percent

per capita. The County's adoption of a water use reduction goal would introduce requirements for new development and would provide cooperative support for water purveyors that are required to implement these reductions for existing developments. The County would also provide internal reduction measures such that County facilities will support this reduction requirement. The following measures represent potential programs that can be implemented to attain this reduction goal:

Water Conservation Program. Under this program the excessive watering of landscaping, excessive fountain operation, watering during peak daylight hours, water of non-permeable surfaces, excessive water use for noncommercial washing, and water use resulting in flooding or runoff would be prohibited. In addition the program would encourage efficient water use for construction activities, the installation of low-flow toilets and showerheads for all new developments, use of drought-tolerant plants with efficient landscape watering systems for all new developments, recycling of water used for cooling systems, use of pool covers, and the posting of water conservation signage at all hotels.

Sutter Pointe Water Conservation and Efficiency Requirement. Under the provisions in the Sutter Pointe Specific Plan EIR, new developments within the Sutter Pointe Specific Plan area are required to adhere to the following water conservation and efficiency measures:

- With the exception of ornamental shade trees, use water-efficient landscapes with native, drought-resistant species in all public areas and commercial landscaping. Use water-efficient turf in parks and other turf-dependant spaces;
- Install the infrastructure to use reclaimed water for landscape irrigation and/or washing cars;
- Install water-efficient irrigation systems and devices, such as soil moisture-based irrigation controls;
- Design buildings and lots to be water efficient. Only install water-efficient fixtures and appliances.
- Restrict water methods (prohibit systems that apply water to non-vegetated surfaces) and control runoff. Prohibit business from using pressure washers for cleaning driveways, parking lots, sidewalks, and street surfaces;
- Provide education about water conservation and available programs and incentives; and
- Construct driveways to single family detached residences and parking lots and driveways of multi-family residential uses with pervious surfaces.

New Development Incentives. Provide incentives for developers to comply with the California Green Building Standards Code as requirements for all new development. Under this Code new developments are required to reduce indoor potable water use by 20% beyond the Energy Policy Act of 1992 fixture performance requirements, and to reduce outdoor potable water use by 50% from a mid-summer baseline average consumption through irrigation efficiency,

native plant selection, the use of recycled water and/or captured rainwater for example.

Water Meter Program. Encourage water providers to install water meters for all County homes not using wells. This would provide for a better accounting of County water usage and provide potential costing per usage to help offset costs of the implementation of water conservation programs.

Water Efficiency Pricing Program. Under this program, the County would encourage water suppliers to adopt a water conservation pricing schedule (i.e. tiered rate) to encourage efficient water use. Notices could be provided in each billing showing water use budgets and the relationship between the budget and the actual usage.

Water Efficiency Retrofit Program. This program would encourage upgrades in water efficiency for renovations or additions of residential, commercial, office, and industrial properties equivalent to that of new developments. The County would work with local water purveyors to achieve consistent standards, and to develop, approve, and review procedures for implementation.

Water Efficiency Training and Education. Under this measure the County, in coordination with local water purveyors would implement a public information and education program that promotes water conservation. The program could include certification programs for irrigation designers, installers, and managers, as well as classes to promote the use of drought tolerant, native species and xeriscaping.

Increased Recycled Water Use. Promote the use of municipal wastewater and graywater for agricultural, industrial and irrigation purposes. This measure would be subject to approval of the State Health Department and compliance with Title 22 provisions. This measure would facilitate the following:

- Inventory of non-potable water uses that could be substituted with recycled or graywater;
- Determination of the feasibility of producing and distributing recycled water for groundwater replenishment;
- Determine the associated energy/GHG tradeoffs for treatment/use vs. out of basin water supply usage.
- Cooperation and coordination with responsible agencies to encourage the use of recycled water where energy tradeoffs are favorable.

R3-E1 **Energy Efficient Development, and Renewable Energy Deployment Facilitation and Streamlining.** This measure would encourage the County to identify and remove regulatory and procedural barriers to the implementation of green building practices and the incorporation of renewable energy systems. This could include the updating of codes and zoning requirements and guidelines. This measure could be further enhanced by providing incentives for energy efficient projects such as priority in the reviewing, permitting, and inspection process. Additional

incentives could include permit streamlining and CEQA streamlining in exchange for incorporating green building practices or renewable energy systems.

