4.11 PUBLIC SERVICES, UTILITIES, AND SERVICE SYSTEMS

4.11.1 INTRODUCTION

The Public Services, Utilities, and Service Systems chapter summarizes the existing setting related to public services and utilities and identifies potential new demands resulting from the proposed project on fire and police protection services, parks, water supply, and gas and electric infrastructure. Information for this section was drawn primarily from the Yolo County General Plan,[1] the associated EIR,[2] the Cache Creek Area Plan (CCAP) Update FEIR,[3] and the County's Integrated Regional Water Management Plan (IRWMP).[4]

In response to the NOP, the County received comments related to Public Services, Utilities, and Service Systems from a number of residents in the area. These commenters expressed that the Draft EIR should consider the following:

- Cumulative impacts related to wastewater, groundwater, and other utility services (Resident);
- Violence and crime that could increase, particularly by people trespassing and breaking into private property (Resident);
- The purchase of supplemental electricity from the grid which could be generated from solar, wind, geothermal, or small-scale hydroelectric generation sources (Resident); and
- Potential impacts to existing gas and electric facilities (Pacific Gas and Electric Company).

The CEQA Guidelines note that comments received during the NOP scoping process can be helpful in "identifying the range of actions, alternatives, mitigation measures, and significant effects to be analyzed in depth in an EIR and in eliminating from detailed study issues found not to be important." (CEQA Guidelines Section 15083.) Neither the CEQA Guidelines or Statutes require a lead agency to respond directly to comments received in response to the NOP, but they do require they be considered. Consistent with these requirements, these comments have been carefully reviewed and considered by Yolo County and are reflected in the analysis of impacts in this chapter. Appendix B includes all NOP comments received.

Concepts and Terminology

This chapter does not include concepts or terminology that require definition in this section.

4.11.2 EXISTING ENVIRONMENTAL SETTING

The following setting information provides an overview of the existing conditions of the project site and surrounding area in relation to public services.

1 Yolo County. *2030 Countywide General Plan.* November 10, 2009.
2 Yolo County. *Yolo County 2030 Countywide General Plan Environmental Impact Report. SCH# 2008102034.* April 2009.
3 Yolo County. *Cache Creek Area Plan Update Project, Final Environmental Impact Report. SCH# 2017052069.* December 2019.
4 Water Resources Association of Yolo County. *Integrated Regional Water Management Plan*. April 2007.

Description of Regional Environment

The project region is characterized primarily by continuous agricultural lands within a broad, alluvial valley surrounded by distant rolling hills. Cache Creek generally meanders west to east and runs into the Sacramento Valley, ending in a settling basin east of Woodland, eventually flowing into the Sacramento River. Regional topography is generally flat. Vegetation, other than agricultural crops, is primarily limited to grasslands, ornamental landscaping, and scattered native vegetation.

The region is rural and sparsely populated, with urban development being primarily concentrated within small towns such as Capay, Esparto, and Madison. Rural residences, farm dwellings with various accessory and agricultural structures, and commercial uses sparsely dot the landscape. Roads provide interconnections between agricultural properties having various crops, such as row crops, orchards, and vineyards. Telephone and electricity poles frequently parallel the roadways throughout the region. Aggregate mining operations, inclusive of above-ground structures and equipment, are prevalent throughout the region, in particular, along the banks of Cache Creek, within the CCAP boundaries.

The following sections provide an overview of the local public services, utilities, and services systems, including fire and police protection, parks, water supply, and electricity and natural gas.

Fire Protection

The project site is currently located within the jurisdiction of the Willow Oak Fire Protection District (FPD). The Willow Oak FPD serves 33 square miles of rural Woodland and Yolo County. The FPD responds to incidents including medical emergencies, fires, hazardous materials and conditions, rescues, and public assistance. The Willow Oak FPD is located in the central section of Yolo County, adjacent to the City of Woodland. The FPD does not protect any incorporated cities or towns within the County. The FPD has a “second alarm” agreement with Madison FPD and a Mutual Aid agreement with Woodland, Springlake, and West Plainfield FPDs. Currently, the Willow Oak FPD has two stations: Station 6, located at 17535 County Road 97 and Station 7, located at 18111 County Road 94B. Station 7 is located directly south of the project site.

Each FPD in Yolo County is assigned an Insurance Service Organization (ISO) rating in order to determine insurance costs. The rating reflects fire suppression response times based on 10 public protection classifications. Classifications range from Class 1, which indicates the highest level of protection to Class 10, which indicates the lowest level of protection. The Willow Oak FPD has an ISO rating of 8 in developed areas and 9 in rural areas. The average response time for the FPD is three to four minutes to the community and five minutes to the rural areas. The staff consists of two paid firefighters, 25 volunteer firefighters, one paid chief, and one paid office manager. In addition, the FPD has three fire engines, two water tenders, two grass trucks, and one rescue truck. From 2001 to 2003, emergency call volume remained fairly constant, with the majority of calls concerning request for medical aid.

The Sierra-Sacramento Valley Emergency Medical Services Agency (S-SV EMS) is designated as the local emergency medical service agency for Yolo County. The S-SV EMS has partnered with American Medical Response (AMR) to provide emergency services throughout Yolo County. In accordance with federal and State regulations and guidelines, including ones administered by the California Emergency Medical Services Authority, the S-SV EMS has established response time goals across various locations throughout Yolo County. The AMR response time standard for the Willow Oak FPD is within 25 minutes, 90 percent of the time.

Police Protection

The Yolo County Sheriff-Coroner Department (Sheriff's Department) is located at 140 Tony Diaz Drive, Woodland, California, approximately 8.5 miles east of the project site. The Sheriff's Department is responsible for patrolling the County, administering the County jail and work program, providing security to the Yolo County Court System, providing animal services, and serving as the County coroner. The Sheriff's Department has 276 full time employees, 96 of which are sworn officers, including one sheriff, one undersheriff, two captains, four lieutenants, 10 sergeants, 72 deputies, one chief deputy coroner, and four deputy coroners. The 181 full-time non-sworn employees include correctional officers, management and administrative professionals, and animal care workers. The Sheriff's Department has 22 patrol vehicles and 19 unmarked vehicles.

The total unincorporated population of Yolo County in 2018 was 28,500. In 2006, Yolo County had 91 sworn officers for a ratio of 4.0 officers per 1,000 people. The patrol unit of the Sheriff's Department receives approximately 38,000 calls annually, which includes requests for assistance by other agencies and jurisdictions.

