4.12 UTILITIES AND PUBLIC SERVICES

This section provides an overview of existing utilities and public services for the City of Merced (City) and the proposed project area, including water supply, wastewater service, solid waste management, electrical service, natural gas service, telephone service, fire protection, police service, public schools, and parks. Impacts are evaluated in relation to increased demand for public services associated with the proposed project and actions needed to provide the services that could potentially lead to physical environmental effects. EDAW prepared a Water Supply Assessment (WSA) for the proposed project in 2006 (included as Appendix F). The DEIR's analysis of water supply is based primarily on the WSA.

Analysis provided in this section is based on review of agency documents and consultation with local public services providers. Impacts related to stormwater management and water quality are addressed in Section 4.6, "Hydrology and Water Quality."

4.12.1 ENVIRONMENTAL SETTING

WATER SUPPLY AND CONVEYANCE

The City of Merced is the only water purveyor for users within the City boundaries. The City uses groundwater exclusively, drawing water from 20 wells with a combined capacity of 49,500 gallons per minute (gpm). The active wells are fully operational and used on a regular basis for water supply within the City. An additional well is scheduled to come online in 2007, and several wells are planned for 2008 through 2011. (City of Merced 2005a.)

Well depths range from 161 to 800 feet, and individual capacities of the operating wells range from 1,000 gpm to 4,000 gpm. The depth of the City's wells suggests that the City is primarily drawing water from the deep aquifer associated with the Mehrten formation, a significant aquifer in terms of water supply. The wells are arrayed in approximately a mile grid system, with 16-inch mains on a mile grid and 12-inch mains on a one-half mile grid. This strategy for well siting is intended to minimize the potential for local drawdown of groundwater from pumping operations.

Instead of a centralized water treatment plant, water is treated at the wellhead with disinfection and fluoridation systems and distributed through a transmission system with the help of well pumps. The City has a storage capacity of approximately 1.4 million gallons in four elevated storage tanks. These facilities provide average daily demand, meet peak hour urban level conditions, and provide fire flows. (City of Merced 2005a.)

2005 Urban Water Management Plan

In December 2005, the City's 2005 Urban Water Management Plan (UWMP) was finalized. The UWMP encompasses the City's entire water service boundary which is bounded by the City limits, the Specific Urban Development Plan (SUDP) boundary, and the University of California (UC) Merced Campus. For purposes of the City's UWMP, the SUDP boundary was used to describe the future City water system service area.

The City's UWMP projects future potable water demands to ensure that the future needs of residents and businesses in the City's SUDP are planned for and adequately addressed. Unit water use factors, and total water demands are developed to estimate future water needs based on the population, housing, and employment projections within the SUDP. The total water production in 2005 was estimated to be 30,118 acre-feet per year (afy). Table 4.12-1 shows projected water use in the City during normal year conditions.

Table 4.12-1 Projected Normal Year Water Usage for the City of Merced	
Projection Year	Water Use (afy)
2005	30,118
2010	36,570
2015	41,919
2020	48,821
2025	55,677
Source: City of Merced 2005a	

As shown in Table 4.12-1, by 2025, water demands are expected to increase by approximately 85%, from 30,118 afy in 2005 to 55,677 afy in 2025.

The City's UWMP concludes that groundwater is a consistent source, so no replacement plan is needed. Although groundwater levels have declined at a greater rate during drought periods, the annual quantity of groundwater available does not vary significantly in relation to wet or dry years. The reliability of the City's water supply does not change due to seasonal or climatic shortages and there is no evidence that groundwater quality is affected by short-term drought conditions. As discussed below, the City and the Merced Irrigation District (MID) are cooperating on a long-range plan to stabilize groundwater levels and to investigate the potential of recharge with imported surface water from the Merced River. Table 4.12-2 presents the City's water supply reliability for 2025.

Table 4.12-2 City of Merced Water Supply Reliability for 2025					
Sustainable Water Supply	Normal Year (afy)	Single Dry-Year (afy)	Multiple Dry Years (afy)		
			Year 1	Year 2	Year 3
Surface water	200	200	200	200	200
Groundwater	56,000	56,000	56,000	56,000	56,000
Total supply	56,200	56,200	56,200	56,200	56,200
2025 Demand	55,677	55,677	55,677	55,677	55,677
Surplus	523	523	523	523	523
Source: City of Merced 2005a, EDAW 2006					

Merced Water Supply Plan

The *Merced Water Supply Plan* (CH2M Hill 1995, Updated 2001), prepared by the City of Merced in conjunction with MID and the University of California, Merced, presents a general plan for overall water system expansion. The plan, originally completed in 1995, was developed to ensure a reliable water supply through 2030, recognizing that the rate of population growth in eastern Merced County would continue to outpace statewide growth. The 1995 *Merced Water Supply Plan* identified five goals:

- manage groundwater resources;
- provide a high-quality, reliable supply of water for cities;
- protect and enhance the economic base;
- protect MID's Merced River water rights; and
- maintain consensus on a water supply plan.

The plan was updated in September 2001 because of new conditions that could influence the long-term projections made in the 1995 plan. These conditions included the decision to locate the new University of

California campus in the study area, the preparation of a groundwater management plan for the area, the preparation of an agricultural water management plan for the area, changing instream flow conditions on the Merced River, and better data and understanding of the study area's water resources.

Merced Basin Groundwater Management Plan

In 1997, as part of the implementation of the Merced Water Supply Plan, MID adopted a Groundwater Management Plan, including a Groundwater Management Program to conjunctively manage the region's surface and groundwater supplies to meet local and regional water needs reliably. The Groundwater Management Program involves a variety of measures, including monitoring, water quality protection, conjunctive use, and public involvement and information. Groundwater monitoring measures include: groundwater production, levels and storage, inflows and outflows, as well as water quality. The following Merced area public agencies have prepared and adopted or have formally agreed to adopt the MBGMP:

- County of Merced (County),
- MID,
- Le Grand-Athlone and Turner Island Water Districts,
- Winton Water & Sanitary District (WWSD),
- Merced County Water District,
- Planada and LeGrand Community Service Districts,
- Black Rascal and Meadowbrook Water Companies,
- Stevinson Water District, and
- East Merced Resources Conservation District.

