

## **4.14 UTILITIES AND SERVICE SYSTEMS**

This section presents analysis of the impacts that implementation of the 2030 General Plan may have related to water, wastewater, solid waste, and storm drainage facilities in unincorporated Yuba County.

Impacts associated with the extension of public services, including fire protection, law enforcement, schools, parks and recreation services, and libraries are analyzed separately in Section 4.12, “Public Services and Recreation.” An evaluation of water quality can be found in Section 4.9, “Hydrology and Water Quality.”

### **4.14.1 REGULATORY SETTING**

#### **FEDERAL PLANS, POLICIES, REGULATIONS, AND LAWS**

Sections 4.4, “Biological Resources,” and 4.9, “Hydrology and Water Quality,” describe the requirements of the federal Clean Water Act as it relates to discharge of fill to waters of the United States and surface water quality and management.

#### **Public Utility Regulatory Policies Act**

Congress enacted the Public Utility Regulatory Policies Act to promote conservation of energy, efficient use of facilities and resources, and equitable rates to customers. This legislation set forth electric utility service practice and rate-making standards for consideration by state regulatory authorities and non-regulated utilities. The legislation has been amended to include additional standards related to electric utilities. Please see Section 4.15 of this EIR, “Energy” for further discussion of energy demand and infrastructure. State Plans, Policies, Regulations, and Laws

#### **Water Supply and Water Quality**

##### ***Porter-Cologne Water Quality Control Act of 1969***

The 1969 Porter-Cologne Water Quality Control Act also established the State Water Resources Control Board (SWRCB) and the nine Regional Water Quality Control Boards (RWQCBs) as the primary state agencies with regulatory authority over water quality. Under the act, the SWRCB has the ultimate authority over state water rights and water quality policy.

##### ***California Water Code***

The California Water Code outlines the general state authority and responsibilities over water in California. It establishes the Department of Water Resources (DWR) as the primary research, supply development, and management agency for water. The Water Code identifies the SWRCB as the decision making body for overall water quality policy development and for dealing with water rights issues. The nine RWQCBs are charged with regulation, enforcement, and protection of the beneficial uses of water.

##### ***Surface Water Rights***

The SWRCB has jurisdiction over all water rights in California under the common-law public-trust doctrine. Section 1735 of the California Water Code provides the regulatory framework for long-term transfers, subject to the requirements of CEQA.

Appropriative water rights allow the diversion of surface water for beneficial use. Before 1914, appropriative water rights involved a simple posting to describe intent and scope of water use, diversion, or construction of diversion activities. Since 1914, the sole method for obtaining appropriative water rights has been to file an

application with the SWRCB. Before it can issue a water rights permit, the SWRCB must demonstrate the availability of unappropriated water. Both pre- and post-1914 appropriative water rights may be lost if the water has gone unused for a period of five years.

Riparian water rights apply to lands that are traversed by, or border on a natural watercourse. Riparian owners have a right (correlative with the right of each other riparian owner) to share in the reasonable beneficial use of the natural flow of water that passes the owners land. No permit is required for such use. Riparian water must be used reasonably, beneficially, and solely on riparian (adjacent) land and cannot be stored for later use.

### ***Groundwater Rights***

The state requires that counties enact regulations covering well design to protect groundwater quality from surface contamination, and to ensure proper well construction and development for domestic use. However, these regulations are not related to the quantity of water extracted.

Counties can also enact an ordinance to ensure that wells developed on one property do not interfere with the use of adjacent wells. In some areas of overuse, and where there is a high dependence on groundwater, groundwater rights are determined judicially in what are termed “adjudicated groundwater basins.”

### ***Senate Bill 610***

Senate Bill 610 (SB 610) (Chapter 643, Statutes of 2001; Water Code Sections 10910–10915) made changes to the State Water Code to require additional information in urban water management plans (UWMPs) if groundwater is identified as a source available to the supplier. The information required includes a copy of any groundwater management plan adopted by the supplier, a copy of the adjudication order or decree for adjudicated basins, and if nonadjudicated, whether the basin has been identified as being overdrafted or projected to be overdrafted in the most current DWR publication on that basin. If the basin is in overdraft, that plan must include current efforts to eliminate any long-term overdraft.

Another key provision in SB 610 requires that any project subject to CEQA supplied with water from a public water system be provided a specified water supply assessment for large developments (e.g., projects of 500 or more residential units, 500,000 square feet of retail commercial space, or 250,000 square feet of office commercial space), except as specified in the law. These assessments, prepared by “public water systems” responsible for service, address whether there are adequate existing or projected water supplies available to serve proposed projects, in consideration of urban and agricultural demands and other anticipated development in the service area in which the subject project is located.

Where a water supply assessment (WSA) concludes that insufficient supplies are available, the WSA must lay out steps that would be required to obtain the necessary supply. The content requirements for the assessment include, but are not limited to, identification of the existing and future water suppliers and quantification of water demand and supply by source in 5-year increments over a 20-year projection. This information must be provided for average normal, single-dry, and multiple-dry years.

The absence of an adequate current water supply does not preclude project approval, but does require a lead agency to address a water supply shortfall in its project approval findings.

### ***Senate Bill 221***

SB 221 (Chapter 642, Statutes of 2001; Government Code Section 66473.7) prohibits approval of subdivisions consisting of more than 500 dwelling units unless there is verification of sufficient water supplies for the project from the applicable water supplier(s). This requirement also applies to increases of 10% or more of service connections for public water systems with less than 500 service connections. The law defines criteria for

determining “sufficient water supply,” such as using normal, single-dry, and multiple-dry year hydrology and identifying the amount of water that the supplier can reasonably rely on to meet existing and future planned uses.

Rights to extract additional groundwater, if proposed to be used for the subject project, must be substantiated.

### ***Groundwater Management Act***

The Groundwater Management Act, Assembly Bill 3030 (AB 3030), signed into law in 1992, provides a systematic procedure for an existing local agency to develop a groundwater management plan. This section of the code provides such an agency with the powers of a water replenishment district to raise revenue to pay for facilities to manage the basin (extraction, recharge, conveyance, quality). In some basins, groundwater is managed under other statutory or juridical authority.

### ***Urban Water Management Act***

The California Urban Water Management Planning Act of 1983 requires that each urban water supplier, providing water for municipal purposes either directly or indirectly to more than 3,000 customers or supplying more than 3,000 acre-feet of water annually, shall prepare, update and adopt its urban water management plan at least once every five years on or before December 31, in years ending in five and zero.

### ***Wastewater and Storm Drainage***

The SWRCB, in coordination with the Central Valley RWQCB, regulates water quality, including issuance of discharge permits. The RWQCBs issue waste discharge requirements for major point-source discharges, such as municipal wastewater treatment plants and industrial facilities. The RWQCB also issues and monitor enforcement actions when water quality standards are violated, and oversee activities necessary to address those enforcement actions.

### ***Solid Waste***

#### ***California Integrated Waste Management Act***

To minimize the amount of solid waste disposal, the State Legislature passed the California Integrated Waste Management Act (CIWMA) of 1989 (AB 939), effective January 1990. According to the CIWMA, all cities and counties were required to divert 25% of all solid waste from landfill facilities by January 1, 1995, and 50% by January 1, 2000.

Each jurisdiction is required to develop solid waste plans demonstrating integration of the CIWMA plan with the County plan. The plans must promote (in order of priority) source reduction, recycling and composting, and environmentally safe transformation and land disposal.

### ***Private Utilities***

#### ***California Public Utilities Commission***

The California Public Utilities Commission (CPUC) has jurisdiction over the siting of natural gas transmission lines, as well as electrical transmission facilities, and substations. CPUC General Order 131-D (adopted by Decision 94-06-014 and modified by Decision 95-08-038) establishes the rules for the planning and construction of new transmission facilities, distribution facilities, and substations. This decision requires utilities to obtain permits to construct certain power line facilities or substations if the voltage would exceed 50 kilovolts (kV) or if the substation would require the acquisition of land or an increase in voltage rating above 50 kV. Utilities do not need to comply with this decision for distribution lines and substations with voltage less than 50 kV. However, they must obtain any nondiscretionary local permits required for the construction and operation of these projects.

Compliance with the California Environmental Quality Act (CEQA) is required for construction of facilities in accordance with the decision. Please see Section 4.15 of this EIR, “Energy” for further discussion of energy demand and infrastructure.

## 4.14.2 ENVIRONMENTAL SETTING

### WATER SUPPLY, DISTRIBUTION, AND DEMAND

#### Water Supplies

Water supplies in Yuba County are provided by several different providers that, in turn, rely on both surface and groundwater sources. Significant bodies of water in the County consist of the Yuba, Feather, and Bear Rivers; Honcut Creek; several lakes and reservoirs; and many lesser creeks, canals, and streams --- all of which provide some amount of local surface water supply.

The eastern portion of the County is within the Sierra Nevada foothills and mountain region. These areas rely primarily on surface water supplies due to the underlying granite bedrock that does not allow for many pockets of dependable groundwater, with the exception of limited areas with fractures in the bedrock (Yuba County Water Agency 2008: 2-2).

The portions of the County in the Sacramento Valley, west of the foothills, rely on both surface and groundwater sources. Municipal water purveyors, including California Water Service, Linda County Water District (LCWD), the City of Wheatland, Olivehurst Public Utilities District (OPUD), and Beale Air Force Base (AFB), use groundwater exclusively. Urban users rely primarily on groundwater while most agricultural users rely on a combination of surface and groundwater supplies (YCWA 2008:4-28, 4-29).