Sworn officers perform law enforcement tasks, as well as administration and supervision, and civilian personnel are involved in administration, support services, supervision, dispatch, parking enforcement, and community service duties.

Parks

Parks within Yolo County are managed by several entities. The Yolo County Parks and Natural Resources Department is the responsible managing agency for County resource parks, campgrounds, and several boat launches and fishing access. The resource parks in Yolo County are planned and maintained through several federal, State, and County agencies. A total of 17 parks are present throughout Yolo County, totaling 1,976.5 acres. Community parks are small in area, usually located in or near small population centers. The two existing community parks in Yolo County are the Esparto Community Park and the Dunnigan Community Park.

In contrast to community parks, resource parks include regional parks and open spaces, and are managed for multiple objectives. Yolo County owns and manages a number of resource parks; however, the vast majority of open space in the County remains in private ownership.

The closest public resource park to the project site is the 123-acre Cache Creek Nature Preserve (CCNP), which is operated and managed by the non-profit Cache Creek Conservancy under an agreement with the County Administrative Office Natural Resources Division. The CCNP and other existing and planned future open space and recreational facilities along lower Cache Creek are (or will be) a part of the County park system in that they are owned by the County, but they are similarly operated and maintained through the Natural Resources Division as a part of the Cache Creek Parkway. The Cache Creek Parkway (currently totaling 1,889 acres) is a planned component of the CCAP, comprised primarily of reclaimed lands dedicated to the County following mining and reclamation, in fulfillment of the public benefit requirements of the CCAP. As described in the Project Description of this EIR, the proposed project would include similar public benefit negotiations (sometimes referred to as "net gains") documented through a Development Agreement with the applicant.

Water Supply

Yolo County relies on many different water supply sources, such as the Sacramento River, Cache Creek, and groundwater. Many water-related administrative bodies within the County also distribute water. In 2007 an IRWMP was completed for Yolo County in order to assess water supply conditions and necessary actions within the County, including incorporated cities. The IRWMP projected that during average-year water conditions, demand in the County would increase from 915,000 acre-feet per year in 1995 to approximately 927,000 acre-feet per year in 2020. During the 25-year period, water use by agriculture is expected to increase from five to eight percent. During the same time period, the total water supply available for Yolo County is projected to increase from 924,000 acre-feet per year to approximately 938,000 acre-feet per year, yielding a 9,000-acre-foot annual surplus of supply over demand for both the 1995 and 2020 conditions.

In 2010-2011, the Water Resources Association of Yolo County Technical Committee reviewed the projects listed in the adopted 2007 IRWMP and compiled an updated project status from the lead agencies responsible for coordinating each Integrated Action. Two lists were distilled from the review process: a list of projects completed as of June 2011 and a list of priority projects expected to be completed by 2020. The projects that are still in a conceptual phase remain on the master IRWMP list of actions.

Groundwater Supplies

Yolo County overlies the Sacramento Valley groundwater basin, which provides most of the domestic water supply for the County. Individual users and private and public systems draw domestic water supplies from the basin, which supplies approximately 34 percent of total water supply in the County in non-drought years. Oversight of the groundwater source is coordinated through the Yolo County Water Resources Association. For management purposes, the Water Resources Association divides the basin into six subbasins that coincide with political boundaries. Aquifers beneath Yolo County are contained within either the older thick alluvial and river sediments of the Tehama formation, or the younger sediments of the Red Bluff formation, floodplain deposits, and stream channel deposits that overlie the Tehama formation.

The natural hydraulic gradient of groundwater is toward the east and south, roughly following the topographic incline. Groundwater pumping has had an impact on the gradient by creating localized depressions in the water table and land subsidence beneath areas of more intensive groundwater pumping. Developing surface water has relieved much of the stress on aquifers beneath Yolo County. The aquifers are recharged by runoff and groundwater from the east-facing foothills, by percolation of precipitation, and by infiltration of surface water. Surface water infiltration is provided by the creeks and streams that flow from the Coast Ranges into the County from delivered and applied irrigation water, from Sacramento and Feather River flood waters diverted to the Yolo Bypass, from the Sacramento River, and from the Sacramento River Deep Water Ship Channel that extends south from West Sacramento.

Surface Water Resources

Aside from groundwater supplies, Yolo County also depends on many different surface water supply sources. Surface water is typically used for agricultural irrigation. A number of natural and man-made bodies of water throughout the County are used for water supply, storage, and distribution. Surface water resources in the County originate mostly from the Cache Creek and Putah Creek watersheds and from the Sacramento River. The Cache Creek watershed originates in Lake County to the northwest of Yolo County; the Putah Creek watershed originates in Napa

County. Most remaining surface water supply comes directly from the Sacramento River and associated waterways. As defined by the Department of Water Resources (DWR), Yolo County is a small portion, 3.8 percent (1,034 square miles) of the large Sacramento Hydrologic Region or watershed, which covers 26,960 square miles of land.

Agricultural Water Supply

Rainfall in Yolo County is not adequate to sustain most crops, and thus, agriculture depends on a reliable irrigation water supply from a combination of both groundwater and surface water. In normal years, surface water is the primary source of irrigation water in Yolo County. The main sources of surface water supply for agriculture in Yolo County are the Sacramento River, Colusa Basin Drain, Putah Creek, Cache Creek, Yolo Bypass, Tule Canal, Willow Slough, and the Tehama-Colusa Canal. Farmers rely on groundwater for approximately 40 percent of their supply in a normal year and rely more heavily on groundwater during drought years. The General Plan indicates that agricultural water demand is expected to remain fairly stable or to decline slightly due to the increasing use of higher value, permanent crops and associated efficient irrigation systems.

Projected Water Demand

The projected water demands through 2030 include approximately 14,798 additional dwelling units allowed under the General Plan, as well as 3,372 acres of development that includes approximately 2,516 acres of commercial and industrial development and 854 acres of agricultural commercial/industrial uses to be added in the unincorporated County. Given that the County relies on groundwater for approximately 40 percent of supply, groundwater requirements could increase. At buildout, the General Plan EIR assumed conversion of approximately 9,072 acres of agricultural land within the unincorporated County to other uses. The projected water demand in 2030 within unincorporated areas of the County is listed in Table 4.11-1 below.