Existing Water Supply and Conveyance on the Project Site

In the project area, a 16-inch water main is located on Childs Avenue, and a 16-inch water main on Kibby Road passes south through the project site to Gerard Avenue (Frank, pers. comm., 2006). The western one-third of the project site contains an almond orchard, and the eastern two-thirds consist of agricultural fields. There is an irrigation well on the project site. The amount of groundwater pumped annually from this well is unknown.

California Department of Water Resources (DWR) estimates that unit applied water demand for deciduous orchards (e.g. almonds) in the Merced region range from 2.1 acre-feet per acre (afa) to 3.0 afa and unit applied water demand for agricultural fields range from 1.7 afa to 2.4 afa (DWR 1975). The annual water demands for the almond orchard and agricultural fields are estimated to be approximately 160 afy to 228 afy and 262 afa to 370 afa respectively. Total existing water demands at the project site would be approximately 422 afy to 598 afy.

Table 4.12-3
Estimated Annual Water Demands for Existing land Use at Project Site

Land Use	Acreage	Water Demand (afy)
Almond orchard	76	160–228
Fields	154	262–370
Total	230	422–598

Source: EDAW 2006

For more information regarding the City's water supply, please refer to the WSA prepared specifically for the proposed project by EDAW (Appendix F).

WASTEWATER COLLECTION AND TREATMENT

The sewer system consists of up to 48-inch diameter gravity sewers, pumping stations, and force mains that convey wastewater to the Merced Wastewater Treatment Plant (WWTP). In the project area, a 12-inch sewer main is located on Childs Avenue, and a 36-inch sewer main is located on Gerard Avenue. A 30-inch trunk sewer main is located on Kibby Road and passes south through the project site to Gerard Avenue. (Frank, pers. comm., 2006).

The City owns and operates the Merced WWTP, which is located 2 miles south of the Merced Municipal Airport. The plant treats sewage generated by uses in the City and also serves limited unincorporated areas of the County in special circumstances. The existing facilities at the Merced WWTP include headworks, septage receiving, primary and secondary clarification, activated biosolid aeration basins, chlorination and dechlorination, anaerobic biosolid digesters, and biosolid drying beds. Dried biosolids are disposed of on a 600-acre site of City-owned farmland as a soil amendment (City of Merced 2005a.) The wastewater treatment plant is currently operating at an average dry weather flow of 7.8 million gallons per day (mgd), or 78% of the plant's permitted average dry-weather flow capacity of 10 mgd. The plant's current wet-weather flow is 8.15 mgd. The current design capacity of the treatment plant can support a population of approximately 100,000.

Approximately 75 to 80% of the Merced WWTP effluent flow is discharged to Hartley Slough, which enters Owens Creek, and subsequently enters a network of natural and artificial channels tributary to the San Joaquin River. The Merced Wildlife Management Area (MWMA), a 385-acre mitigation area created to offset habitat losses incurred through the development of a City industrial wastewater disposal site, receives another 20 to 25% of the treatment plant effluent. The remaining portion of the effluent is used to irrigate fodder crops grown during periods of low industrial flow. The fodder crops are grown and irrigated on a City-owned and operated 580-acre industrial wastewater disposal site south of the treatment plant. (City of Merced 2005a.)

The City evaluated the environmental impacts of increasing wastewater treatment capacity and improving treated effluent quality of the existing City of Merced WWTP facility in the *City of Merced Wastewater Treatment Plant Expansion Project, Final Environmental Impact Report* (City of Merced 2006a). The final EIR was certified by the City Council on December 18, 2006, and construction of improvements is scheduled to start in spring 2009. Improvements will increase capacity to 12 mgd and provide tertiary treatment (filtration and ultraviolet disinfection).

The overall goal of the WWTP expansion project is to upgrade and expand the capacity of its WWTP facilities to accommodate planned wastewater loads generated within its SUDP area and the adjacent University of California Merced Long Range Development Plan (LRDP) area, and to comply with current and anticipated effluent quality regulatory limits. The WWTP project would initially increase the capacity of the WWTP from the currently permitted 10 mgd to 11.5 mgd without any substantive improvements to the treatment facilities. This project is currently underway to provide redundancy for the existing 10 mgd capacity. The 11.5 mgd of secondary treatment capacity would be available immediately upon issuance of a new National Pollutant Discharge Elimination System (NPDES) permit from the Central Valley Regional Water Quality Control Board (RWQCB) and after certification of the EIR for the wastewater treatment plant. Following this initial upgrade a series of improvements would be made to the WWTP enabling the capacity of the treatment system to be rated at either 12 mgd or 16 mgd by adding a series of tertiary-treatment facility improvements. Ultimately, the WWTP would reach a capacity of 20 mgd with additional improvements as needed to meet future wastewater loads.

SOLID WASTE DISPOSAL

Solid waste disposal for the City of Merced and the project site is managed by the Merced County Solid Waste Regional Agency. The Merced County (County) and its six incorporated cities jointly own and operate two active solid waste landfill facilities: the Highway 59 Landfill, serving the eastern end of the County, and the Billy

Wright Landfill, serving the western end of the County. Both of these facilities are permitted to accept municipal solid waste.

The City provides all waste collection and transport services within the City limits processing approximately 60,000 tons per year. Commercial and industrial solid waste collection services are provided up to six times per week. It is anticipated that the Highway 59 Landfill, approximately 6 miles north of the City, would serve the project area. Permitted waste types at the Highway 59 Landfill are Class III, nonhazardous solid waste, inert wastes, and nonfriable asbestos.