Yuba County Water Agency (YCWA), described in more detail below, provides its member units with surface water sources from the Yuba River. YCWA’s member units may supplement surface water supplies with their own groundwater supplies (Yuba County Water Agency 2008: 2-1—2-2).

#### Surface Water

The Yuba River serves as the County’s largest single source for water supplies (Yuba County IRWMP 2008; 4-1). The Yuba River basin spans approximately 1,339 square miles on the western slope of the Sierra Nevada, and encompasses portions of Yuba, Nevada, Placer, and Sierra Counties. The river’s average annual unimpaired flow at Smartsville, prior to in basin and out of basin diversions, is 2.45 million acre-feet (af), although it has ranged from a high of 4.925 million af in 1986 to a low of 370,000 af in 1977 (Yuba County Water Agency 2008: 4-1). The Yuba River is the largest tributary of the Feather River. The Yuba River converges with the Feather River at Marysville.

Surface water supplies in Yuba County are managed by the YCWA and a number of other ~~smaller~~ entities. YCWA was formed as an independent special district to provide wholesale water and flood control services to Yuba County. It does not provide water directly to users, but it provides wholesale water service to its member units: South Yuba Water District (SYWD); Dry Creek Mutual Water Company; Brophy Water District; Cordua Irrigation District; Hallwood Irrigation Company; Ramirez Water District; Browns Valley Irrigation District; and Wheatland Water District. YCWA and its constituent members manage surface water supplies within the County. In addition to the deliveries that YCWA makes to member units, several water purveyors in the County have their own pre-1914 water rights to divert surface waters for consumptive and non-consumptive uses. These entities include BVID, Cordua Irrigation District and Hallwood Irrigation Company. YCWA must coordinate its operations with these senior rights to ensure that the supplies of senior users are delivered as requested.

The inflow of water to YCWA’s primary facility is approximately 1.2 million af annually. YCWA experiences an average daily demand for water of 1,140 af and has experienced a peak day demand of 2,273 af. ~~The average daily demand indicates a typical annual demand for 416,100 af annually.~~ YCWA operates one storage reservoir and has a storage capacity of 314,893 million gallons (mg).

YCWA’s infrastructure includes dams, reservoirs, and tunnels that control the Yuba River and the South Yuba Canal for distribution of surface water to south Yuba County. Surface water sources include the North Yuba River, Oregon Creek, and the Middle Yuba River.

YCWA was the lead agency for preparing the Integrated Regional Water Management Plan (IRWMP), completed in 2008, which developed strategies for changes in groundwater levels and water quality and the need for enhanced flood protection.

~~Surface water supply and demand within Yuba County are described below in Table 4.14-1.~~

District	Annual Water Supply	Average Daily Water Demand (Annual Demand Estimate)	Water Users
Yuba County Water Agency	2.45 million af <sup>2</sup>	1,140 af per day (416,100 afa)	Irrigation and transfers to other water districts
City of Marysville (California Water Service Company)	10,305 af (9.2 mgd)	3.2 mgd (3,577 afa)	Domestic
City of Wheatland	6,833 af (6.1 mgd) <sup>2†</sup>	0.72 mgd (806.7 afa)	Domestic
Wheatland Water District	40,230 af	Unknown	Irrigation
Camptonville	Unknown	0.03 mgd (33.6 afa)	Domestic
Brophy	75,647 af**	54.5 mgd (61,046.3 afa)	Irrigation
Browns Valley	82,734 af**	36.8 mgd (41,219.5 afa)	Irrigation
Cordua	72,000 af**	55.3 mgd (61,943.8 afa)	Irrigation
Linda County	16,466 af (14.7 mgd)	2.92 mgd (3,270.4 afa)	Domestic
North Yuba	9,760 af	0.52 mgd (582.5 afa)	Domestic
Ramirez	25,101 af (22.4 mgd)*	14.15 mgd (15,848.3 afa)	Irrigation and wildlife habitat
South Yuba	44,330 af (39.5 mgd)	32 mgd (35,843 afa)	Irrigation and domestic
Camp Far West	13,000 af (11.6 mgd)	10.6 mgd (12,968.5 afa)	Irrigation
River Highlands	Unknown	Unknown	Domestic
Olivehurst	4,490 af (1,463 mg [4 mgd])	3.8 mgd (4,255.9 afa)	Domestic
<b>Totals (estimated)</b>	<b>2,620,515 afa</b>	<b>657,496 afa</b>	

Notes: af = acre-feet, mgd = million gallons per day  
\* — Water is provided by YCWA  
\*\* — Includes water contracted from YCWA, therefore these numbers are not part of the totals  
† — Some proposed projects are located within multiple districts  
<sup>2</sup> — 2.45 million af is the average unimpaired flow of the Yuba River at Smartsville. Actual water rights are constrained by complex instream flow requirements.  
<sup>2</sup> — Amount of water available when all six groundwater wells are operating  
Source: Summarized from Data in Yuba LAFCO 2008

## Groundwater

The valley area of Yuba County is underlain by an alluvial aquifer system that is divided into two subbasins: the North Yuba and South Yuba Subbasins. The North Yuba Subbasin is bound by Honcut Creek to the north, the Feather River to the west, the Yuba River to the south, and the Sierra Nevada to the east. The South Yuba Basin is

located directly south of the North Yuba Subbasin, with the Yuba River to the north, the Feather River to the west, the Bear River to the south, and the Sierra Nevada foothills and mountains to the east (Yuba County Water Agency 2008: 4-11).

Groundwater levels in the North Yuba Subbasin range from approximately 130 feet above mean sea level (msl) at the eastern edge of the basin to approximately 50 feet msl near Marysville. Similar groundwater levels are found in the South Yuba Subbasin, where they vary from approximately 140 feet msl at the eastern edge of the subbasin to 25 feet msl near the western edge (Yuba County Water Agency 2008: 4-12).

The estimated total storage capacity of the groundwater basins is about 7.5 million af (Yuba County IRWMP 2008; 4-13). Of this amount approximately 2.8 million af occur within 200 feet of the land surface (Yuba County Water Agency 2008: 4-13). Not all of these supplies are available for withdrawal because well capacity and recharge rates limit the amount that can be safely withdrawn.

Currently, the YCWA and other water providers are coordinating to minimize-avoid ground water overdraft and land subsidence associated with ground water extraction, however the yearly safe-yield (amount of water that can be withdrawn without adverse effects) is not currently known (Scott Matyac, Yuba County Water Agency, pers. comm.). In addition, neither the North or South Yuba Subbasins are adjudicated (Scott Matyac, Yuba County Water Agency, pers. comm.[1]).

As mentioned above, groundwater availability in the foothills and mountains is very limited due to fractured granite formations underlying the Sierra Nevada. Small amounts of groundwater can be stored in the rock fractures and in some cases, in small alluvial deposits located adjacent to small streams. Some wells for rural residences not linked to municipal water sources supplied with surface water are used in these limited areas, but reliability on these groundwater sources is limited, particularly since groundwater levels in these areas are highly variable during droughts (Yuba County Water Agency 2008: 4-14).

### Existing Water Use within Yuba County

~~Overall, total groundwater demand~~The existing water use within the planning area ~~studied in the~~was described in the Yuba County IRWMP, which includes the entire County plus Yuba City. This document estimates annual urban and agricultural consumption during the 2005 water year at, was determined to be approximately 563,200 af annually, based on 2005 as the current conditions year. Table 4.14-2 identifies the existing water demand in the IRWMP planning area by geographic area, land use, and water source. Table 4.14-1 breaks out the constituent elements of this water use by sector.

Agricultural uses by far created the largest ~~groundwater~~demand in all geographic areas, with a total of 514,100 af ~~demand~~, whereas urban uses had a demand of 49,100 af. Water for agricultural purposes in the foothills and mountains is provided by surface water supplies. Groundwater in the foothills and mountains is used only for residential or other developed (non-agricultural) use. Surface water in the Valley is used only for agricultural uses.

The numbers provided in Table 4.4-1 represent typical deliveries. However, the volatility of rainfall affects available water supplies. For example, the unimpaired flow of the Yuba River ranges from a historical high of 4.9 million acre feet in 1986 to 370,000 acre feet in 1977 (YCWA 2005:4-3). During drought years, individual water deliveries that member units of YCWA receive are curtailed according to the deficiency provisions indicated in the YCWA IRWMP (YCWA 2005:4-9). During drought years, shortages in water supplies can occur.