Table 4.11-1
Projected 2030 Water Demand

Town	Projected Water Demand by Use (gpd)	
	Total Residential Demand	Commercial / Industrial
Capay	38,584	331,505
Clarksburg	16,016	267,594
Dunnigan	5,826,743	2,053,719
Esparto	1,083,120	138,473
Knights Landing	978,984	132,758
Madison	1,037,338	474,395
Monument Hills	18,200	48,583
Yolo	40,768	51,700
Zamora	10,192	77,410
Remaining Unincorporated	1,408,428	5,185,088
Total	**10,456,411**	**8,761,235**

Source: Yolo County 2030 Countywide General Plan EIR, 2009.

As noted in the CCAP Update FEIR, a number of General Plan amendments have occurred, including removal of the Dunnigan, Elkhorn, Knights Landing, and Madison Specific Plans, which result in a significant reduction in the projected amount of future growth in the County. The urban growth associated with the various specific plans, including related impacts in the category of public services and utilities, among others, would not occur. The CCAP Update FEIR does not

include specifics or a recalculated projected demand in water use. Accordingly, although highly conservative, the numbers presented above from the General Plan are used for analysis purposes, as necessary.

Electricity and Natural Gas

Power is generated in the County from a variety of sources including fossil fuels, natural gas fields, hydroelectric facilities, solar energy, hydrogen fuel and biofuels. Three power plants are located within Yolo County in order to generate energy which is used in the County and sold to the Sacramento Municipal Utility District. Additionally, approximately 25 natural gas fields are located within the County and provided to residential and commercial uses. Natural gas accounted for 39 percent of the energy source distributed to residents and businesses in Yolo County in 2011 and totaled 3.3 million cubic feet of production in 2017.

Launched in June 2018, Valley Clean Energy (VCE) purchases energy with a higher renewable energy content, and lower GHG content, as compared to equivalent grid electricity provided by Pacific Gas and Electric (PG&E), which previously provided electricity services to Yolo County. Although VCE purchases the electricity, electricity within the County continues to be transported through PG&E owned equipment.

Description of Local Environment

The central and southern portions of the project site consist primarily of actively managed agricultural land. Crops planted at the site over the past decade have included wheat, alfalfa, tomatoes, cucumbers, canola, sunflower, and safflower. The northeastern portion of the site previously contained a ranch headquarters (Stevens Ranch); however, the structures that comprised the headquarters were burned down as part of a fire department training exercise in the late 1970s or early 1980s. Currently, structures do not exist at the location and the area is currently overgrown by low-lying brush. The northern portion of the site consists of 52 scattered oak trees and ruderal grassland vegetation.

Moore Canal, a concrete-lined water conveyance structure owned and operated by the Yolo County Flood Control and Water Conservation District (YCFCWCD), bisects the central portion of the site from west to east. Magnolia Canal is an unlined water conveyance structure owned and operated by the YCFCWCD that intersects the Moore Canal on the northeastern portion of the project site. An existing groundwater well used for agricultural purposes is located along the western site boundary. An additional domestic water supply well is located at the location of the former ranch headquarters. The northern portion of the site also includes an electric conveyor and associated gravel road formerly used to transport mined aggregate from the Teichert Woodland Storz mining site to the Woodland Plant located north of the project site. The natural environment of the immediate vicinity is similarly characterized by agricultural lands, but also includes Cache Creek, immediately north of the project site. Riparian woodland vegetation is located along portions of the banks of Cache Creek.

The environment of the immediate vicinity is dominated by aggregate mining operations to the north; a golf course (Yolo Fliers Club), the Wild Wings subdivision, airport (Watts-Woodland), and farm dwellings to the west/southwest; rural residential and cemetery (Monument Hill Memorial Park cemetery) to the south; and farm dwellings to the east. The existing aggregate mining operations in the vicinity consist of Teichert's Storz mining site to the west and Teichert's Woodland Plant site to the northeast, beyond which is Teichert's Schwarzgruber mining site. The Teichert-Woodland Plant has been in continuous operation for over 50 years.

Both the project site and the Woodland Plant are located within the FPD and Sheriff's Department service areas. Water for ongoing agricultural uses at the project site are provided by an existing on-site water well located along the western site boundary. The adjacent Woodland Plant also relies on a water well for all existing water demands. Neither the project site nor the Woodland Plant site are connected to public stormwater or wastewater infrastructure.

Electricity at the Woodland Plant is directly purchased by Teichert through Direct Access (i.e., purchased directly from a third-party provider) and distributed through existing PG&E infrastructure. In addition, in order to meet a portion of the existing demand for electricity at the Woodland Plant, Teichert has voluntarily installed a photovoltaic energy system at the Woodland Plant. The electricity generated by the photovoltaic energy system is fed into the grid, and offsets a portion of the electricity demanded by existing operations.

4.11.3 REGULATORY CONTEXT

The following is a description of federal, State, and local environmental laws and policies that are relevant to the review of public services, utilities, and service systems under the CEQA process.

Federal Regulations

The following are the federal environmental laws and policies relevant to public services and utilities.

Safe Drinking Water Act (SDWA)

The federal SDWA, which was enacted in 1974, gives the United States Environmental Protection Agency (EPA) the authority to set standards for contaminants in drinking water supplies. The EPA was required to establish primary regulations for the control of contaminants that affected public health and secondary regulations for compounds that affect the taste, odor, and aesthetics of drinking water. Accordingly, the EPA set a maximum contaminant level or treatment technique for each of the 83 contaminants in drinking water listed in the SDWA. Under the provisions of SDWA, the California Department of Health Services (DHS) has the primary enforcement responsibility. Title 22 of the California Administrative Code establishes DHS authority, and stipulates State drinking water quality and monitoring standards.

State Regulations

The following are the State environmental laws and policies relevant to public services and utilities.

Uniform Fire Code

The Uniform Fire Code (California Code of Regulations, Title 24, Part 9) with the State of California Amendments contains regulations relating to construction, maintenance, and use of buildings. Topics addressed in the California Fire Code include fire department access, fire hydrants, automatic sprinkler systems, fire alarm systems, fire and explosion hazards safety, hazardous materials storage and use, provisions intended to protect and assist fire responders, industrial processes, and many other general and specialized fire-safety requirements for new and existing buildings and the surrounding premises. The Fire Code contains specialized technical regulations related to fire and life safety.