At present, the Highway 59 Landfill is permitted to accept a maximum of 1,500 tons per day (tpd) of solid waste, and the average daily rate of solid waste tonnage accepted at the facility is approximately 488 tpd. In January 2001, the site received approval for an additional permitted area of 140 acres. The site currently has a permitted capacity of approximately 46.2 million tons. Closure dates of landfills are based on projected population growth rates. The closure date of the Highway 59 Landfill is anticipated to be approximately 2030. (CIWMB 2004a.)

RECYCLING FACILITIES

Assembly Bill (AB) 939 requires local agencies to implement source reduction, recycling, and composting (see discussion under "Regulatory Setting" below). The countywide Integrated Waste Management Plan (IWMP) requires recycling programs, which are expected to result in a 50% diversion from landfills, thereby extending the life of landfills.

Individual landfills in Merced County have resource recovery areas, and the Highway 59 Landfill has a permitted composting facility, which provides for the collection of wood and green wastes (which are composted) and concrete/asphalt wastes (which are processed and used for the pads and haul roads within the landfill sites).

The Highway 59 Landfill inspects all self-haul loads and some commercial haul loads. If it appears that the load has a high percentage of recyclable materials, the load is sent to a sorting pad.

ELECTRICAL SERVICES

Two potential public utility providers could provide electrical service for the project site: the Merced Irrigation District (MID) and Pacific Gas and Electric Company (PG&E). MID, under the authority of the California Water Code, has the authority to operate as an electric utility. During the past 70 years, MID has provided wholesale power to PG&E. As a result of AB 1890, MID is able to sell power at the retail level. MID distributes electricity through the Atwater/Merced transmission loop. Historically, MID has served the area generally from the City of Livingston to the City of Atwater. MID has expanded its power delivery area in recent years, and in 2000 it completed the extension of its network to the City of Merced with a series of overhead and underground lines. Currently, the MID delivers approximately 80 megawatts of electricity to its 3,500 residential customers.

PG&E delivers approximately 81,923 million kilowatt-hours (kWh) of electricity to its 13 million customers throughout the 70,000-square-mile service area in northern and central California. The Wilson Substation, which is located immediately south of State Route 140 and west of Tower Road, is one of PG&E's substations serving the City. Two parallel transmission lines originate from this substation and extend to the northwest: a 115-kilovolt (kV) line, called the Wilson-Atwater, and a 230-kV line called the Belotta-Harndon. These transmission lines generally run north to south through the central area of the site and terminate northeast of the project site at the Wilson Substation.

NATURAL GAS SERVICES

Natural gas service would be provided to the project site by PG&E. Gas is delivered to Merced and the proposed project area through portions of PG&E's 46,000 miles of natural gas pipelines. An existing 8-inch gas

transmission line runs parallel to State Route 99 through the City, and several 6-inch and 4-inch distribution lines tap off of the main line. In the proposed project area, one 6-inch gas transmission line parallels Yosemite Parkway north of the project site and one 6-inch gas transmission line parallels Childs Avenue east of the project site.

TELECOMMUNICATIONS SERVICE

The proposed project site is located in the service area of AT&T (formerly SBC), which would provide telephone communications service to the proposed project. AT&T provides telecommunications services, including local, long distance, and DSL, to the City.

Cable television services are provided by Comcast who is in the process of renovating local facilities to offer high speed internet access through the cable system and other products.

FIRE PROTECTION

The project site is in the service area of the Merced Fire Department. The following information on the department was obtained from the department's Web site (City of Merced 2006b) and from City staff (Espinosa 2008). As of 2008, the City of Merced Fire Department's fire control equipment consisted of five first-line engine companies (carry and pump water) at five stations throughout the City, one ladder company (85 feet), two reserve engines, one reserve truck, and several miscellaneous vehicles. The Fire Department personnel totals 81 employees, all of whom are paid professionals, which provides the City coverage 24 hours a day, 7 days a week.

The City of Merced Fire Department has a mutual aid agreement with the Atwater and County Fire Departments. This agreement enables the different jurisdictions to request aid from another when necessary. At present, the Merced Fire Department holds a Class II ISO rating. This rating schedule is used by the Insurance Service Office (ISO) to establish insurance rates for commercial and residential properties.

The department responds to fires, medical emergencies, traffic accidents, creek rescues, and a variety of other emergency situations. The department currently employs 54 line personnel (15 captains, 18 engineers, and 21 firefighters), three battalion chiefs, two division chiefs, and one chief. Department personnel are typically assigned on a three-platoon work schedule, which provides the City with coverage 24 hours a day, 7 days a week. The department maintains five fire stations:

- Station 51 at 99 East 16th Street,
- Station 52 at Merced Municipal Airport,
- Station 53 at 800 Loughborough Drive,
- Station 54 at 1425 East 21st Street, and
- Station 55 at the intersection of Parsons Avenue and Silverado.

The project site is located in Fire District 4, and Station 54 at 1425 East 21st Street currently provides first-response service to the project area (City of Merced 2005b). Personnel at Station 54 are responsible for emergency out-of-town assignments and maintenance of all wildland equipment. Fires Station 54 is approximately 3.9 miles northwest of the project site.

An important requirement in fire suppression is adequate fire flow, which is the amount of water, expressed in gpm, available to control a given fire and the duration of time this flow is available. The total fire flow needed to extinguish a structural fire is determined by a variety of factors, including building design, internal square footage, construction materials, dominant use, height, number of floors, and distance to adjacent buildings. Minimum requirements for available fire flow at a given building are dependent on standards set in the California Fire Code. Generally, fire flow requirements for the type of development associated with the proposed project is 3,500 gpm for industrial development (measured at 20 pounds per square inch [psi]) with a minimum 2-hour duration.