~~The IRWMP estimates that the County's agricultural water demand will decrease approximately 6% by 2015, but this decrease would be offset by an increase in urban demands as the population increases 45% to approximately 94,400 in 2015 and 137,300 in 2030.~~

<b>Table 4.14-21</b>							
<b>Current Existing Conditions: WaterGroundwater Use Use (in acre-feet per year)</b>							
Area	Agricultural Uses			Urban Uses			Total
	Surface Water	Groundwater	Total	Surface Water	Groundwater	Total	
<b>North Yuba Groundwater Basin</b>							
North Yuba Subarea	188,500	39,000	227,500	0	3,800	3,800	231,300
City of Marysville Subarea	0	300	300	0	3,600	3,600	3,900
<b>Subtotal</b>	<b>188,500</b>	<b>39,300</b>	<b>227,800</b>	<b>0</b>	<b>7,400</b>	<b>7,400</b>	<b>235,200</b>
<b>South Yuba Groundwater Basin</b>							
South Yuba Subarea	170,100	82,700	252,800	0	22,000	22,000	274,800
City of Wheatland Subarea	6,300	4,100	10,400	0	1,200	1,200	11,600
<b>Subtotal</b>	<b>176,400</b>	<b>86,800</b>	<b>263,200</b>	<b>0</b>	<b>23,200</b>	<b>23,200</b>	<b>286,400</b>
<b>Foothill/Mountains</b>							
Foothills/Mountains	23,100	0	23,100	7,300	11,200	18,500	41,600
<b>Total Plan Area</b>	<b>388,000</b>	<b>126,100</b>	<b>514,100</b>	<b>7,300</b>	<b>41,800</b>	<b>49,100</b>	<b>563,200</b>
Source: Yuba County Water Agency: 2008:4-299, Table 4-6							

The current annual YCWA demand as stated in the YCWA Lower Yuba River Accord EIR as of 2007 was 305,000 acre-feet and the future expected demand is 345,000 acre-feet. The difference in these two amounts is the addition of the Yuba Wheatland Canal Project, which is mostly complete; therefore the correct demand for YCWA would be 345,000 acre-ft (YCWA 2011).

## WASTEWATER

There are 11 state-regulated wastewater treatment facilities in Yuba County, including facilities operated by OPUD, LCWD, River Highlands CSD, Beale AFB, and the cities of Marysville and Wheatland. In addition, there are several private sewage systems operated at various facilities throughout the County, including Sleep Train Amphitheatre, campgrounds, and mobile home parks.

In addition to these larger-scale wastewater treatment facilities, many properties throughout the County, but particularly in the more rural areas, use private septic systems. The three largest wastewater treatment providers – Linda County Water District (LCWD), Olivehurst Public Utilities District (OPUD), and River Highlands Community Services District (RHCS) – are described below. Please refer to the Infrastructure, Public Facilities, and Public Services General Plan Update Background Report, under separate cover (available at the County Planning Department and online at: <http://www.yubavision2030.org/Library.aspx>).

### Linda County Water District

The LCWD provides wastewater collection, treatment, and disposal services for 3,360 connections, primarily for residences, but with some commercial uses. The wastewater treatment plant (WWTP) is located in the unincorporated community of Linda and has a capacity of 1.8 million gallons per day (mgd) for secondary treatment standards.

As of March 2010, average daily flows to the WWTP were approximately 1.1 mgd. Although the expected growth did not occur, LCWD moved forward with its plans to expand the WWTP, in order to comply with

environmental requirements. Design for the expansion has been completed, and construction began in December 2009. The WWTP expansion will have a capacity of 5 mgd for liquid train and 3 mgd for solid train by 2011 (Davis 2010, pers. comm.).

Following the expansion of the WWTP, these percolation ponds will not be necessary since the expansion includes an upgrade to provide wastewater effluent treatment to tertiary-level standards. The District also maintains a permitted outfall pipeline that allows discharge of treated effluent to the Feather River.

### **Olivehurst Public Utilities District**

The Olivehurst Public Utilities District (OPUD) provides wastewater collection, treatment, and disposal services to the communities of Olivehurst-Plumas Lake. OPUD owns, operates, and maintains a WWTP with a permitted capacity of 3 mgd for average dry weather flows. The WWTP was expanded and upgraded to tertiary-level standards in 2006, but OPUD still anticipates the eventual need for another phase of improvements to accommodate growth in Plumas Lake. However, similar to the situation in the LCWD service area, due to changes in the housing market and economy, growth in Plumas Lake has slowed, so the need for WWTP improvements is not immediate.

Average daily flows to the WWTP are approximately 1.53 mgd, with peak wet weather flows reaching up to 8 mgd. The buildout wastewater demand estimate for the Plumas Lake Specific Plan alone is between 5 and 6.5 mgd. OPUD anticipates that flows to the WWTP at buildout of all known planned development in its service area is between 7.1 and 8.85 mgd.

Other infrastructure under the control of OPUD includes a pond, drying beds, 51 miles of 8-inch diameter and greater sewer pipelines, and associated pump stations. Improvements to the wastewater collection system in Olivehurst are needed due to age and because it is no longer adequately sized. Treated effluence from the WWTP is discharged to the Western Pacific Interceptor Drainage Canal, which is tributary to the Bear River and the Feather River.

### **River Highlands Community Services District**

The River Highlands CSD wastewater system is smaller than LCWD and OPUD, with a maximum capacity of 260,000 gallons per day (gpd) average dry weather flow (ADWF) and only serving 84 residences in a single development. That facility had severe maintenance issues that resulted in the failure of the treatment facility and caused water quality violations and led to the referral of the violations to the California Attorney General in 2007. The old wastewater system is no longer in use. A new facility was completed in October 2010 and is being operated by Yuba County.

## **SOLID WASTE**

In 2008, the Yuba-Sutter Regional Waste Management Authority, which has jurisdiction over solid waste matters in both Yuba and Sutter Counties, disposed of a total of 136,831 tons of solid waste – all of which was landfilled within California (CalRecycle 2010d). A breakdown of solid waste generated in unincorporated Yuba County is not available.

Solid waste collection services, including garbage pickup, recycling, and yard waste hauling, in Yuba County are provided by Recology Yuba-Sutter, formerly known as Yuba-Sutter Disposal, Inc. The company serves Yuba and Sutter Counties, including the incorporated cities and Beale AFB, as well as the community of Knights Landing in Yolo County. Recology Yuba-Sutter operates two transfer stations – one in Marysville and the other in Brownsville. Recology also operates a household hazardous waste collection facility, a recycling buy-back center, and a composting facility. The transfer station located in Marysville has a maximum permitted throughput of 1,080 tons per day (CalRecycle 2010a). The Ponderosa Transfer Station, located in Brownsville, has a maximum throughput of 96 tons per day (CalRecycle 2010b).

Once solid waste is collected and sorted at the transfer stations, it is disposed of at the Ostrom Road Landfill, which is located approximately four miles north of Wheatland. Ostrom Road Landfill is owned and operated by Recology. According to the California Department of Resources, Recycling, and Recovery (CalRecycle, formerly the California Integrated Waste Management Board), it has a maximum permitted throughput of 3,000 tons per day and has a total maximum permitted capacity of 41,822,300 cubic yards. The Ostrom Road Landfill has a remaining capacity of approximately 40,600,000 (97% of total capacity) and an anticipated closure date of December 31, 2066 (CalRecycle 2010c).

According to CalRecycle, the average disposal rate in Yuba County, considered to be within the Central Valley region, was 0.36 tons per resident per year (CalRecycle 2009a). Business disposal rates vary depending on the type of business, as some businesses create more waste than others by nature, from an average of 0.2 tons per employee per year (Forestry and Industrial Machinery Manufacturing) to 3.3 tons per employee per year (Building Materials and Gardening Retail) (CalRecycle 2009b).

## **STORMWATER DRAINAGE AND FLOOD PROTECTION**

Flood protection and drainage are closely linked with regard to infrastructure needs. Adequate facilities and maintenance are necessary to prevent issues associated with flood protection. In some cases, flood protection and drainage services and/or infrastructure are provided by the same agency in an area, or by many different agencies, in which case they work together to provide adequate flood protection and drainage in a particular area. In Yuba County, several agencies have some jurisdiction over flood protection and the drainage infrastructure associated with flood control, including: the U.S. Army Corps of Engineers, California Department of Water Resources, YCWA, the Three Rivers Levee Improvement Authority (TRLIA), Marysville Levee District, several reclamation districts, and Yuba County. An overview of floodplains, water features and planned development is provided in Exhibit 4.9-1 in Section 4.9 *Hydrology and Water Quality*.

### **Flood Protection Infrastructure**

Major flood protection infrastructure within Yuba County includes major levee systems along the Feather, Yuba, and Bear Rivers, as well as other major drainage canals and watercourses, dams at New Bullards Bar Reservoir, the Western Pacific Interceptor Canal (WPIC) channel, and various slurry cutoff walls, ditches, and detention basins located at appropriate locations throughout the County. Oroville Dam in Butte County also provides flood protection to Yuba County, which is downstream. Additional information about specific flood control infrastructure and the agencies providing maintenance to those facilities can be found in the “Infrastructure, Public Facilities, and Public Services” General Plan Update Background Report. Flooding hazards are addressed in greater detail in Section 4.9, “Hydrology and Water Quality.” The remainder of this analysis will focus on storm drainage facilities.

### **Stormwater Drainage Facilities**

In addition to major flood control facilities, such as levees and dams, smaller-scale drainage infrastructure can play a role in preventing localized flooding during larger flood or storm events. Drainage needs depend on the amount of precipitation and upstream flow, the amount of urban development, the rate of groundwater infiltration (percolation), downstream flood conditions, water quality, and evolving regulatory standards.

Urban development results in additional impervious surfaces, such as streets, sidewalks, driveways, buildings, and parking lots, which do not allow water to soak into the ground, so the water must be transported elsewhere to prevent it from pooling and causing localized flooding. This urbanization and development of new impermeable surfaces may create new pollutant sources, which can affect water quality downstream. Urban runoff and related water quality impacts can be reduced through management techniques that slow down and disperse runoff and allow water to soak into the ground. Cities and counties typically conduct comprehensive drainage master

planning that is linked to long-range land use plans. As development is proposed, the locally relevant aspects of the overall drainage master plan are funded and constructed (Yuba LAFCO 2008).