California Health and Safety Code

State fire regulations are set forth in Sections 13000 et seq. of the California Health and Safety Code, and include regulations for building standards (as also set forth in the California Building Code), fire protection and notification systems, fire protection devices such as extinguishers and smoke alarms, high-rise building and childcare facility standards, and fire suppression training.

Sustainable Groundwater Management Act

The DWR has developed a Strategic Plan for its Sustainable Groundwater Management (SGM) Program. DWR's SGM Program will implement the new and expanded responsibilities identified in the 2014 Sustainable Groundwater Management Act (SGMA) (Division 6, Part 2.74, Sections 10720 – 10727.8, of the California Water Code). The expanded responsibilities include the following:

1) Developing regulations to revise groundwater basin boundaries;
2) Adopting regulations for evaluating and implementing Groundwater Sustainability Plans (GSPs) and coordination agreements;
3) Identifying basins subject to critical conditions of overdraft;
4) Identifying water available for groundwater replenishment; and
5) Publishing best management practices for the sustainable management of groundwater.

Local Regulations

The following are the regulatory agencies and regulations pertinent to the proposed project on a local level.

Yolo County General Plan

The applicable Yolo County General Plan policies and standards related to public services, utilities, and service systems are presented below.

Goal LU-5 Equitable Land Use Decisions. Ensure inclusion, fair treatment and equitable outcomes in local land use decisions and regulations.

Policy LU-5.5 Ensure that public facilities, services and amenities are distributed equitably and in locations that enhance the quality of life for the broadest number of County residents.

Goal CC-1 Preservation of Rural Character. Ensure that the rural character of the County is protected and enhanced, including the unique and distinct character of the unincorporated communities.

Policy CC-1.11 Require the development of open space corridors, bicycle paths and trails integrating waterways, scenic areas and County parks where appropriate, in collaboration with affected land owners as a part of project approval. The intent is to connect each community and city and other special places and corridors, throughout the County.

Goal PF-2 Stormwater Management. Provide efficient and sustainable stormwater management to reduce local flooding in existing and planned land uses.

Policy PF-4.3 Maintain a minimum ratio of 3.9 sworn officers per 1,000 people, including the necessary facilities, equipment and non-uniformed personnel to support that ratio.

Policy PF-5.3 Require assertive fire protection measures in all development to supplement limited rural fire district resources.

Goal CO-5 Water Resources. Ensure an abundant, safe, and sustainable water supply to support the needs of existing and future generations.

Policy CO-5.1 Coordinate with water purveyors and water users to manage supplies to avoid long-term overdraft, water quality degradation, land subsidence and other potential problems.

Policy CO-5.3 Strive to manage the County's groundwater resources on a sustainable yield basis that can provide water purveyors and individual users with reliable, high quality groundwater to serve existing and planned land uses during prolonged drought periods.

Off-Channel Mining Plan

The applicable Off-Channel Mining Plan (OCMP) standards related to public services and utilities are presented below.

Goal 3.2-1 Promote the conjunctive use of surface and groundwater to maximize the availability of water for a range of uses, including habitat, recreation, agriculture, water storage, flood control, and urban development.

4.11.4 IMPACTS AND MITIGATION MEASURES

The section below describes the standards of significance and methodology utilized to analyze and determine the proposed project's potential project-specific impacts related to public services and utilities. In addition, a discussion of the project's impacts, as well as mitigation measures where necessary, are also presented.

Standards of Significance

The significance criteria used for this analysis were developed from Appendix G of the CEQA Guidelines, and applicable policies and regulations of Yolo County. A public services, utilities, and service systems impact is considered significant if the proposed project would:

- Result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for any of the public services:
  - Fire protection;
  - Police protection;
  - Schools;
  - Parks; or
  - Other public facilities;

- Increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated;
- Include recreational facilities or require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment;
- Require or result in the relocation or construction of new or expanded water, wastewater treatment, or storm water drainage, electric power, natural gas, or telecommunications facilities, the construction or relocation of which could cause significant environmental effects;
- Have sufficient water supplies available to serve the project and reasonably foreseeable future development during normal, dry, and multiple dry years;
- 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;
- Generate solid waste in excess of State or local standards, or in excess of the capacity of local infrastructure, or otherwise impair the attainment of solid waste reduction goals;
- Comply with federal, state, and local management and reduction statutes and regulations related to solid waste; or
- Cause a significant environmental impact due to a conflict with applicable plans, policies, or regulations adopted for the purpose of avoiding or mitigating impacts to public services, utilities, and service systems.

Impacts Found to be Less Than Significant in Initial Study

The Initial Study prepared for the proposed project (see Appendix A) determined that implementation of the proposed project would result in no impact or a less-than-significant impact related to the following public services, utilities, and service systems impacts:

- Would the project result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for schools;
- Would the project increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated;
- 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;
- Generate solid waste in excess of State or local standards, or in excess of the capacity of local infrastructure, or otherwise impair the attainment of solid waste reduction goals; or
- Comply with federal, state, and local management and reduction statutes and regulations related to solid waste.

Method of Analysis

The potential for increased demand for public services and utilities was evaluated for the proposed mining and reclamation activities at the project site, as well as associated processing activities at the adjacent Woodland Plant. Potential increases in demand for public services occurring as a result of the proposed project was based on demands of other existing mining projects within the CCAP area. Demands were evaluated for the proposed mining phase, as well as the proposed reclamation activities. With regard to utilities, water demands were estimated based on Chapter 4.8, Hydrology and Water Quality, of this EIR, which provides a detailed analysis of existing and projected groundwater conditions in the project vicinity. The proposed project would rely solely on groundwater supplies; connection to public water infrastructure would not be required.

Evaluation of the proposed project's potential impacts related to public services, utilities, and service systems was based on the proposed project's potential increase in demand for and/or use of services and infrastructure in comparison to existing conditions, consistent with the standards of significance listed above.

Project-Specific Impacts and Mitigation Measures

The following discussion of impacts related to public services, utilities, and service systems is based on implementation of the proposed project in comparison to existing conditions and the standards of significance presented above.

4.11-1 Would the project result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times, or other performance objectives for fire protection services. The impact would be *less than significant*.

The key proposed elements of this project are as follows: 1) relocation of a segment of Moore Canal to the northerly portion of the site and modification of Magnolia Canal to align with the relocated Moore Canal; 2) transfer of tonnage from the Teichert Esparto and Teichert Schwarzgruber operation to the Teichert Shifler operation; 3) continued operation and expansion of the Teichert Woodland Plant facilities (including new equipment and increased processing capacity); 4) excavation at the Shifler site; 5) reclamation of the Shifler site; 6) delayed reclamation at Woodland Plant site; 7) dedication of various reclaimed properties to the County; and 8) completion of an in-channel gravel bar removal project.