POLICE PROTECTION

The Merced Police Department provides law enforcement services including dispatching to the City of Merced and the project site. The following information on the department was obtained from the City's Web site (City of Merced 2006c). As of February 2005, the department had a total of 81 sworn officers, including four administrative staff. The department maintains three stations:

- Central Station at 611 West 22nd Street,
- North Station at 1109 Loughborough Drive, and
- South Station at 470 West 11th Street.

The department has a total 95 vehicles, including patrol, SWAT, bomb, investigatory, traffic, canine, parking enforcement, and administrative vehicles. The average response time for in-progress calls is between 2 and 4 minutes, while the average response time for not-in-progress calls can range from 2 minutes to over an hour, depending on the type of call. The department responded to 5,600 calls in 2005.

The Central District at 611 W. 22nd Street currently provides first-response service to the project area (City of Merced 2005b). This district includes an investigations division, traffic division, animal control, dispatch, records, gang violence suppression unit, evidence, and administration. The Central District Station is 5.2 miles northwest of the project site.

SCHOOLS

Schools in the City of Merced are administered by three districts: the Merced City Elementary School District, which consists of 13 elementary schools and four middle schools; the Weaver Union Elementary School District, which consists of two elementary schools; and the Merced Union High School District, which consists of seven high schools. For the 2005-2006 school year, there were 11,289 students, 2,086 students, 10,466 students enrolled in the Merced City Elementary School District, Weaver Union Elementary School District, Merced Union High School District, respectively. (Education Data Partnership 2006.) Because the project is anticipated to hire primarily from the local community, resulting in little in-migration, the project would not increase substantially increase population (See Section 4.9 "Population and Housing" for a more detailed discussion). Therefore, the project is not expected to increase long-term demand for schools necessitating the expansion of existing facilities or construction of new facilities. In addition, new industrial uses are required to pay school impact fees; therefore, impacts associated with student generation of in-migrating employees would be off-set by this fee payment.

PARKS AND RECREATIONAL FACILITIES

As of 2008, the City of Merced owns and maintains 60 park areas with a total area of 395 acres (Espinosa 2008). These park areas include mini-parks, urban plazas, neighborhood parks, school parks, community parks, large urban parks, athletic parks, special use areas, linear parks, and undeveloped parkland. The City's policy requires 5 acres of parkland for every 1,000 residents. As of 2003, the City's population was 67,610 for a ratio of 5.04 acres per 1,000 residents. The City also owns and maintains seven ball fields, four soccer fields, two tennis courts, one gymnasium, 5,450 square feet of pool space, and 13.11 miles of recreational pathways/trails. The park located nearest the project site is the Joe Herb Park, which is a 26.7-acre community park located at 2200 Yosemite Parkway approximately 3.3 miles northwest of the site. (City of Merced 2006d.) Because the project is anticipated to hire primarily from the local community, resulting in little in-migration, the project would not increase substantially increase population (See Section 4.9 "Population and Housing" for a more detailed discussion). Therefore, the project is not expected to increase long-term demand for parks and recreation facilities such that new facilities or expansion of existing facilities would be necessary.

LIBRARY FACILITIES

Library services in the City of Merced are provided by the Merced County Library which has 16 branches located throughout the County. The main branch of the library and one additional branch are located in the City of Merced on O Street and Lesher Drive, respectively. The main branch has over 100,000 books and 150 magazine and newspaper subscriptions. Because the project is anticipated to hire primarily from the local community, resulting in little in-migration, the project would not increase substantially increase population (See Section 4.9 "Population and Housing" for a more detailed discussion). Therefore, the project is not expected to increase long-term demand for library facilities such that new facilities or expansion of existing facilities would be necessary.

4.12.2 REGULATORY SETTING

FEDERAL PLANS, POLICIES, REGULATIONS, AND LAWS

Americans with Disabilities Act

The Americans with Disabilities Act (ADA) of 1990 (42 United States Code [USC] 12181) prohibits discrimination on the basis of disability in public accommodation and state and local government services. Under the ADA, the Architectural and Transportation Barriers Compliance Board issues guidelines to ensure that facilities, public sidewalks, and street crossings are accessible to individuals with disabilities. Typical ADA improvements include creating handicap parking spaces, restroom modifications, door hardware requirements, and lighting upgrades. Play areas, meeting rooms, park restrooms, and other buildings and park structures are required to meet ADA compliance requirements.

STATE PLANS, POLICIES, REGULATIONS, AND LAWS

Senate Bill 610

Senate Bill (SB) 610 (Section 21151.9 of the Public Resources Code and Section 10910 et seq. of the Water Code) requires the preparation of "water supply assessments" (WSA) for large developments (e.g., for projects of 500 or more residential units, 500,000 square feet of retail commercial space, or 250,000 square feet of office commercial space). 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 addition to urban and agricultural demands and other anticipated development in the service area in which the project is located. Where a 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.

A WSA has been prepared for the project and is included as Appendix F. The conclusions of the WSA are summarized in the "Environmental Impacts" portion of this section, under Impact 4.12-1.

California Integrated Waste Management Act

To minimize the amount of solid waste that must be disposed of by transformation and land 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 city 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.

Building Energy Efficiency Standards

The project would be required to comply with recently adopted changes to Title 24 of the California Code of Regulations regarding energy efficiency, which became effective on October 1, 2005. These new energy efficiency standards were developed in response to the state's energy crisis as well as AB 970 in regards to improving residential and nonresidential building energy efficiency, minimizing impacts to peak energy usage periods, and reducing impacts on overall state energy needs.

LOCAL PLANS, POLICIES, REGULATIONS, AND LAWS

Merced Vision 2015 General Plan

The Public Services and Facilities Element, the Open Space Element, the Sustainable Development Element, and the Safety Element of the *Merced Vision 2015 General Plan* (City General Plan) contain various goals and policies that apply to the services and facilities provided by the City, and regulate the ways in which new developments are required to offset impacts associated with these services. The following specific local policies apply to development of the uses proposed in this project.