Yuba County, the City of Marysville, the City of Wheatland, Reclamation District 784, and Beale AFB are responsible for the operation and maintenance of local runoff collection, conveyance and discharge systems, and 22 of the County Service Areas (CSAs) provide maintenance of roadside ditches along private roads throughout the County (Yuba LAFCO 2008).

### ***Yuba County***

Yuba County operates and maintains a drainage system consisting of roads with drainage systems, catch basins, water basins, detention basins, constructed wetlands, artificial channels, aqueducts, curbs, gutters, ditches, sumps, pumping stations, storm drain inlets, and storm drains, which provide stormwater drainage to unincorporated County lands (Yuba LAFCO 2008).

The southwestern portion of the County experiences the greatest impacts from drainage overflow issues, as water backs up into the Feather and Bear Rivers and the Western Pacific Interceptor Canal channel during major storm events. The County has identified the need to improve drainage infrastructure in Linda and Olivehurst. In general, improvements to the County drainage system are developer-driven and funded. However, there is a known need for improvements to the existing system so that new development does not further exacerbate issues. The southwest portion of the County was the only area identified in the General Plan Update Background Report and the Municipal Services Review prepared for LAFCO as needing major drainage improvements. However, much of this area includes planned future development areas within Linda and Olivehurst - Plumas Lake.

### ***Reclamation District 784***

RD 784 provides drainage in the Olivehurst - Plumas Lake and Linda. RD 784 maintains major drainage channels, most detention basins, and pumping stations. Water drains from the county-owned infrastructure in subdivisions into district-owned channels and detention basins, and is finally pumped over the levees into the Feather and Bear Rivers and the WPIC. Drainage infrastructure maintained by RD 784 includes 43 miles of internal drainage ditches, nine pumping stations, and five detention basins. Recommended improvements include the development of new detention basins, channel widening, and improvements to pump stations (Yuba LAFCO 2008).

## **4.14.3 ENVIRONMENTAL IMPACTS AND MITIGATION MEASURES**

### **METHODOLOGY**

Impacts on utility infrastructure that would result from buildout of the 2030 General Plan are evaluated at a programmatic level by comparing existing infrastructure, its available capacity, and ability to serve future demand on utilities that would be caused by buildout. Once future demands have been estimated, the analysis determines whether the increased demand would result in the need for new or expanded facilities, the construction of which could possibly result in adverse impacts on the physical environment. Policies and actions of the 2030 General Plan that would reduce these impacts are identified.

### **THRESHOLDS OF SIGNIFICANCE**

Based on Appendix G of the State CEQA Guidelines, an impact on public utilities is considered significant if the proposed project would:

- ▶ exceed wastewater treatment requirements of the applicable Regional Water Quality Control Board;

- ▶ require or result in the construction of new water or wastewater treatment facilities or expansion of existing facilities, the construction of which could cause significant environmental effects;
- ▶ require or result in the construction of new storm water drainage facilities or expansion of existing facilities, the construction of which could result in significant physical environmental effects;
- ▶ have sufficient water supplies available to serve the project from existing entitlements and resources, or are new or expanded entitlements needed;
- ▶ result in a determination by the wastewater treatment provider which serves or may serve the project that it has adequate capacity to serve the project's projected demand, in addition to the provider's existing commitments;
- ▶ be served by a landfill with sufficient permitted capacity to accommodate the project's solid waste disposal needs; or
- ▶ comply with federal, state, and local statutes and regulations related to solid waste.

## IMPACT ANALYSIS

**IMPACT 4.14-1 Exceed Wastewater Treatment Requirements.** *Implementation of the 2030 General Plan would result in the development of new residential, commercial, industrial, and civic uses, which would increase local demand for wastewater treatment facilities. It is possible that land use change could exceed the capacity of wastewater treatment facilities. It is possible that, depending on the specific uses developed under the 2030 General Plan, wastewater treatment requirements may be exceeded. This impact is considered **potentially significant**.*

The potential to exceed wastewater treatment requirements or capacity is an impact that is associated with new land uses that would increase wastewater effluent or substantially decrease water quality being discharged to wastewater systems. The 2030 General Plan creates land use designations and policies that organize growth, but does not, by itself, propose new development projects. The County anticipates that urban development would occur under the General Plan, including housing, commercial retail and services, parks, schools, and some amount of light industrial and industrial development.

The specific environmental impacts of projects, including projects that may produce wastewater effluent in large amount or high pollutant concentrations, will be evaluated at the project level and is beyond the scope and purpose of a General Plan programmatic EIR. The impacts of infrastructure required to serve General Plan buildout is analyzed at a programmatic level along with the direct effects of construction and operation of General Plan land uses throughout this EIR.

Typical urban development is not known to generate wastewater in such amounts or concentrations as to create challenges at any of the existing wastewater treatment plants serving the unincorporated area. It is not knowable at this time whether or not uses may be proposed that would require on-site treatment or pre-treatment due to unusual wastewater effluent generation characteristics. Because the exact nature of future projects and their potential impact on the water treatment requirements of specific wastewater treatment systems is unknown. The impact is considered **potentially significant**.

### Relevant Policies and Actions of the 2030 General Plan

- ▶ **Policy CD12.2:** New developments will be required to construct and dedicate and/or fund on a fair-share basis wastewater collection, conveyance, and treatment facilities consistent with applicable local, State, and federal standards.

► **Action CD12.1: Facility Planning.** Following adoption of the General Plan, as funding allows, the County will seek to draft and/or update long range facility plans for relevant County departments. The Community Development and Services Agency will provide detail on population growth assumptions for different parts of the County to assist with the facility planning effort. It is anticipated that joint-use and operation opportunities would arise from a coordinated facility planning process that involves multiple County departments. The County should identify and prioritize discrete projects in the facilities master plan. Facility master plan projects would be a part of the County’s ongoing capital improvements programming and the subject of grant applications. For example, the County should coordinate facility master plan updates with applications for the US Department of Agriculture’s Rural Development low-interest loan and grant programs for rural parts of the County.

- Related Goals: Goal CD12
- Agency/Department: Community Development and Services Agency; Administrative Services Department; Library Department
- Funding Source: Impact fees; federal and state funds; General Fund
- Time Frame: Update facility master plans by 2015

► **Action CD14.1: Impact Fees and Tax/Revenue Agreements.** Following General Plan adoption, the County will coordinate with the cities and other public service agencies on revenue sharing, redevelopment pass-through funding, development impact fees, and other important fiscal arrangements to implement General Plan policies.

- Related Goals: Goal CD1, Goal CD2, Goal CD12, Goal CD13, Goal CD14, Goal CD15, Goal CD16, Goal CD17
- Agency/Department: Community Development and Services Agency and County Administrator’s Office.
- Funding Source: General Fund
- Time Frame: Ongoing during General Plan buildout.

The County’s policies and actions would require planning and funding of infrastructure needed to serve the General Plan at buildout, including wastewater treatment facilities with the capacity and treatment mechanisms needed to meet regional and state requirements. However, the County cannot demonstrate at this programmatic level of analysis that the implementation of these policies and actions would reduce impacts to a less-than-significant level. The impact is considered **potentially significant**, requiring mitigation.

**Mitigation Measure 4.14-1: Wastewater Treatment Verification.**

The County shall implement the following measures to ensure the availability of adequate wastewater collection and removal systems for land development projects in the unincorporated county under the 2030 General Plan:

- Before approval of any tentative subdivision map for a proposed residential project, the County shall formally consult with the appropriate wastewater system provider that would serve the proposed subdivision to make a factual showing or impose conditions to ensure the availability of an adequate wastewater removal system for the proposed development.
- Before recordation of any final subdivision map, or before County approval of any project-specific discretionary approval or entitlement for nonresidential land uses, the project applicant shall demonstrate,

based on substantial evidence, the availability of a long-term, reliable wastewater collection and treatment system for the amount of development that would be authorized by the final subdivision map or project-specific discretionary nonresidential approval or entitlement. Such a demonstration shall consist of a written verification that existing treatment capacity is, or will be available and that needed physical improvements for treating wastewater from the project site will be in place before occupancy.

## Conclusion

Implementation of the above mitigation would assist in ensuring that sufficient service capacity is available to serve future growth projected in the 2030 General Plan and avoid issues related to wastewater treatment requirements. By adhering to the policies proposed in the 2030 General Plan, as well as the above requirement mitigation and existing regulations, the impact is considered **less than significant**.

**IMPACT 4.14-2** **Construction of New or Expanded Water or Wastewater Facilities.** *Implementation of the 2030 General Plan would result in the development of new residential, commercial, industrial, and civic uses, which would increase local demand for water conveyance and wastewater collection, conveyance, and treatment facilities. In addition, implementation of the 2030 General Plan could accommodate development in areas that currently are not served by water systems or a wastewater treatment provider. Construction of new or expanded water and wastewater facilities could have adverse effects on the physical environment. This impact is **potentially significant**.*

The 2030 General Plan would govern land use in unincorporated parts of Yuba County. Within the unincorporated portion of the County, primary wastewater treatment providers are LCWD and OPUD, both of which serve the areas planned for growth under the 2030 General Plan, including Linda, Olivehurst-Plumas Lake, and Arboga.

As mentioned in the Environmental Setting above, OPUD recently upgraded its WWTP to tertiary standards in 2006 and has a permitted capacity of 3 mgd for average dry weather flows (adwf). Current flows are 1.53 mgd adwf, just slightly over 50% of the WWTP's capacity. However, OPUD estimates that buildout of all known planned development within OPUD's service boundary, including Plumas Lake, will eventually reach between 7.1 and 8.85 mgd adwf. Therefore, another expansion to the WWTP would be required to serve planned development prior to buildout. This was the case before the County initiated this General Plan update. In addition to the need for wastewater treatment capacity upgrades, wastewater conveyance infrastructure, such as pipes and pumping stations will be required in currently undeveloped areas where no such infrastructure currently exists.