The relevant CEQA threshold is pertains to whether new or physically altered stations are needed to meet response times or other performance objectives, the construction of which could cause environmental impacts. The project site is already currently served by the Willow Oak FPD. The nearest station is Station 7, located directly south of the project site. Per the County's General Plan Policy PF-5.5, the County encourages fire districts to maintain an overall ISO rating of Rural 7 or better for fire protection service within the unincorporated communities.

However, as discussed in further detail in Chapter 4.7 of this EIR, the likelihood for fire at the project site is low due to adjacent land uses and roadways providing a fire break, as well as the lack of housing or habitable structures within the project site. In addition, the proposed mining activities would reduce the total amount of on-site combustible vegetation from existing conditions, thereby minimizing fire risk at the site during mining. In accordance with Section 4291 of the Public Resources Code, maintenance of defensible space would continue to be required for the buildings and structures within the Woodland Plant site. Plant equipment associated with the proposed operations would primarily be made of non-flammable materials such as iron or steel. The project operator would be required to submit a Hazardous Materials Business Plan to the Yolo County Environmental Health Department, which would include a list of all hazardous materials stored at the site, including any flammable materials or supplies, identification of emergency response procedures, evacuation plans and procedures, and training records for personnel. The operator would be in charge of ensuring proper use, handling, and storage of hazardous materials during daily operations. Employees would be present on-site daily, and occasionally on a 24-hour basis, to maximize oversight of operations.

Upon completion of mining operations, approximately 117 acres of the mining area would be reclaimed to agricultural use, while the remainder of the mining area would be reclaimed to a lake, with riparian woodland along the fringes/shoreline. The reclaimed uses would result in a similar, if not lesser, potential for fire at the project site as compared to existing conditions. Thus, the demand for fire protection services post-reclamation would be similar to existing conditions. The reclaimed lake could potentially provide a new emergency water supply for fighting a fire in the region should one occur.

Due to the type of activities anticipated on-site, some occupational accidents and medical emergencies may occasionally occur. However, the potential increase in demand for emergency response would not be substantial such that additional staffing or equipment would be necessary. Accordingly, the S-SV EMS, as well as any other emergency medical service agency that would provide mutual aid, would be expected to be capable of adequately serving the project site.

Overall, the fire protection service demand of the proposed project would not differ materially from the existing demand associated with the site or from the levels anticipated for the site for the reasons provided above. Accordingly, the Willow Oak FPD would be capable of providing adequate service to the project site, and the proposed project would not result in the need for new or physically altered fire protection facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times, or other performance objectives. Thus, a ***less-than-significant*** impact would occur.

Mitigation Measure(s)

None required.

4.11-2 Would the project result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times, or other performance objectives for police protection services. The impact would be *less than significant*.

Police protection for the project site is currently provided by the Yolo County Sheriff's Department, which is headquartered approximately 8.5 miles east of the project site. Currently the Sheriff's Department has a ratio of 4 sworn officers per 1,000 people in unincorporated Yolo County, which is consistent with the standard of Policy PF-4.3 of a ratio of 3.9 officers per 1,000 residents.

The proposed project would not result in new population growth in the area. Emergency calls made to local law enforcement agencies typically associated with mining projects include vandalism and theft, which would not require immediate response. In addition, the project site would be a restricted, highly controlled facility in an area of very low population. Thus, the risk of trespass and vandalism would be lower than in a more urban populated area. Employees would be present on-site daily, and occasionally on a 24-hour basis, to maximize oversight of operations. Accordingly, the proposed project is not expected to create a significant increase in crime in the area or in the number of emergency calls made to local police protection agencies.

Upon completion of mining operations, approximately 117 acres of the mining area would be reclaimed to agricultural use, while the remainder of the mining area would be reclaimed to a lake, with riparian woodland along the fringes/shoreline. The reclaimed uses would result in a similar demand for police protection services to existing conditions.

Based on the above, the demand for police protection services associated with the proposed project would not differ materially from the existing demand associated with the site or from the levels anticipated for the site. Accordingly, the Sheriff's Department would be capable of providing adequate service to the project site, and the proposed project would not result in the need for new or physically altered police protection facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times, or other performance objectives. Thus, a ***less-than-significant*** impact would occur.

Mitigation Measure(s)

None required.

4.11-3 Would the project result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for parks. The impact would be *less than significant*.

Given that the proposed project would not result in new population growth within the project area, the project would not result in increased demand for park facilities. Further, as noted in the Project Description of this EIR, the proposed project includes the execution of a new development agreement (DA) between the applicant and the County. Among other things, the DA commits the applicant to participation in the CCAP, including payment of per-ton mining fees and the provision of other specified public benefits known also as "net gains". As mining is completed, reclamation will occur in compliance with proposed reclamation plans resulting in approximately 86 acres of agricultural land on the west, approximately 31 acres of agricultural land on the east, a 113-acre open water lake in the central portion of the proposed mining area, 24 acres of riparian habitat along the lake frontage, and 24 acres in grassy slopes and access roads. The lake and surrounding habitat will be dedicated to the County for future public recreation, public trails, open space, and protected habitat. The applicant has also agreed to dedicate the Shifler In-Channel property, reclaimed Schwarzgruber property, and potentially the reclaimed Woodland Plant site, for similar future uses. The aforementioned net gains would be beneficial to the overall parks and recreation system within the County. Therefore, a ***less-than-significant*** impact would occur.

Mitigation Measure(s)
None required.

4.11-4 Would the project result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times, or other performance objectives for other public facilities. The impact would be *less than significant*.

Yolo County maintains public facilities such as public libraries and community buildings used by residents of the community. Because the proposed project would not result in an increase in population in the area, the project would not result in the need for new or expanded libraries, community buildings, or other similar government facilities. In addition, because the proposed project is consistent with the CCAP, potential government facility expansion associated with mining activities within the OCMP area have been accounted for the by the County and evaluated in the CCAP

Update FEIR. Accordingly, the proposed project would not result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times, or other performance objectives for other public facilities. Therefore, a ***less-than-significant*** impact would occur.

Mitigation Measure(s)
None required.