Public Services and Facilities Element

GOAL AREA P-1: Public Facilities and Services

- **Policy P-1.1:** Provide adequate public infrastructure and services to meet the needs of future development.

  1.1.a: Through development review, ensure that utilities are adequately sized to accommodate the proposed development and, if applicable, allow for extensions for future developments, consistent with master plans.

  1.1.c: Include in Specific Plans and master plans, a phasing plan for providing access, sewer, water, drainage, flood control, schools, parks and other appropriate governmental facilities and services.

- **Policy P-1.3:** Require new development to provide or pay for its fair share of public facility and infrastructure improvements.

  1.3.c: All new development shall contribute its fair share of the cost of on-site and off-site public infrastructure and services as appropriate.

  1.3.d: The City may require developments to install off-site facilities which also benefit other properties.

GOAL AREA P-2: Police and Fire Protection Services

- **Policy P-2.1:** Maintain sufficient public protection facilities, equipment, and personnel to serve the City's needs.

  2.1.b: Determine that new development is adequately served by fire and police protection services.

  2.1.e: Maintain an adequate and reliable water system to serve fire protection needs.

  2.1.g: Utilize existing community resources, to the maximum extent feasible, in the provision of public protection services.

2.1.h: Assure that new development utilizes modern public protection concepts in their design and development.

GOAL AREA P-3: Water

- **Policy P-3.1:** Ensure that adequate water supply can be provided within the City's service area, concurrent with service expansion and population growth.

  3.1.e: Continue to work with Merced Irrigation District and the County of Merced to ensure that adequate water supply and distribution facilities can be developed to meet the growth of the Merced metropolitan area.

GOAL AREA P-4: Wastewater

- **Policy P-4.1:** Provide adequate wastewater collection, treatment and disposal capacity for projected future needs.

  4.1.a: Maintain the existing wastewater system to increase the lifetime of the system.

  4.1.b: Develop wastewater master plans to serve future Merced urban expansion.

GOAL AREA P-6: Solid Waste

- **Policy P-6.1:** Establish programs to recover recyclable materials and energy from solid wastes generated within the City.

  6.1.a: Implement source reduction and recycling programs to minimize waste at the point of manufacture or use.

- **Policy P-6.2:** Minimize the potential impacts of waste collection, transportation and disposal facilities upon the residents of Merced.

  6.2.b: Cooperate with Merced County to implement recommendations for source reduction programs which have the least environmental and economic impacts on the City and its residents.

  6.2.c: Continue implementation of programs in cooperation with the County of Merced to meet solid waste diversion goals.

Open Space Element

GOAL AREA OS-5: Conservation of Resources

- **Policy OS-5.1:** Promote water conservation throughout the planning area.

  5.1.a: Continue implementation and enforcement of the City's Water Shortage Regulations (MMC 15.42.010-100).

  5.1.b: Continue implementation of the Water Efficient Landscaping and Irrigation Ordinance (MMC 17.60.010-070).

Sustainable Development Element

GOAL AREA SD-3: Energy Resources

- **Policy SD-3.1:** Promote the use of solar energy technology.

  3.1.a: Encourage the use of solar energy in design and management of all new construction in the City.

  3.1.c: Encourage developers and builders to properly design all structures on each building lot in the City to take fullest advantage of solar use in heating and cooling.

  3.1.d: Encourage developers and builders to maximize "passive" solar design, such as large south-facing windows for winter heat gains and overhangs for shading for summer heat protection.

- **Policy SD-3.2:** Encourage the use of energy conservation features and low-emission equipment for all new residential and commercial development.

  3.2.b: Cooperate with the local building industry, utilities, and SJVUAPCD to promote enhanced energy conservation standards for new construction.

  3.2.c: Encourage new residential, commercial, and industrial development to reduce air quality impacts from area sources and from energy consumption.

Safety Element

GOAL AREA S-4: Fire Protection

- **Policy S-4.1:** Promote the concept of fire protection master planning with fire safety goals, missions, and supporting objective for the community.

  4.1.b: Work with the Fire Department and the Environmental Health Division to identify fire districts that will require specialized manpower and equipment, such as businesses that use hazardous materials, and request that land uses or structures with similar needs be confined to these districts.

- **Policy S-4.2:** Maintain a reasonable level of accessibility and infrastructure support for fire suppression, disaster, and other emergency services.

  4.2.b: Maintain current standards defined in the California Building and Fire Codes and City Standards for the spacing of fire hydrants. In general, these standards call for 500-foot spacing in residential areas and 300-foot spacing in commercial and industrial areas.

GOAL AREA S-6: Crime

- **Policy S-6.2**: Provide services and personnel necessary to maintain community order and public safety.

  6.2.a: Maintain a police force sufficiently staffed and deployed to ensure quick response times to emergency calls.

  6.2.b: Encourage approaches to crime prevention to be designed into new buildings and subdivisions.

Merced Municipal Code, Title 15, Public Services

Chapter 15.42, Water Shortage Regulations, of the Merced Municipal Code states, "a water shortage and emergency exists within the water source and service area of the water department of the City of Merced, and that it is necessary to prohibit and regulate water uses." The City of Merced Water Conservation Ordinance is in effect year-round. This ordinance allows watering of lawns and landscaping according to street addresses, and prohibits:

- washing of sidewalks, driveways, porches or other outdoor surfaces, except when necessary to protect public health and safety; however, buildings may be washed down once a year;
- operation of any ornamental fountain unless it uses a re-circulating water system;
- washing of boats, motor homes, or automobiles and trucks with a hose that is not fitted with an automatic shut-off device;
- indiscriminate running or wasting of water, such as excessive irrigation causing runoff and flooding; and
- allowing broken or defective plumbing or irrigation systems which permit the escape or leakage of water.