LCWD is currently in the process of upgrading its existing WWTP. Construction of the WWTP expansion began in December 2009 and is expected to be completed in December 2011 and will have a capacity of five mgd. Another expansion to 6.6 mgd is anticipated by 2030 to accommodate new development. Because additional development could exceed future projected treatment capacity, LCWD may also need to construct collection infrastructure in new development areas and expand and improve existing infrastructure, as needed.

New development that could occur in Rural Community Boundary areas is anticipated to be served by private septic systems. The 2030 General Plan includes a policy that promotes the use of centralized and shared septic systems in the Rural Centers within the Rural Community boundaries, where land uses would be more clustered than in other parts of the community (Policy HS3.9) to minimize the impact of such systems. It is also possible that clustered developments could occur that would be served by a public wastewater system. It is not possible to know at this time whether development would be served by septic systems, shared septic systems, or public wastewater treatment systems.

Water supplies in Yuba County are provided by several different providers that, in turn, rely on both surface and groundwater sources. Municipal water purveyors, including California Water Service, Linda County Water

District (LCWD), the City of Wheatland, Olivehurst Public Utilities District (OPUD), and Beale Air Force Base (AFB), use groundwater exclusively.

OPUD operates two separate water systems in the Olivehurst – Plumas Lake area. Well water is treated at one of four treatment facilities or pumped directly into the distribution system during times of high demand, when the treated wells cannot meet demand. The total maximum well pumping capacity of both systems is 24,070 gallons per minute (gpm), 16,370 gpm in Olivehurst and 7,700 gpm in Plumas Lake. The maximum day demand in 2005 used only 60 percent of the system’s capacity. The Olivehurst system has enough source capacity to meet peak demand. However, providing sufficient treated water to the eastern side of the system has posed a challenge to OPUD (Yuba Local Agency Formation Commission, 2008).

LCWD also serves developed portions of unincorporated Yuba County. Key infrastructure includes six production wells, eleven booster pumps, approximately 40 miles of pipe line, and four treatment facilities. The water supply system has a maximum pumping capacity of 14.7 mgd. LCWD’s water supply is provided entirely by the South Yuba Groundwater Basin from six wells. Each well is equipped with a wellhead treatment system to treat taste, odor, and color. The current water system has the pumping capacity to serve anticipated growth until 2010, according to UWMP projections. However, if growth occurs as predicted, an additional three mgd capacity will be needed by 2015 and an additional 20 mgd will be needed by 2030 to accommodate maximum daily demand. The additional five mgd of pumping capacity from Well 17 is expected to meet the needs of the District beyond 2015.

To serve the 2030 General Plan at buildout, there will need to be improvements to the water supply systems of OPUD and LCWD, as well as improvements in the more rural parts of the County. The County anticipates the need for additional wells, treatment systems, pumps, and delivery/conveyance facilities.

The specific environmental impacts of each phase of improvements to the water and wastewater infrastructure will be evaluated at the project level and is beyond the scope and purpose of a General Plan programmatic EIR. The impacts of infrastructure required to serve General Plan buildout is analyzed at a programmatic level along with the direct effects of construction and operation of General Plan land uses throughout this EIR. However, because of the level of development anticipated under the 2030 General Plan, it is possible that the construction of additional facilities could generate significant impacts. Installing water and wastewater conveyance facilities would involve earth disturbance, transport of materials, and operation of equipment similar to that which will also be required for installation of other infrastructure in the same public rights-of-way and between public rights-of-way and end users. Although General Plan policies and actions will require infrastructure and facilities to be provided in a way that reduces environmental impacts, the extent of infrastructure required to serve future demand, depending on phasing of future development, could create significant impacts.

### **Relevant Policies and Actions of the 2030 General Plan**

The 2030 General Plan contains the following policies and actions to minimize the environmental effects associated with wastewater treatment facilities and infrastructure. In addition, the County’s 2030 General Plan policies and actions intended to reduce cultural, biological, air quality, climate change, noise, hydrology, geology and soils, and other impact areas would also apply to expansion and extension of wastewater treatment, collection, and conveyance facilities.

- ▶ **Policy CD3.5:** Prior to approval, new developments are required to demonstrate consistency with established standards for setbacks from landfills, airports, sewage treatment plants, and other similar uses, as applicable.
- ▶ **Action CD3.1: Compatibility Review and Conditioning of Projects and Plans.** The County will review projects against policies in this General Plan and analysis in the General Plan Environmental Impact Report (EIR) to reduce noise and air quality impacts. The County Zoning Ordinance and development standards should identify design and performance standards for noise, light, glare, air pollution, and other relevant issues. The County will use the General Plan to determine the adequacy of proposed buffering between

residential land uses, highways, railroads, airports, industries, mining operations, agricultural operations, and other potentially incompatible uses. The County will condition projects, as appropriate, to provide consistency with this General Plan and the General Plan EIR. The County will balance its goals for infill and mixed-use development with policies and standards for noise, vibration, light and glare, and other issues of compatibility.

- Related Goals: Goal CD3, Goal NR11, Goal HS5, Goal HS10, Goal HS11
- Agency/Department: Community Development and Services Agency
- Funding Source: General Fund; applicant funding for project-specific work
- Time Frame: Ongoing

- ▶ **Policy CD12.2:** New developments will be required to construct and dedicate and/or fund on a fair-share basis wastewater collection, conveyance, and treatment facilities consistent with applicable local, State, and federal standards.
- ▶ **Action CD12.1: Facility Planning.** Following adoption of the General Plan, as funding allows, the County will seek to draft and/or update long range facility plans for relevant County departments. The Community Development and Services Agency will provide detail on population growth assumptions for different parts of the County to assist with the facility planning effort. It is anticipated that joint-use and operation opportunities would arise from a coordinated facility planning process that involves multiple County departments. The County should identify and prioritize discrete projects in the facilities master plan. Facility master plan projects would be a part of the County’s ongoing capital improvements programming and the subject of grant applications. For example, the County should coordinate facility master plan updates with applications for the US Department of Agriculture’s Rural Development low-interest loan and grant programs for rural parts of the County.

- Related Goals: Goal CD12
- Agency/Department: Community Development and Services Agency; Administrative Services Department; Library Department
- Funding Source: Impact fees; federal and state funds; General Fund
- Time Frame: Update facility master plans by 2015

- ▶ **Policy CD14.1:** The County will support regional electricity, water, wastewater, water conservation, and other agreements, where cost-effective and environmentally sustainable.
- ▶ **Action CD14.1: Impact Fees and Tax/Revenue Agreements.** Following General Plan adoption, the County will coordinate with the cities and other public service agencies on revenue sharing, redevelopment pass-through funding, development impact fees, and other important fiscal arrangements to implement General Plan policies.

- Related Goals: Goal CD1, Goal CD2, Goal CD12, Goal CD13, Goal CD14, Goal CD15, Goal CD16, Goal CD17
- Agency/Department: Community Development and Services Agency and County Administrator’s Office.
- Funding Source: General Fund
- Time Frame: Ongoing during General Plan buildout.

- **Policy HS3.10:** New developments proposing private well and septic systems shall demonstrate compliance with the County’s standards for water wells and sewage disposal systems, which are designed to protect the public and environmental health.

The County’s policies and actions listed above, in addition to the environmental topic specific policies and actions included throughout the General Plan and referenced throughout this EIR would reduce impacts associated with construction and operation of needed water delivery and wastewater treatment, collection, and conveyance facilities.

## Conclusion

By adhering to the policies proposed in the 2030 General Plan, as well as all applicable requirements pertaining to water supply, wastewater treatment, and septic systems, the County could minimize impacts associated with construction of new wastewater treatment facilities or extension of existing facilities or infrastructure. Technical sections of this EIR evaluate the effects of construction activities relative to specific environmental issue areas, such as biological resources, air quality, etc., at a programmatic level of detail, as is appropriate for a general plan. The 2030 General Plan includes policies and actions, and this EIR includes mitigation measures, where necessary, to reduce or avoid impacts, as noted throughout Section 4.0 of this EIR. Despite mitigating policies and actions and the application of necessary mitigation measures, construction and operation of new or expanded water delivery and wastewater conveyance and treatment infrastructure may result in significant environmental effects. The County has included throughout the 2030 General Plan all feasible measures available to mitigate such impacts. The impact is considered **significant and unavoidable**.

**IMPACT 4.14-3** **New or Expanded Storm Water Drainage Facilities.** *Buildout of the 2030 General Plan would accommodate an expansion of the urbanized landscape and construction of new impermeable surfaces that would generate additional stormwater runoff compared to baseline conditions. New land uses would be expected to include residential, commercial, industrial, and civic uses. Each of these land uses could involve addition of impermeable surfaces, with associated increases in stormwater runoff. The construction of new facilities and conveyance infrastructure or the expansion of existing facilities and infrastructure to handle this runoff could generate significant environmental effects. This impact is considered **potentially significant**.*

Buildout of the 2030 General Plan would accommodate an expansion of the urbanized landscape and construction of new impermeable surfaces that would generate additional stormwater runoff compared to baseline conditions. The 2030 General Plan could accommodate urbanization in areas currently in agricultural production, which would increase stormwater runoff in these areas. The increased flow in stormwater would increase demand for stormwater conveyance and discharge facilities.