4.11-5 Does the project include recreational facilities or require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment. The impact would be *less than significant*.

As noted in the Project Description of this EIR, the proposed project includes the execution of a new DA between the applicant and the County. Among other things, the DA commits the applicant to participation in the CCAP, including payment of per-ton mining fees and the provision of other specified public benefits known also as "net gains". As mining is completed, reclamation will occur in compliance with proposed reclamation plans resulting in approximately 86 acres of agricultural land on the west, approximately 31 acres of agricultural land on the east, a 113-acre open water lake in the central portion of the proposed mining area, 24 acres of riparian habitat along the lake frontage, and 24 acres in grassy slopes and access roads. The lake and surrounding habitat will be dedicated to the County for future public recreation, public trails, open space, and protected habitat. The applicant has also agreed to dedicate the Shifler In-Channel property, reclaimed Schwarzgruber property, and potentially the reclaimed Woodland Plant site, for similar future uses. The aforementioned net gains would be beneficial to the overall parks and recreation system within the County. The physical environmental impacts associated with reclamation of the site to agricultural use and a lake, with riparian woodland along the fringes/shoreline, are discussed in the environmental resource sections of Chapters 4.1 through 4.12 of this EIR.

Given that the proposed project would not induce population growth within the project area, the project would not result in increased demand for recreational facilities such that construction of new or expansion of existing facilities would be required.

Based on the above, a ***less-than-significant*** impact would occur.

Mitigation Measure(s)
None required.

4.11-6 Require or result in the relocation or construction of new or expanded water, electric power, or natural gas facilities, the construction or relocation of which could cause significant environmental effects. The impact would be *less than significant*.

The following sections describe the water, electric power, and natural gas facilities improvements that would be necessary to serve the proposed project.

Water Conveyance Infrastructure

Currently, Moore Canal bisects the project site from west to east along the northern border of the site and conveys water to adjacent agricultural parcels. The proposed project would include relocation of the canal along the western and northern boundary. Relocation is not triggered by water capacity or water service needs, but, rather, as a component of the project in order to facilitate mining on the property. The relocated Moore Canal would be concrete-lined and have an access road on each side for periodic maintenance by the Yolo County Flood Control and Water Conservation District (YCFCWCD). Cross-sections of the proposed canal alignment in relation to the proposed mining pit are shown in Figure 4.11-1 and Figure 4.11-2 below. Relocation of the canal would occur prior to mining operations within 50 feet of the canal. As proposed, the relocated canal would be located 200 feet from the existing top of bank of Cache Creek. Relocation of Moore Canal would ensure the continued availability of water supplies for the agricultural parcels that receive water supplies from the current alignment of the canal.

The new canal would be constructed to the north of the project and would be operational prior to the start of mining activities within 50 feet of the canal. The relocation of Moore Canal would require approval from the Board of Directors of the YCFCWCD. Because the relocation of the canal would occur within the project site, the impacts associated with relocation have been discussed throughout this EIR.

The proposed project would also include installation of a new water pipe, to be located alongside the existing conveyor belt alignment, to transfer groundwater from the Shifler mining area to the adjacent Woodland Plant. Installation of the pipe would not require trenching in areas that have not already been subject to substantial prior disturbance associated with the conveyor belt. Physical environmental impacts associated with installation of the water pipe have been addressed throughout this EIR.

Electricity and Natural Gas

The proposed mining and processing activities would require the consumption of energy in the forms of fossil fuels and electricity. Natural gas would not be required for the proposed operations. Electricity would continue to be provided through direct purchase from electricity producers via PG&E owned equipment. The project would include connection to the PG&E distribution network in order to deliver electricity and would be subject to payment to PG&E for the use of their transmission network. Although the proposed project would result in an increase in electricity demand from existing conditions, adequate electric power supplies exist to serve the project and the increase would not require new or expanded electric power facilities. In addition, the photovoltaic energy system installed at the Woodland Plant, would continue to be used, which off-sets some of the demand of Teichert's existing operations at the Woodland Plant. Further discussion regarding energy associated with the proposed project is provided in Chapter 4.3 of this EIR.