Merced Municipal Code, Title 17, Buildings and Construction

Chapter 17.60, Water Efficient Landscaping and Irrigation Ordinance

Chapter 17.60, Water Efficient Landscaping and Irrigation Ordinance, is intended to:

- enhance the environmental value and physical appearance of development in the City;
- improve the environmental performance of development by: reducing heat, glare and noise; promoting the percolation of storm water, aid in improving air quality; and buffering potentially incompatible land uses from one another; and
- promote the conservation of water and preservation of water quality by requiring drought tolerant plant material in landscaping and the retention of existing natural vegetation, thereby reducing the need for irrigation, pesticides, herbicides, and fertilizers.

Chapter 17.62, Public Facilities Impact Fees Ordinance

To implement the goals and objectives of the City of Merced's General Plan and to mitigate the impacts caused by future development in Merced, certain public facilities must be or have been required to be constructed, and/or compensation measures must be or have been required to be taken to offset resources lost due to the future development. The City Council has determined that public facilities impact fees are needed to finance these public facilities, and/or compensation measures, and to pay for each development's fair share of the construction costs of these improvements, and/or the costs of the compensation measures. In establishing the fees, the City Council has found the fees to be consistent with its General Plan.

A public facilities impact fee is established on issuance of building permits for development in the City of Merced to pay for municipally owned public facilities, including, but not limited to, fire stations, police stations, community recreation facilities, traffic-related improvements, and bikeways facilities.

Merced Community Fire Protection Master Plan

The City of Merced Community Fire Protection Master Plan (2003) provides the following ongoing service goals and objectives that are applicable to the proposed project:

1. Implement City policies and provide levels as directed by the City Council and administrative staff.

2. Provide continued community assessment to identify the needs relative to service levels, in line with the departments "Standards of Cover" and operational policies/procedures.

4.12.3 ENVIRONMENTAL IMPACTS

METHOD OF ANALYSIS

Impacts on utilities and public services that would result from the project were identified by comparing existing service capacity and facilities, staffing, and equipment against future demand associated with project implementation. When possible, a quantitative comparison was used to determine the effect of the proposed project on future demands and whether physical impacts associated with the need to expand existing facilities or construct new facilities would likely result. Evaluations of potential utilities and public services impacts are based on a review of documents pertaining to the proposed project area, including the City General Plan, the WSA, and the City of Merced Community Fire Protection Master Plan. Additional information was obtained through consultation with appropriate agencies and field review of the project site and surroundings.

THRESHOLDS OF SIGNIFICANCE

For the purpose of this analysis, the following thresholds of significance have been used to determine whether implementation of the proposed project would result in significant utilities and public services impacts. Based on questions included Appendix G of the State CEQA Guidelines (the CEQA checklist), a utilities impact is considered significant if implementation of the proposed project under consideration would do any of the following:

- create a need for the development of new service facilities (e.g., fire, police, schools), the construction of which could result in significant environmental impacts;
- create circumstances where existing services and facilities could not meet established performance standards (i.e., response times, provider per resident ratios);
- substantially impede existing services;
- generate solid waste beyond the capacity of existing landfills;
- violate federal, state, or local statues and regulations related to solid waste; or
- result in inefficient, wasteful, and unnecessary consumption of energy (based on Appendix F of the State CEQA Guidelines).

A public services impact is considered significant if implementation of the proposed project under consideration would do any of the following:

- create demand beyond available service or permit capacity;
- create demand for electrical or natural gas service that is substantial in relation to the existing demands;
- exceed wastewater treatment requirements of the Central Valley RWQCB;
- 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; or

- have insufficient water supplies available to serve the project from existing or permitted entitlements and resources, or require new or expanded entitlements.

The proposed project is not expected to result in substantial, direct population growth, and indirect impacts related to population growth are addressed in Chapter 6, "Cumulative and Growth-Inducing Impacts." It is anticipated that the majority of employees would be hired from the local population base. For further information on the project's impact on population, employment and housing, please see Section 4.9, "Population and Housing". Currently, the parks and recreational facilities, school facilities and services, and other public services in the City are adequate to serve the existing City residents. The project would be subject to development impact fees would provide the legally maximum required level of funding under State law. The California Legislature has declared that the school impact fee is deemed to be full and adequate mitigation under CEQA. (Government Code Section 65996) Therefore, the project would not increase long-term demand for these services and are not discussed further in this section.

IMPACT ANALYSIS

IMPACT 4.12-1 Increased Demand for Water Supply and Distribution. *Implementation of the proposed project would increase demand on the existing water supply and water distribution systems. Existing water supply and distribution facilities would be adequate to serve the project. Therefore, this impact is considered less than significant.*

Water requirements for the project are broken into two categories: domestic and fire protection. Domestic water usage is distributed into two categories: domestic plumbing and truck wash. Domestic usage is approximately 20,000 gpd and includes restrooms, sinks, water fountains and the kitchen. The truck wash usage is approximately 35,000 gpd and is for washing company tractors and trailers. In addition to the domestic water requirements, the project facility would have two 300,000-gallon (0.9 afy) ground-level water storage tanks. The tanks would be dedicated to service the facility fire protection system and would not be connected to the domestic water system. The total amount of water needed for the tanks would be 600,000 gallons (1.8 afy). Because it is not possible to predict when, if ever, these water tanks would be needed for fire protection, it is assumed that the amount of water necessary to fill the tanks is an annual water demand.

Table 4.12-4
Wal-Mart Regional Distribution Center Annual Water Demands

Category		Unit Water Demand	
		gallons per day (gpd)	acre-feet per year (afy)
Domestic Water	Plumbing	20,000	22.4
	Truck wash	35,000	39.2
	Total	**55,000**	**61.6**
Fire Protection	Two 300,000-gallon storage tanks	600,000	1.8
Total Water Demands			63.4

Source: City of Merced 2006f

Currently, the project site contains an almond orchard and agricultural fields. Total existing water demands for these uses at the project site would be approximately 422 afy to 598 afy. As shown in Table 4.12-4, total annual water demands for the project would be 61.6 afy for domestic water and 1.8 afy for fire protection, a total of 63.4 afy. With implementation of the proposed project, the existing water demand associated with the almond orchard and agricultural uses would no longer be required. Therefore, the project would result in a net reduction in total groundwater basin pumping. However, for purposes of this DEIR, the most conservative analysis approach was

taken and the net increases in water supply demand for the proposed project were considered as separate from existing uses.