Under the 2030 General Plan, the Linda and Olivehurst areas would be expected to experience some redevelopment and new development. These areas currently experience localized flooding due to deficiencies in the existing stormwater drainage system. Redevelopment and new development activities in or near these communities could exacerbate these existing issues by adding urbanized impermeable surfaces to the landscape, so improvements will be necessary along with redevelopment and new development.

The specific environmental impacts of each phase of improvements to the drainage infrastructure will be evaluated at the project level and is beyond the scope and purpose of a General Plan programmatic EIR. The impacts of infrastructure required to serve General Plan buildout is analyzed at a programmatic level along with the direct effects of construction and operation of General Plan land uses throughout this EIR. However, because of the level of development anticipated under the 2030 General Plan, it is possible that the construction of additional facilities could generate significant impacts.

Installing drainage facilities would involve earth disturbance, transport of materials, and operation of equipment similar to that which will also be required for installation of other infrastructure in the same public rights-of-way

and between public rights-of-way and end users. Although General Plan policies and actions will require infrastructure and facilities to be provided in a way that reduces environmental impacts, the extent of infrastructure required to serve future demand, depending on phasing of future development, could create significant impacts.

### Relevant Policies and Actions of the 2030 General Plan

The County's 2030 General Plan policies and actions intended to reduce cultural, biological, air quality, climate change, noise, hydrology, geology and soils, and other impact areas would also apply to expansion and extension of stormwater detention, collection, and conveyance facilities. Please refer to the topic-specific subsections of Section 4.0 of this EIR for more information. The 2030 General Plan also includes policies and actions that are intended to provide adequate stormwater infrastructure that would protect the unincorporated developed areas of the County from localized flooding associated with stormwater drainage issues, including the following.

- ▶ **Policy CD12.3:** The County will implement stormwater master plans designed to provide collection, detention, and conveyance consistent with local standards for developed areas within the Valley Growth Boundary. In general, new developments will be required to demonstrate no net increase in stormwater runoff prior to approval.
  
- ▶ **Action CD12.1: Facility Planning.** Following adoption of the General Plan, as funding allows, the County will seek to draft and/or update long range facility plans for relevant County departments. The Community Development and Services Agency will provide detail on population growth assumptions for different parts of the County to assist with the facility planning effort. It is anticipated that joint-use and operation opportunities would arise from a coordinated facility planning process that involves multiple County departments. The County should identify and prioritize discrete projects in the facilities master plan. Facility master plan projects would be a part of the County's ongoing capital improvements programming and the subject of grant applications. For example, the County should coordinate facility master plan updates with applications for the US Department of Agriculture's Rural Development low-interest loan and grant programs for rural parts of the County.
  - Related Goals: Goal CD12
  - Agency/Department: Community Development and Services Agency; Administrative Services Department; Library Department
  - Funding Source: Impact fees; federal and state funds; General Fund
  - Time Frame: Update facility master plans by 2015
  
- ▶ **Policy CD15.7:** County and reclamation district drainage fees should be structured to provide incentives for use of Low Impact Development and natural drainage approaches that slow down, disperse, and filter stormwater runoff.
  
- ▶ **Policy CD15.8:** The County will encourage the joint use of parks for school and public use, as well as stormwater detention, as appropriate.
  
- ▶ **Action CD15.1: Revise Impact Fees.** The County will have prepared a Nexus Fee Study following the 2030 General Plan update to support revised development impact fees. One focus of this updated effort would be to ensure that compact development that makes efficient use of land has lower fees, where this approach to development is shown to have lower costs. The County will consider basing fees on an equivalent dwelling unit (EDU) basis, a per-capita basis, or per-acre basis, depending on the type of fee. The per-EDU, per-capita, or per-acre approach would be considered rather than presenting fees on a flat-rate, per unit basis. Different types of dwelling units have different demands for services and different associated costs. The County will

also consider reduced fees for infill development that has access to existing infrastructure with adequate capacity to serve that development.

- Related Goals: Goal CD1, Goal CD2, Goal CD5, Goal CD6, Goal CD7, Goal CD8, Goal CD11, Goal CD12, Goal CD13, Goal CD14, Goal CD15, Goal CD16, Goal CD19, Goal NR12, Goal HS9
- Agency/Department: Community Development and Services Agency
- Funding Source: General Fund
- Time Frame: Nexus Fee Study and revised fees by 2014.

- ▶ **Policy HS3.16:** New developments are encouraged to incorporate open, vegetated swales to filter, slow down, and convey stormwater and encourage groundwater infiltration.
- ▶ **Policy HS3.17:** New developments shall limit construction of new impervious surfaces, such as parking lots, travelways, vehicle waiting areas, and vehicle loading areas to the minimum amount needed to implement the subject project.
- ▶ **Policy HS3.18:** New developments shall break up parking areas, intersperse parking with vegetated areas, and incorporate other best management practices that filter and slow down runoff and promote infiltration.

- ▶ **Action HS3.1: Ongoing Monitoring and Corrective Actions.** During General Plan buildout, the County may conduct water quality monitoring along key waterways and watersheds. The County may require more stringent water quality standards for developments that may affect waterways or watersheds with identified water quality problems. The County, in collaboration with regional water supply providers, will conduct ongoing monitoring to ensure the application and effectiveness of construction and environmental policies and standards. Ongoing monitoring would be designed to identify problems that may require corrective actions. The County will collaborate with regional and state agencies on the need for corrective actions for ongoing uses that pollute the County's water supply.

- Related Goals: Goal HS3, NR12
- Agency/Department: Community Development and Services Agency
- Funding Source: State and federal grants, other State or federal funding, and private funding for projects near the County's waterbodies
- Time Frame: Ongoing, with corrective actions, as needed

- ▶ **Policy NR1.10:** The County's recreational open space should be designed to provide multiple benefits, including recreational, circulation, and stormwater drainage conveyance and detention. Applicable impact and in-lieu-fees will be reduced to reflect these overlapping uses for developments that include multi-use open space.

- ▶ **Policy NR6.43:** New developments, roads, water and sewer lines, and stormwater infrastructure should be located to avoid impacts to significant cultural resources.

- ▶ **Action NR6.2: Paleontological Resources.** If potential paleontological resources are detected during construction, work shall stop and consultation is required to avoid further impacts. Actions after work stoppage will be designed to avoid significant impacts to the greatest extent feasible. These measures could

include construction worker education, consultation with a qualified paleontologist, coordination with experts on resource recovery and curation of specimens, and/or other measures, as appropriate.

- Related Goals: Goal NR6
- Agency/Department: Community Development and Services Agency
- Funding Source: Project applicant funds
- Time Frame: Ongoing, as construction occurs under the General Plan

## Conclusion

Implementation of the 2030 General Plan would require new and expanded stormwater infrastructure. Technical sections of this EIR evaluate the effects of construction activities relative to specific environmental issue areas, such as biological resources, air quality, etc., at a programmatic level of detail, as is appropriate for a general plan. By adhering to the policies proposed in the 2030 General Plan, as well as all applicable requirements pertaining to drainage systems, the County could minimize impacts. The 2030 General Plan includes policies and actions, and this EIR includes mitigation measures, where necessary, to reduce or avoid impacts, as noted throughout Section 4.0 of this EIR. For example, drainage facilities will be located to avoid identified cultural resources. However, as with all ground disturbing construction, there is the potential for impacts to previously unidentified resources. In addition, other natural resources within the footprint of an expanded stormwater drainage network may be adversely affected. Despite mitigating policies and actions and the application of necessary mitigation measures, construction and operation of new or expanded drainage facilities and infrastructure may result in significant environmental effects. The County has included throughout the 2030 General Plan all feasible measures available to mitigate such impacts. The impact is considered **significant and unavoidable**.

**IMPACT 4.14-4** **Insufficient Water Supplies to Meet the Future Water Demand in Unincorporated Areas Served by the County.** *Implementation of the 2030 General Plan would ~~accommodate development that designate land uses that, if developed to full buildout,~~ would increase water demand. ~~The County's water conservation policies, requirements to confirm water supply prior to development for large projects, and avoid impacts to groundwater recharge areas would ensure a less than significant impact. Reductions in agricultural cultivation caused by conversion of agricultural land would decrease water consumption within Yuba County. Existing regulations require additional water conservation measures in new development and for large developments to demonstrate ongoing reliable water supply. Considering existing regulations that require conservation and demonstration of water supply and that the overall change in water demand compared to existing supply is not substantial, the impact is considered less than significant.~~*

Adoption of the 2030 General Plan, by itself, would not create new water demand. The policies of the 2030 General Plan provide a means for organizing and regulating growth and use change. However, if and uses allowed under the 2030 General Plan, if developed, would lead to new water demand. Implementation of the 2030 General Plan could accommodate up to 100,000 additional residents in unincorporated areas at full buildout. This population increase would be accompanied by additional commercial, industrial, and civic uses, as well, which would generate water demand. Because specific development proposals for these land uses are not considered in this EIR, the exact increase in water demand and the water purveyors that would provide this water cannot be determined. However this impact analysis examines the estimated increase in demand in relation to the existing water use conditions in Yuba County to estimate the availability of water supply.