- R3-E2 **Energy Efficiency Training & Public Education.** This measure would provide public education and publicity about energy efficiency measures and reduction programs available within the County, including rebates and incentives available for residences and businesses. In addition, this measure would provide training in green building materials, techniques, and practices for all plan review and building inspection staff.
- R3-E3 **Energy Efficiency and Solar Energy Financing.** This measure would facilitate the incorporation of innovative, grant funded or low-interest financing programs for energy efficiency and renewable energy projects for both existing and new developments. This would include financing for heating, ventilation, air conditioning, lighting, water heating equipment, insulation, weatherization, and residential and commercial renewable energy. A few potential options for funding this measure include:
- Use the money from offset purchases (see R2-E2 and R2-T6) to provide grants to allow for the offset of some of the cost to existing residents in making energy efficiency upgrades;
  - Target local funds to assist affordable housing developers to incorporate renewable energy sources and energy efficiency design features into low-income housing during development or through retrofit programs.
  - Establish a Finance District, approve a bond purchase, and administer agreements to allow property owners to implement energy efficiency retrofits or designs and/or install renewable systems. Under this provision repayment could be incorporated as a special tax on the property owner's property tax bill.
  - Funding of other incentives to encourage the use of renewable energy sources and energy efficient equipment and lighting.
- R3-E4 **Cross-Jurisdictional Coordination.** Under this reduction measure the County would coordinate with other local governments, special districts, nonprofit, and other organizations in order to optimize energy efficiency and renewable resource development and usage throughout the County. This would allow for economies of scale and shared resources to more effectively implement these environmental enhancements.
- R3-E5 **Alternative Energy Development Plan.** The accomplishment of this measure would encourage the County to work with PG&E to explore the possibilities for producing energy by renewable means within the built environment. This would be developed to identify appropriate alternative energy facilities (i.e., photovoltaic) for use within residential and commercial developments. This could also incorporate the use of wind or additional solar installation in more remote areas. The Alternative Energy Development Plan will encourage the establishment of County policies and ordinances to address how alternative energy production would be conducted. This measure would identify the most optimal locations and

the best means by which to avoid noise, aesthetics and other land use compatibility conflicts. Another provision of this Plan could be to identify possible sites for the production of renewable energy using local renewable sources such as solar, wind, small hydro, and/or biogas. This would encourage adopting measures to protect these resources and providing right-of-way easements, utility easements, or by setting aside land for future development of these potential production sites.

- R3-E6 **Energy Compliance Documentation.** Sutter County currently requires energy compliance documentation and testing with third party certification for new developments. This program could be expanded to include certification of compliance with the R2 measures as well as providing incentives for the completion of energy audits and certification of existing buildings. The measure enhances and supports the energy efficiency reduction programs R2-E1 through R2-E9.

#### SOLID WASTE

- R3-W1 **Encourage Increased Efficiency of the Gas to Energy System at Landfills.** In 2009 the Recology Ostrom Landfill instituted a Gas to Energy System which converts 66% of the methane captured to energy. This measure would encourage Recology to keep current with upgrades in efficiencies to waste to energy systems and to upgrade as feasible when significant increases in conversion efficiencies are available.

## Proposed Sutter County General Plan Goals and Policies

The following goals and policies from the proposed General Plan area relevant to electricity and natural gas within the entire policy area are listed below.

#### INFRASTRUCTURE ELEMENT (I)

**Goal I 5 Balance the provision of energy to meet the needs of the County with support for energy conservation, efficiency, and renewable resources. (Modified Goal 4.G)**

#### Policies

- I 5.1 **Energy Efficient Buildings.** Implement, as appropriate, the reduction measures in the Climate Action Plan targeted to create energy efficient buildings. Such measures may include: facilitating energy efficient design and incorporating renewable energy components into new residential, commercial, and industrial developments; incorporating energy reduction measures for residential, commercial, and industrial buildings undergoing major renovations; initiating an incentive program for retrofit of residential buildings with renewable energy components; identifying and removing regulatory and procedural barriers to implementing energy efficient practices; providing public education and training of staff in energy efficiency; providing energy efficiency and solar energy financing; coordinating with other jurisdictions and groups to maximize energy

efficiency and renewable resource development and usage; preparing an alternative energy development plan; and documenting energy compliance.

- 15.2 **Energy Conservation.** Implement energy conserving land use practices that include compact development, provision of bikeways and pedestrian paths, and the incorporation of transit routes and facilities.
- 15.3 **Adequate Energy Supplies.** Work with local utility providers to ensure adequate and affordable supplies of energy are available for existing and future development.
- 15.4 **New Utility Lines.** Construct new utility lines along existing utility corridors, when feasible.
- 15.5 **Proximity to Transmission Lines.** Prohibit 115 kV or greater transmission lines from being located within 100 feet of any residential use.