Figure 4.11-1
Proposed Mining Cross-Section – Moore Canal North of Mining Pit

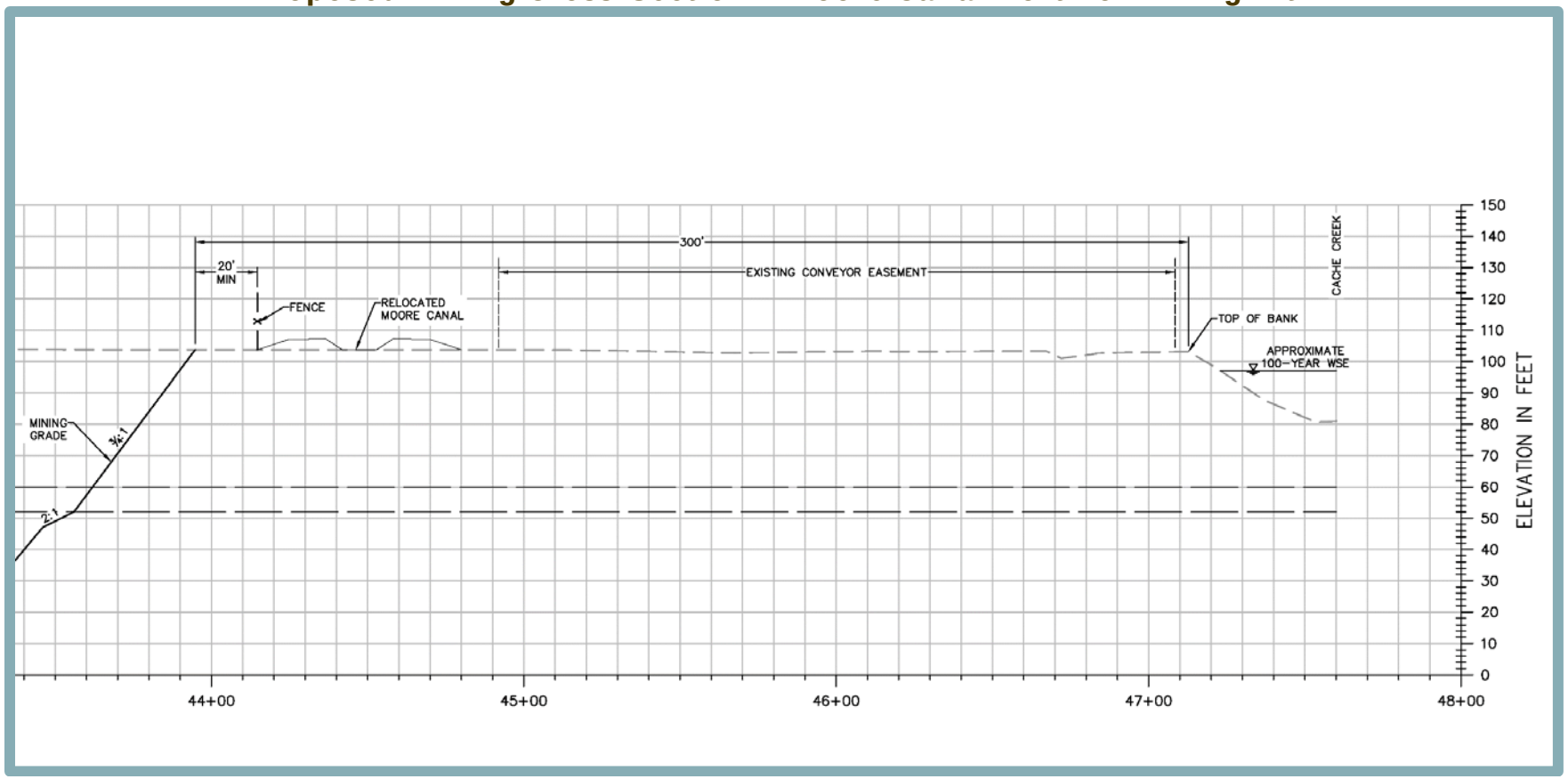
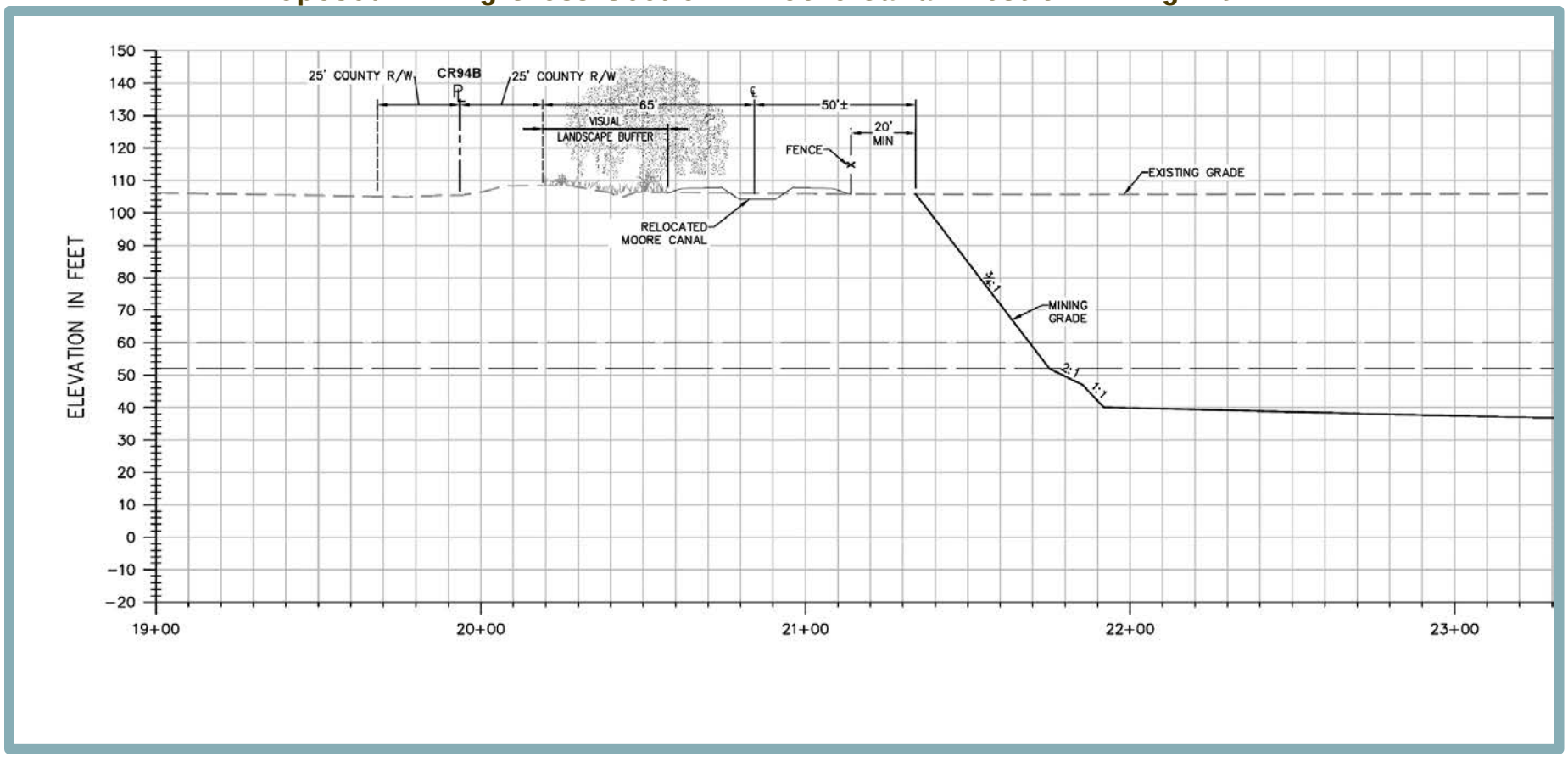


Figure 4.11-2
Proposed Mining Cross-Section – Moore Canal West of Mining Pit



Upon completion of mining operations, approximately 116 acres of the mining area would be reclaimed to agricultural use, while the remainder of the mining area would be reclaimed to a lake, with riparian woodland along the fringes/shoreline. The reclaimed uses would not require electricity or natural gas service.

Conclusion

Based on the above, the proposed project would have a ***less-than-significant*** impact related to the relocation or construction of new or expanded water, electric power, or natural gas facilities, the construction or relocation of which could cause significant environmental effects.

Mitigation Measure(s)

None required.

4.11-7 Have sufficient water supplies available to serve the project and reasonably foreseeable future development during normal, dry, and multiple dry years. The impact would be *less than significant*.