Prior to the preparation of the 2030 General Plan, YWCA estimated that foreseeable growth within the County (including incorporated areas) would result in an increase in annual urban water demand of approximately 45,000 acre feet, while conversion of agricultural land would result in a decrease in annual agricultural water demand of approximately 31,000 acre feet over the same period (YCWA 2008:4-33). These estimates result in a net increase in annual demand of approximately 14,000 acre feet, projected by 2030, based upon foreseeable patterns of development prior to development of the 2030 General Plan. The projected increase in water demand, calculated by YCWA prior to development of the 2030 General Plan is relatively small in relation to existing patterns of

consumption. The projected net increase of 14,000 acre feet per year constitutes approximately an increase in consumption of 2.4% relative to the water used in 2005. However, urban water demand, at least in the immediate future would most likely be served with groundwater, while the agricultural demand is mostly surface water. Today, roughly 75% of agricultural water demand is met with surface water and 85% of urban demand is met using groundwater. Additionally, when agricultural land, especially flood irrigated land, is retired and development occurs, it is possible that the net infiltration of water from the land surface would be reduced due to loss of percolation of irrigation water and increased impervious surfaces.

In addition to YCWA estimates, the California Department of Water Resources (DWR) provides estimates -of per -capita, per-day (GPCD) water demand for the subregions of California. Yuba County is within DWR Hydrologic Region 5 (Sacramento River), where the average rate of water consumption is 253 GPCD (DWR 2010). Per capita water use is defined as the total applied water of a service area divided by the permanent population of that area (DWR 1994:5). This metric provides a means of estimating how much an increase in population in a particular area will increase water demand, assuming that development conforms roughly to existing patterns of land use.

Based upon this figure, an increase in population of 100,000 individuals within unincorporated portions of the County could result in an increase in water demand of approximately 28,340 acre feet per year. The net effect of buildout however, must consider reductions in agricultural water use associated with conversion of agricultural land to urban use, as anticipated under the 2030 General Plan. Conservatively estimated, the conversion of farmland from land use change under the 2030 General Plan (approximately 9,324 acres, excluding grazing land where water is not applied) could reduce agricultural water consumption by approximately 23,124 af at the time of buildout, based upon an average applied water rate of 2.48 af per year in the US (USGS 2011). The net increase in demand resulting from buildout of the 2030 General Plan, considering the increase in population relative to changes in land use is estimated to be approximately 5,216 af per year. The County tracks crop type and has some Geographic Information Systems data describing crop types throughout the County, although the County does not have comprehensive information. If estimates by crop type are used instead of overall average irrigation rates, the decrease in water demand from conversion of agricultural land to urban us is 19,917 af per year (DWR 2011). This estimate is conservative since, as noted, tracking of crop types is not comprehensive throughout portions of the County that could be subject to land use change under the 2030 General Plan.

The net effect of buildout of the 2030 General Plan would increase water demand by 1 percent relative to the water consumed in Yuba County in 2005. However, as noted above, urban water demand, at least in the immediate future would most likely be served with groundwater, while the agricultural demand is mostly surface water. Ignoring the decrease in demand by converting agricultural land, the total increase in water demand is conservatively estimated to be approximately 5% above existing water demand levels for full buildout of the 2030 General Plan. Assuming 85% of the new demand is for groundwater, full buildout of the 2030 General Plan could increase the demand for groundwater by approximately 17%. These amounts will be further reduced by enforcement of the California Green Building Code (Title 24, Cal. Code of Regulations [CCR] Part 11). The Green Building Code requires an overall 20% reduction in residential indoor potable water use (24 CCR Part 11, Section 4.303.1) and a 20% reduction in indoor potable and wastewater use for non-residential buildings (24 CCR Part 11, Section 5.303.2 and 5.303.4). These reductions would occur relative to the baselines for typical appliances and fixtures provided in the Code. The Green Building Code also requires irrigation controls for residential developments that adjust irrigation in response to changes in plants' needs and changes in weather in order to reduce water use. Existing regulations that will be required for new development accommodated under the 2030 General Plan will reduce the net increase in demand compared to the previously provided estimates.

Existing surplus surface water supplies in Yuba County exceed 2 million af annually. The estimated total storage capacity of the groundwater basins is about 7.5 million af (Yuba County IRWMP 2008; 4-13). Not all of these supplies are available for withdrawal because well capacity and recharge rates limit the amount that can be safely withdrawn. However, approximately 2.8 million af occur within 200 feet of the land surface (Yuba County IRWMP 2008:4-13). Although the net increase in water demand relative to existing demand is insubstantial and

existing supplies appear to be sufficient, the determination of sufficient and reliable supplies for specific projects requires identification of particular service systems and consideration of the availability and reliability of supplies that a purveyor can deliver in relation to existing commitments considering the potential fluctuations of water availability at the time the project proponent seeks to secure new water rights. The potential for drought makes future deliveries uncertain. In drier years, due to shortages in surface water supplies, agricultural water users may turn to groundwater, which may affect the availability and quantity of groundwater for urban use. However, existing requirements of state law require projects that would consume large amounts of water to demonstrate sufficient and reliable supplies (California Water Code 10910 et seq.). Existing regulations incorporated into the California Green Building Code require additional water conservation measures as a part of new development. The increase in water demand is counterbalanced with a decrease in the amount of irrigated agricultural land that would be converted to urban development if the 2030 General Plan is fully built out. The net increase in water demand under the 2030 General Plan is very small (roughly 1 percent relative to the water consumed in Yuba County in 2005) compared to existing demand and existing supplies. Therefore, the County considers the impact to be less than significant.

~~Yuba County per capita urban water consumption is estimated at 666 gallons per person per day. This estimate was generated by dividing the annual urban water usage in 2005 by the population estimates for 2005 and multiplying this quantity by the number of days in a year (Yuba County 2008:4-20, U.S. Census Bureau 2005). This number thus provides an estimate for the total water consumption per capita, including all water-consumptive urban land uses (not simply the average water consumed at individual dwelling units). Thus an increase in population of 100,000 individuals would generate a net increase in urban water demand of 74,602 af per year.~~

~~The conversion of farmland from projected development (approximately 9,324 acres excluding grazing land) could reduce agricultural water consumption by approximately 23,124 af at the time of buildout of the plan area, based upon an average applied water rate of 2.48 af per year in the US (USGS 2010b). The net increase in demand resulting from buildout of the 2030 General Plan would thus be approximately 51,478 af per year.~~

~~Existing surplus surface water supplies in Yuba County exceed 2 million af annually. The estimated total storage capacity of the groundwater basins is about 7.5 million af (Yuba County IRWMP 2008: 4-13). Not all of these supplies are available for withdrawal because well capacity and recharge rates limit the amount that can be safely withdrawn. However, approximately 2.8 million af occur within 200 feet of the land surface (Yuba County IRWMP 2008:4-13). While current groundwater extraction for both urban and agricultural uses is estimated at 563,200 af per year the total safe yield of the ground water basins in the County is not currently known, thus the amount by which ground water extraction may be increased safely is also unknown (Scott Maytae, Yuba County Water Agency, pers. comm.[2]). Surplus water supplies total approximately 2,159,304 af per year. Because the increase in demand is estimated at 51,478 af per year, a fraction of the total surplus surface water and ground water supplies, the increased demand for water associated with full buildout of the 2030 General Plan would be less than significant.~~

## **Relevant Policies and Actions of the 2030 General Plan**

The General Plan Exhibit Natural-Resources-1, Open Space Diagram, along with supporting policies, establish the County's approach for surface and groundwater management. These policies include both land use designations and project review requirements to assess the availability of water for particular land uses. Among the open space designations defined in the Natural Resources Element is a category called "Water and Groundwater Recharge." Important areas for groundwater recharge are mapped, and are intended to be reserved for water quality protection, habitat conservation, and other uses that do not adversely affect groundwater recharge. The 2030 General Plan includes policies related directly to protecting groundwater recharge areas, in addition to indirectly promoting groundwater recharge with policies that encourage multi-use open spaces. The 2030 General Plan also includes policies and actions that address a wide variety of issues related to conserving water and ensuring adequate water supply, including those articulated below.:

- ▶ **Policy CD12.1:** New developments will be required to demonstrate the availability of adequate water supply and infrastructure, including during multiple dry years, prior to approval.
- ▶ **Policy CD14.1:** The County will support regional electricity, water, wastewater, water conservation, and other agreements, where cost-effective and environmentally sustainable.
- ▶ **Policy CD14.112:** The County will coordinate with Yuba County Water Agency on conjunctive water use, renewable energy generation and use, and other agreements that would provide advantages to local industries and benefits to existing residents and businesses.
- ▶ **Policy CD15.5:** New developments should incorporate water conservation techniques to reduce water demand, including the use of reclaimed water for landscaping and irrigation.
- ▶ **Action CD15.1: Revise Impact Fees.** The County will have prepared a Nexus Fee Study following the 2030 General Plan update to support revised development impact fees. One focus of this updated effort would be to ensure that compact development that makes efficient use of land has lower fees, where this approach to development is shown to have lower costs. The County will consider basing fees on an equivalent dwelling unit (EDU) basis, a per-capita basis, or per-acre basis, depending on the type of fee. The per-EDU, per-capita, or per-acre approach would be considered rather than presenting fees on a flat-rate, per unit basis. Different types of dwelling units have different demands for services and different associated costs. The County will also consider reduced fees for infill development that has access to existing infrastructure with adequate capacity to serve that development.
  - Related Goals: Goal CD1, Goal CD2, Goal CD5, Goal CD6, Goal CD7, Goal CD8, Goal CD11, Goal CD12, Goal CD13, Goal CD14, Goal CD15, Goal CD16, Goal CD19, Goal NR12, Goal HS9
  - Agency/Department: Community Development and Services Agency
  - Funding Source: General Fund
  - Time Frame: Nexus Fee Study and revised fees by 2014.
- ▶ **Policy NR1.10:** The County's recreational open space should be designed to provide multiple benefits, including recreational, circulation, and stormwater drainage conveyance and detention. Applicable impact and in-lieu-fees will be reduced to reflect these overlapping uses for developments that include multi-use open space.
- ▶ **Policy NR1.11.** Recreational open space along rivers and streams should incorporate flood control objectives, habitat preservation, and habitat restoration, as appropriate.
- ▶ **Policy NR1.14:** Recreational facilities and open space ~~shall-should~~ be designed to use recycled materials and green building techniques, minimize surface runoff, reduce water demand, provide habitat for native species, ~~and~~ reduce the need for ongoing maintenance, and incorporate universal access principles to facilitate use by people of all ages and abilities as feasible.
- ▶ **Policy NR12.1:** For new developments, ~~T~~he County will manage land use change in a way that ~~prevents~~ reduces the potential for overdraft of groundwater supplies, ~~protects-recognizes~~ overlying groundwater rights and surface water rights, and helps to ~~ensures~~ that the combined use of surface and groundwater resources provides for current and future water demand.
- ▶ **Policy NR12.2:** Large new developments shall coordinate with the relevant water service provider to demonstrate availability of water to the satisfaction of the County prior to approval, according to the