### **Standards of Significance**

For the purposes of this EIR, impacts to electricity and natural gas are considered significant if the General Plan would:

- create demand for electrical or natural gas service that is substantial in relation to the existing demands; or
- result in inefficient, wasteful, and unnecessary consumption of energy (based on Appendix F of the State CEQA Guidelines).

### **Project-Specific Impacts and Mitigation Measures**

#### **6.13-6 Implementation of the proposed General Plan could create increased demand for electrical and natural gas services.**

Implementation of the proposed General Plan would create an increase in population and employment within the policy area, which would increase the demand for electricity and natural gas, especially the demand to light, heat and air-condition the new residential and commercial uses. This increase would result in approximately 13,415 residential units and 17,703,401 square feet of business uses. Based on the California Energy Commission's (CEC) residential demand rates, future residential development would demand approximately 93,676,945 kilowatt-hour (kWh) of electricity per year and 1,082,120,975 cubic feet (cf) of natural gas, as shown in Table 6.13-7. The business demands rates results in approximately 229,436,077 kWh of electricity per year and 626,877,429 cf of natural gas within the policy area. This would be a total of 323.1 million kWh of electricity per year and 1.71 billion cf of natural gas demand by the proposed General Plan under the adjusted buildout scenario.

Currently, PG&E has sufficient energy supplies and distribution facilities to meet anticipated electricity demands and growth in the county. The appropriate infrastructure would be determined as development progresses. In 2007, PG&E provided 85,057 million kWh of electricity to the State of California.<sup>62</sup> The 323.1 million kWh required for development proposed under the General Plan is approximately 0.38 percent of the amount provided in 2007 and is therefore not considered substantial. As discussed previously, PG&E's Line 406 and Line 407 Pipeline Project would provide greater capacity and service reliability to the existing natural gas transmission and distribution pipeline system and would extend natural gas service to planned residential and commercial developments in Placer, Sutter, and Sacramento counties.

The county's draft Climate Action Plan (CAP) includes policies to reduce the amount of solid waste generated and to reduce emissions and increase energy efficiency. These include policies R1-E4 and R1-E5 which include energy efficiency measures that CARB views as crucial to meeting the State-wide 2020 target, such as "Zero Net Energy" buildings, broader standards for new types of appliances and for water efficiency, improved compliance and enforcement of existing standards, voluntary and mandatory whole-building retrofits for existing buildings, and innovative financing to overcome first-cost and split incentives for energy efficiency, on-site renewables, and high efficiency distributed generation. Policy R2-E4 would initiate an incentive program that encourages residents to retrofit their homes with photovoltaic panels such that 50 percent of all of the home's electrical usage is offset. Policy R2-E6 would facilitate the voluntary incorporation of renewable (solar or other renewable) energy generation into the design and construction of new commercial, office, and industrial developments. Finally, Policy R3-E3 would facilitate the incorporation of innovative, grant funded or low-interest financing programs for energy efficiency and renewable energy projects for both existing and new developments. This would include financing for heating, ventilation, air conditioning, lighting, water heating equipment, insulation, weatherization, and residential and commercial renewable energy.

In addition, General Plan policies are proposed to supplement the policies of the CAP. For example, policy I 5.1 implements reduction measures in the CAP targeted to create energy efficient buildings. Policy I 5.2 implements energy conserving land use practices that include compact development, provision of bikeways and pedestrian paths, and the incorporation of transit routes and facilities. Lastly, policy I 5.3 requires coordination with local utility providers to ensure adequate and affordable supplies of energy are available for existing and future development.

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62 CEC, California Electricity Sector Overview, <http://www.energyalmanac.ca.gov/electricity/overview.html>, accessed June 23, 2010.

Future development proposed under the General Plan would also be required to comply with all federal, state, and local statutes and regulations related to energy. Implementation of Titles 20 and 24 of the CCR would reduce impacts associated with an increased demand for electricity by implementing energy efficient standards for residential and non-residential buildings. In addition, implementation of the Warren-Alquist Energy Resources Conservation and Development Act would also coordinate research and development into energy supply and demand problems to reduce the rate of growth of energy consumption. Therefore, this impact is considered *less than significant*.