A full discussion of groundwater levels can be found in Chapter 4.8, Hydrology and Water Quality, of this EIR. As discussed in Chapter 4.8, a study was performed to analyze the groundwater conditions and water quality on the project site. Seasonal and long-term fluctuations in shallow groundwater levels have been observed across the area of investigation, likely in response to variations in climatic conditions, which in turn affect streamflow conditions, including recharge in the aquifer system and groundwater pumping for irrigation supply.

Based on the study, during stable hydrologic periods, when annual precipitation varies only moderately from the long-term average, groundwater levels will likely fluctuate seasonally. The variation in long-term and seasonal shallow groundwater level fluctuations across the site and in the vicinity are similar to what has been monitored since the 1950s. Groundwater levels in the deep-water supply wells exhibit similar fluctuation; however, the shallow groundwater conditions are not indicative of deep groundwater conditions.

Water for aggregate processing and dust suppression at the project site would be supplied by two wells at the Woodland Plant site and groundwater from the proposed mining pit. During mining operations, the fluctuation in groundwater levels would result in varying conditions, but during both stable and drier periods, the existing wells would supply enough water for operations. To supplement the supply from the wells, groundwater from the mining pit would be pumped to the Woodland Plant to supply aggregate processing operations at the plant. Processing water (also called aggregate wash water) from the project site and the Woodland Plant would be recycled through the use of settling ponds located at the Woodland Plant site.

The proposed dewatering activities would not adversely affect any active wells within 1,000 feet of the mining pit boundary. In addition, the project applicant would monitor water levels in the wet pit(s), evaluate nearby monitoring wells on a quarterly basis,

and quantify the amount of water pumped from and returned to the wet pit(s). Accordingly, sufficient water supplies would be available to serve the project.

Following mining, the project site would be reclaimed to agricultural use and open space. In order to evaluate water supply during reclamation, the study took into account nearby wells located within 1,000 feet of the project site. In addition, estimations were made of the reclaimed lake seasonal water levels that may be reasonably expected during stable, drier, and wetter periods. The report modeled the predicted groundwater level following reclamation of the project site and determined that during all three conditions, impacts to the proposed reclamation lake and groundwater levels would not be substantially different from what has been historically observed.

Thus, based on the above, a ***less-than-significant*** impact would occur.

Mitigation Measure(s)
None required.

4.11-8 Cause a significant environmental impact due to a conflict with applicable plans, policies, or regulations adopted for the purpose of avoiding or mitigating impacts to public services, utilities, and service systems. The impact would be *less than significant*.

Table 4.11-2 below provides an analysis of the proposed project's consistency with applicable policies and regulations that have been adopted for the purpose of avoiding or mitigating environmental effects related to public services, utilities, and service systems. It should be noted that consistency with other standards in the Surface Mining and Reclamation Act, the County Zoning Ordinance, and the Surface Mining Reclamation Ordinance that are specific to land use and planning issues are discussed in Chapter 4.9, Land Use and Planning, of this EIR. As shown in the table, the proposed project would be generally consistent with applicable standards related to public services, utilities, and service systems. Thus, a ***less-than-significant*** impact would occur.

Mitigation Measure(s)
None required.

Table 4.11-2
Consistency with Applicable Standards

Policy / Regulation	Consistency Discussion
Yolo County General Plan	
Policy LU-5.5 Ensure that public facilities, services and amenities are distributed equitably and in locations that enhance the quality of life for the broadest number of County residents.	The proposed project would be adequately served by existing public facilities and services within the County and would not result in adverse impacts related to increased service capacity. Therefore, the project would be consistent with this policy.

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Table 4.11-2
Consistency with Applicable Standards

Policy / Regulation	Consistency Discussion
Policy CC-1.11 Require the development of open space corridors, bicycle paths and trails integrating waterways, scenic areas and County parks where appropriate, in collaboration with affected land owners as a part of project approval. The intent is to connect each community and city and other special places and corridors, throughout the County.	The project proposes to reclaim the mining site to a combination of agriculture, riparian habitat, and lake. The applicant may be providing trails and/or dedicated reclaimed land that would be integrated into the Cache Creek Parkway, subject to the DA between the applicant and the County, Thus, the project would increase public open space opportunities. Therefore, the project would be consistent with this policy.
Policy PF-4.3 Maintain a minimum ratio of 3.9 sworn officers per 1,000 people, including the necessary facilities, equipment and non-uniformed personnel to support that ratio.	See Impact 4.11-2 above. As demonstrated in the impact analysis, the project would be consistent with this policy. Note that the relevant CEQA threshold is whether new or physically altered public services facilities are needed to meet response times or other performance objectives, the construction of which could cause environmental impacts. An increase in demand for police service that does not result in the construction or expansion of new facilities would not necessarily cause a significant impact under CEQA.
Policy PF-5.3 Require assertive fire protection measures in all development to supplement limited rural fire district resources.	See Impact 4.11-1 above. As demonstrated in the impact analysis, the project would be consistent with this policy.
Policy CO-5.1 Coordinate with water purveyors and water users to manage supplies to avoid long-term overdraft, water quality degradation, land subsidence and other potential problems.	See Impact 4.11-7 above. The proposed project would rely solely on groundwater for water supplies. As demonstrated in the impact analysis, the proposed project would not adversely affect groundwater conditions in the project vicinity. With regard to water quality, see Impact 4.8-1 of this EIR. Subsidence is addressed in Impact 4.6-3 of the Geology and Soils, Mineral Resources, and Paleontological Resources chapter of this EIR. As discussed therein, existing regulations would ensure that risks related to subsidence would be reduced to a less-than-significant level, including sections 10-4.406 an 10-4.431 of the OCSMO, as well as the California Code of Regulations Title 8, Subchapter 17 (related to benching of excavated slopes), among others. A Condition of Approval is included requiring adherence to all recommendations within the project-specific Slope Stability Evaluation be incorporated into the project approvals.

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Table 4.11-2
Consistency with Applicable Standards

Policy / Regulation	Consistency Discussion
	Therefore, the project is consistent with this policy.
Policy CO-5.3 Strive to manage the County's groundwater resources on a sustainable yield basis that can provide water purveyors and individual users with reliable, high quality groundwater to serve existing and planned land uses during prolonged drought periods.	See Impact 4.11-7 above and Chapter 4.8 of this EIR. As demonstrated, water supply and quality would not be adversely impacted by the project. Therefore, the project would be consistent with this policy.