requirements of the California Water Code Section 10631. Large developments are generally those with more than 500 dwelling units or employing more than 1,000 people, but shall be defined according to the details in Section 10912 of the California Water Code.

- ▶ **Policy NR12.3:** New developments are strongly discouraged in areas with high groundwater infiltration rates and the County's development standards will restrict the amount of impervious surface that can be added in these areas in the context of new developments.
- ▶ **Policy NR12.4:** The County will encourage the use of recycled water and water from irrigation districts that is not treated to urban standards for outdoor irrigation, toilet flushing, fire hydrants; commercial and industrial processes, carwashes, concrete batching, laundromats; dust control; parks, golf courses, and other landscaped areas, and other appropriate water-intensive uses.
- ▶ **Policy NR12.5:** New developments shall use climate appropriate landscaping in parks and open space, landscaping within new rights of way, yards, and other appropriate spaces, to the maximum extent feasible.
- ▶ **Policy NR12.6:** New developments shall include water conservation technologies such as low-flow toilets, efficient clothes washers, and efficient water-using industrial equipment, in accordance with state law.
- ▶ **Policy NR12.7:** Projects and plans that include recycled water systems, rainwater collection and use, climate appropriate landscaping, smaller lawns, and other water-conserving measures beyond that required by state law should enjoy proportionally lower development impact fees.
- ▶ **Policy NR12.9:** New developments proposing individual wells within Rural Communities shall demonstrate an adequate supply of water without adverse impact to groundwater through testing, hydrological studies, or other means approved by the County.
- ▶ **Policy NR12.10:** Prior to issuing a building permit for a habitable structure, the County will require demonstration of at least 1 gallon per minute per dwelling unit minimum flow rates prior to approval. For any system producing less than 3 gallons per minute, at least 1,200 gallons of storage shall be required. The County may require demonstration of storage capacity for systems that produce low flows, pursuant to County standards.
- ▶ **Policy NR12.11:** Any new water wells drilled near existing County watercourses shall be set back from waterbodies such that the stream hydrology is not directly impacted.

## Conclusion

The proposed policies of the 2030 General Plan require individual projects that would occur under buildout to demonstrate sufficient and reliable water supplies (Policy CD 12.1). In addition, the policies of the General Plan incorporate and reference the existing requirements of state law which require projects that would consume large amounts of water to demonstrate sufficient and reliable supplies (Policy NR12.2, California Water Code 10910 et seq.). Furthermore the 2030 General Plan requires consideration of the individual and cumulative effect of new projects on groundwater supplies (Policy NR12.1). Policies CD 12.1 and NR12.1 would be applied to individual projects that fall under the thresholds of California Water Code Section 10910, and would be enforced as part of project-level review for tiered projects that would occur under buildout. The requirements of California Water Code 10910 et seq. would be enforced at the time of project level review under buildout for larger projects that meet the relevant thresholds provided in California Water Code Section 10912. The Green Building Code requires an overall 20% reduction in residential indoor potable water use (24 CCR Part 11, Section 4.303.1) and a 20% reduction in indoor potable and wastewater use for non-residential buildings (24 CCR Part 11, Section 5.303.2 and 5.303.4). These reductions would occur relative to the baselines for typical appliances and fixtures provided in the Code. Collectively, these policies and laws would apply to all new water consuming land uses that would occur under buildout. The increase in water consumption at buildout would be relatively small in relation to

existing water use, as described above. Because projects occurring under buildout would be required to demonstrate adequate and reliable water supplies and to consider the impact of new water consuming land uses in relation to existing and future demand, this impact is considered **less than significant**.

~~Substantial surplus water supplies exist under current conditions. Because the existing surplus is greater than projected demand it is not anticipated that the increase in demand would require new water entitlements by 2030. In addition, proposed policies within the 2030 General Plan and state law require that new water consumptive projects of substantial size demonstrate adequate supplies. The County has also incorporated water conservation policies in the 2030 General Plan, which supplement water conservation that is already required as a part of building code compliance. In addition California law will mandate further reductions in urban and residential water consumption when the California Green Building Standards Code takes effect in 2011 (Title 24 Cal. Code of Regulations, Part 11). The combined reduction in water consumption that would result from proposed General Plan policies and state law cannot be quantified because specific development proposals are not evaluated in this document. However because the increase in population would not generate an increase in water demand that exceeds supplies even before conservation measures are implemented, this impact is considered **less than significant**.~~

#### **Mitigation**

~~No mitigation is required.~~

**IMPACT 4.14-5** Increased Demand for Solid Waste Disposal and Compliance with Solid Waste Requirements. *Buildout of the 2030 General Plan would accommodate an increase in population and commerce. This would result in an associated increase in solid waste streams of approximately 82,125 tons of solid waste per year, conservatively estimated. Because available capacity can meet this demand, no new facilities would need to be constructed to serve 2030 General Plan buildout. For these reasons this impact would be **less than significant**.*

Buildout of the 2030 General Plan could increase the population of unincorporated Yuba County by up to 100,000 individuals at full buildout, with an associated increase in solid waste streams. Based on EPA's estimated individual solid-waste generation rate of 4.5 pounds per day per person (EPA 2008:1), buildout could generate an additional 225 tons of solid waste per day (82,125 tons per year). This estimate is conservative (high) because recycling and waste diversion reduces this amount and is likely to increasingly reduce the waste stream that is sent to landfills in the future as more restrictive regulations require diversion of larger fractions of the waste stream.

The primary landfill that serves unincorporated portions of Yuba County is the Ostrom Road site. In addition, the facility provides solid waste disposal services to both municipalities and commercial customers from Sutter, Butte, Nevada, and Colusa counties. The Ostrom Road Landfill is owned and operated by Recology. CalRecycle reports that this facility has a maximum permitted throughput of 3,000 tons per day and has a total maximum permitted capacity of 41,822,300 cubic yards (90% capacity remaining, CalRecycle 2010c).

The average daily throughput at this facility is approximately 750 tons per day, with a "typical day" or modal throughput of approximately 900 tons per day (Phil Graham, pers. comm. 2010). Because the estimated increase in throughput associated with buildout of the 2030 General Plan is estimated to increase this amount by only 225 tons per day, the increase in solid waste disposal demand would be within the daily throughput capacity of this facility (975 tons on average and 1,125 tons on a "typical day"). Based on available information, it appears the Ostrom Road site has adequate capacity to serve buildout of the 2030 General Plan.

#### **Relevant Policies and Actions of the 2030 General Plan**

The following policy and action from the 2030 General Plan is applicable to solid waste:

- ▶ **Policy CD12.4:** The County will approve new development projects only if adequate capacity exists to accommodate solid waste demand, including processing, recycling, transportation, and disposal.
  
- ▶ **Action CD12.1: Facility Planning.** Following adoption of the General Plan, as funding allows, the County will seek to draft and/or update long range facility plans for relevant County departments. The Community Development and Services Agency will provide detail on population growth assumptions for different parts of the County to assist with the facility planning effort. It is anticipated that joint-use and operation opportunities would arise from a coordinated facility planning process that involves multiple County departments. The County should identify and prioritize discrete projects in the facilities master plan. Facility master plan projects would be a part of the County’s ongoing capital improvements programming and the subject of grant applications. For example, the County should coordinate facility master plan updates with applications for the US Department of Agriculture’s Rural Development low-interest loan and grant programs for rural parts of the County.
  - Related Goals: Goal CD12
  - Agency/Department: Community Development and Services Agency; Administrative Services Department; Library Department
  - Funding Source: Impact fees; federal and state funds; General Fund
  - Time Frame: Update facility master plans by 2015

**Conclusion**

Buildout of the 2030 General Plan would increase local generation of solid waste. Existing capacity exists to serve this increase in demand. In addition, under 2030 General Plan policy, new projects may only be approved if sufficient capacity to dispose of solid waste exists at the time the new project is subject to review. Existing regulations also require diversion of solid waste. The 2030 General Plan does not conflict with these regulations. Buildout under the 2030 General Plan is not anticipated to require the construction of new landfills. The impact is considered **less than significant**.

**Mitigation Measure**

No mitigation is required.

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