The City uses groundwater exclusively, and development of the project would require 63.4 afy to be pumped from the groundwater basin annually. A WSA has been prepared for the proposed project consistent with Water Code Section 10912 (Appendix F). This assessment includes a determination as to whether the projected water supplies available would meet the water demand associated with the proposed project, in addition to the existing and planned future uses. The projected water demand associated with industrial land use for the project site was accounted for in the most recently adopted UWMP.

The City's total projected water supplies available during normal, single dry, and multiple dry water years during a 20-year projection will meet the projected water demand associated with the project in addition to existing and planned future uses. As shown in Table 4.12-2 above, buildout of the City, which includes the proposed project, would result in a water supply demand of 55,677 afy. The City's UWMP concludes that groundwater is a consistent source, so no replacement plan is needed. Although groundwater levels have declined at a greater rate during drought periods, the annual quantity of groundwater available does not vary significantly in relation to wet or dry years. The reliability of the City's water supply does not change due to seasonal or climatic shortages and there is no evidence that groundwater quality is affected by short-term drought conditions. In addition, the City and MID are cooperating on a long-range plan to stabilize groundwater levels and to investigate the potential of recharge with imported surface water from the Merced River. Based upon the analysis undertaken by the City in its UWMP, and the groundwater management and planning efforts being undertaken by the City and MID, the City has concluded that it can continue to provide potable water to future development included in the SUDP, including the project.

In the project area, a 16-inch water main is located on Childs Avenue, and a 16-inch water main on Kibby Road passes south through the project site to Gerard Avenue. This water main would be rerouted from Kibby Road south to Childs Avenue within the site boundaries. From Childs Avenue the main would travel east to Tower Road, loop to cover the west side of property adjacent to Campus Parkway, and then travel south to Gerard Avenue. These mains would be located in easements within the site boundaries (Frank, pers. comm., 2006).

The project's internal water distribution system would be constructed, as needed, and would be adequately sized to accommodate project-related water demands and fire flow demands. As described in the City General Plan and the City's Municipal Code, the project applicant would be responsible for paying water connection charges when the proposed project connects to the City's water system.

The applicant has not submitted a landscaping plan that would help identify potential water demand associated with irrigation. Nonetheless, the City requires new development to implement water efficient landscaping in project designs. These designs could potentially include, but are not limited to:

- both evergreen and deciduous trees, shrubs and attractive dust and erosion-preventing ground cover;
- 90% of the plants in non-turf areas are well-suited to the climate of the region, drought tolerant, and require minimal water once established in the landscape;
- turf area limited to 30% of the total landscaped area; and
- automated irrigation systems with multiple cycle capabilities and rain sensing override switches.

Based on the estimated water demand for the project, available water supply, the WSA, the City's water distribution system facilities, the project's water supply and water distribution facilities impacts would be ***less than significant.***

Mitigation Measure

No mitigation is required.

IMPACT 4.12-2 Demand for Wastewater Treatment and Conveyance Facilities. *Implementation of the proposed project would increase demand for wastewater treatment and conveyance facilities. Existing wastewater treatment facilities and the City's wastewater conveyance facilities would be adequate to serve the project. This impact would be less than significant.*

Domestic water demand would be 55,000 gpd (Table 4.12-4). The project facility would have two 300,000-gallon ground-level water storage tanks dedicated to serving the facility fire protection system and are not connected to the domestic water system. Therefore, only domestic water demands were used to calculate the amount of wastewater generated by the proposed project. Using a standard rate of 90% of the total water volume used (55,000 gpd) to estimate wastewater production, the project would generate approximately 49,500 gpd (0.05 mgd) of wastewater. The wastewater generated by the project, in combination with the average 7.8 mgd wastewater flows currently being treated at the Merced WWTP, would not exceed the plant's permitted capacity.

As described above under "Affected Environment," the City evaluated the environmental impacts of increasing wastewater treatment capacity and improving treated effluent quality of the existing City of Merced WWTP facility in the certified *City of Merced Wastewater Treatment Plant Expansion Project, Final Environmental Impact Report* (City of Merced 2006a). A summary of their environmental impacts have been incorporated by reference and are summarized in this section below.

The WWTP was recently expanded and has capacity for secondary treatment to 11.5 mgd (although the WWTP is only permitted for 10 mgd by the Regional Board).If the City continues to experience high growth rates, it will expand treatment capacity from 11.5 mgd to 12 mgd by 2012, followed by a subsequent phase from 12 mgd to 16 mgd treatment capacity between 2017 and 2025.

Currently, the existing WWTP capacity would be adequate to serve wastewater flows generated by the proposed project; however, the proposed project, considered along with other future development in the City, contributes to the need for the WWTP expansion. Therefore, there is a relationship between the project and the need for WWTP expansion, and the environmental impacts of increasing wastewater treatment capacity are associated with development of the project. Approval of the project may hasten the occurrence of the related impacts; however, these impacts would also occur without development of the project. Because the WWTP expansion is required to serve regional City development, it would be required whether or not the project is developed.

As described in the WWTP expansion project EIR, expansion of the WWTP would result in several environmental impacts, most of which would be reduced to a less-than-significant level through implementation of mitigation. The only significant and unavoidable impact related to the treatment plant that was identified would be permanent conversion of Unique Farmland or Farmland of Statewide Importance to non-agricultural use. Mitigation identified in the EIR would require the City to pay into a recognized trust fund that would acquire agricultural conservation easements. Implementation of this mitigation would reduce impacts on the permanent conversion of important farmlands but not to a less-than-significant level. Therefore, the proposed project would contribute to a significant and unavoidable impact associated with conversion of farmland identified in the WWTP expansion project EIR.