### Full Buildout Analysis

Under full buildout, additional growth beyond the 2030 general plan horizon would generate additional demand for electricity and natural gas. If that development were allowed to happen without the provision of additional facilities then the effects would be adverse. However, the proposed General Plan includes policies which require energy efficiency and coordination with local utility providers to ensure adequate and affordable supplies of energy are available for existing and future development. At this time, however, the exact nature of those future effects are unknown, and it would be speculative to attempt a more detailed analysis at this time.

In addition, any future development would be subject to rigorous review to determine potential impacts to water infrastructure and the availability of water in accordance with CEQA. The additional growth that could occur under full buildout would go beyond 2030 and future planning efforts and environmental analysis would address this additional growth and the potential implications of this growth.

### Mitigation Measure

*None required.*

### Growth Areas

The analysis conducted for electricity and natural gas is countywide and would receive energy services from PG&E. The anticipated impacts to the growth areas are the same as the policy area analysis, discussed above. A discussion of the SPSP is included below to provide the reader with a summary of the EIR findings specific to the plan area. Please refer to Chapter 3, Project Description, for more specific information pertaining to the General Plan growth areas.

### **Sutter Pointe Specific Plan Area**

The SPSP EIR evaluated impacts to electricity and natural gas services of the expected full buildout population of 46,758. The impact was found to be less than significant. In addition,

the county's draft CAP includes a specific policy for the SPSP. Policy R2-E1 involves the adoption of a program that facilitates energy efficient design for all new residential buildings within the SPSP to be 20 percent beyond the current Title 24 Standards which would implement the new development requirements set forth in the SPSP EIR.

### **Cumulative Impacts and Mitigation Measures**

A cumulative impact or effect results when two or more individual effects are combined together, which when taken together are considerable. PG&E provides electricity and natural gas for the state of California. Therefore, in terms of the provision of energy services, the cumulative context includes the full buildout of the General Plan, along with future development in all counties served by PG&E.

#### **6.13-7 Implementation of the proposed General Plan, combined with other development within the areas serviced by PG&E could create demand for electrical or natural gas service that is substantial in relation to the existing demands.**

Future development in the policy area as well as areas in the region serviced by PG&E would increase residential, commercial, and office needs for electricity and natural gas. Development in previously undeveloped areas would require the extension of existing lines and new transmission facilities and substations would be needed. The environmental impacts associated with the installation of new facilities would be analyzed by each development under separate environmental review as the utilities are extended.

PG&E continues to play an active role in supporting the use of renewable energy resources by promoting clean energy programs throughout the state. PG&E has begun the "WaveConnect" program, which involves studying and potentially harnessing energy from coastal waves in Santa Barbara to provide a new source of clean renewable energy.<sup>63</sup> PG&E also plans on implementing a major new solar photovoltaic program which will generate up to 500 megawatts (MW) of clean energy, enough to meet the needs of about 150,000 homes in PG&E's Northern and Central California service area.<sup>64</sup> Continuing these endeavors would help to minimize the cumulative energy impacts within the planning area as well as the entire area PG&E.

Through the policies set forth in the draft CAP (see Appendix E) and the proposed General Plan, energy conservation would have a major presence in the development of new structures and communities within the planning area. Policies R2-E2, R2-E4, R2-E6, R3-E3, and

63 Green Building Pro, *Pacific Gas & Electric's (PG&E) pilot program for harnessing the power of the Pacific* June 17, 2010, [http://www.greenbuildingpro.com/index.php?option=com\\_content&view=article&id=1836:catch-the-wave&catid=57:features&Itemid=74](http://www.greenbuildingpro.com/index.php?option=com_content&view=article&id=1836:catch-the-wave&catid=57:features&Itemid=74), accessed June 24, 2010.

64 PG&E, *PG&E to Launch Major Solar Energy Initiative*, April 22, 2010, [http://www.pge.com/about/newsroom/newsreleases/20100422/pge\\_to\\_launch\\_major\\_solar\\_energy\\_initiative.shtml](http://www.pge.com/about/newsroom/newsreleases/20100422/pge_to_launch_major_solar_energy_initiative.shtml), accessed June 24, 2010.

R3-E5 of the CAP focus on promoting the use of renewable resources, which would help reduce the cumulative impacts associated with non-renewable energy sources. Policies I 5.1 and I 5.2 of the General Plan promote energy efficient buildings and energy conservation in land use planning. While the demand for energy within the Policy Area would add considerably to the cumulative impacts on energy resources, implementation of these policies in conjunction with the continued efforts of PG&E to promote energy efficiency and renewable energy would make this impact *less than significant* and the project's contribution would be less than considerable.

Mitigation Measure

*None required.*