Additional on-site wastewater conveyance facilities would be required to connect the proposed project into existing City sewer mains, and no extensions of off-site infrastructure would be required to serve the project. In the project area, a 12-inch sewer main is located on Childs Avenue, and a 36-inch sewer main is located on Gerard Avenue. A 30-inch trunk sewer main is located on Kibby Road and passes south through the project site to Gerard Avenue. The portion of this main on the project site would be relocated to an easement on the west side of the site within the property boundaries. (Frank, pers. comm., 2006.) The gravity sewer west of Kibby currently

slopes toward Kibby. This would need to be replaced by a sewer sloping to the west, toward the replacement for the Kibby sewer scheduled to be installed along the western boundary of the property. The project's internal wastewater conveyance system would be constructed, as needed, and would be adequately sized to accommodate project-related wastewater flows. The City's wastewater system has been master planned for future development such as the proposed project. The Gerard trunk sewer is going to require major rehabilitation in the near future. This is a bituminous-lined, corrugated metal sewer installed in the 1950s and is badly deteriorated. It could be slip lined for an estimated $6 million. As described in the City General Plan and the Merced Municipal Code, the project proponent would be responsible for paying sewer connection charges when the proposed project connects to the City's sewer system. Payment of these fees would ensure the project proponent pays for its fair share of the cost of sewer infrastructure and WWTP services. (Frank, pers. comm., 2006.)

The existing WWTP capacity would be adequate to serve wastewater flows generated by the proposed project. In addition, the wastewater generated by the project, in combination with the average 7.8 mgd wastewater flows currently being treated at the Merced WWTP, would not exceed the plant's permitted capacity. Furthermore, the WWTP would be expanded in the near term to 12 mgd and then to 16 mgd and eventually 20 mgd. The proposed project would consequently not result in the need for additional expansion of the WWTP, and the project impact is ***less than significant***.

Mitigation Measure

No mitigation is required.

IMPACT 4.12-3 Increased Generation of Solid Waste. *The proposed project would incrementally increase the amount of solid waste generated in the City. Because the Highway 59 Landfill has sufficient permitted capacity to accommodate the project's solid waste disposal needs and because the project would also comply with all federal, state, and local statutes and regulations and the Merced Municipal Code related to solid waste reduction and recycling, this impact would be a* less than significant.

CIWMB provides an average per-capita solid waste disposal rate for warehousing as 1.9 tons per employee per year (CIWMB 2004b). Approximately 1,200 workers are anticipated to be employed on the project site. Therefore, the solid waste generation for the proposed project is approximately 2,280 tons per year or 6.3 tpd. It should be noted that, although not assumed in this analysis, Wal-Mart representatives have stated that zero waste is one of its sustainability goals and that the proposed project would include a recycling program, which would reduce the solid waste generation factor assumed in this analysis (see Section 3.7.6, "Proposed Sustainability and Energy Conservation Measures" for details).

The project site is currently serviced by the Highway 59 Landfill disposal site. The Highway 59 Landfill is permitted to accept a maximum of 1,500 tpd of solid waste, and the average daily rate of solid waste tonnage accepted at the facility is approximately 488 tpd. On a daily basis, the estimated 6.3 tpd of solid waste generated by the proposed project would represent approximately 0.4% of the maximum daily disposal and approximately 1.4% of the average daily disposal. The landfill has approximately 46.2 million tons of permitted capacity, which is estimated by CIWMB to last for approximately three decades (CIWMB 2004a). The Highway 59 Landfill has sufficient permitted capacity to accommodate the project's solid waste disposal needs.

Operation of the proposed project would generate large amounts of recyclable materials, such as paper, plastic, and cardboard packaging. The City of Merced implements a recycling program to ensure compliance with AB 939 and requires new development to comply with the Merced Municipal Code Title 8, Chapter 8.06, Recycling, which requires new project development to provide adequate, accessible, and convenient areas for collecting and loading recyclable materials. General standards include, but are not limited to:

- providing areas for recycling with adequate in capacity, number, and distribution to serve the development where the project occurs;

- providing adequate number of bins or containers in recycling areas;
- providing security to prevent theft of recyclable materials;
- including driveways with unobstructed access for collection vehicles and personnel; and
- including signs to clearly identifying all recycling and solid waste collection and loading areas and the materials accepted.

Because the Highway 59 Landfill has sufficient permitted capacity to accommodate the project's solid waste disposal needs and because the project would also comply with all federal, state, and local statutes and regulations and the Merced Municipal Code related to solid waste reduction and recycling, this impact would be a ***less than significant***.

Mitigation Measure

No mitigation is required.

IMPACT 4.12-4 Increased Demand for Electricity and Required Extension of Electrical Infrastructure. *Implementation of the proposed project would increase demand for electricity and electrical infrastructure. PG&E or MID would be able to provide electricity to the project site, and the increase in demand for electricity would not be substantial in relation to the existing electricity consumption in PG&E's or MID's service area. The City of Merced has identified the need to reduce energy demands in new development, and the proposed project would be required to include energy efficiency measures in project designs; therefore, this impact would be potentially significant.*

The proposed project would increase electrical demand in Merced. Electrical consumption for the proposed project was estimated based on the Wal-Mart distribution center in Porterville, California, which is similar in size to the proposed project. Using this data, the proposed project could increase electrical demands by approximately 13.3 million kilowatt-hours per year (Gordon, per. comm., 2007).

PG&E and MID facilities are located in the project area, and either utility provider could provide electrical service to the project site. PG&E facilities within the project area consist of two parallel transmission lines, a 115-kV line and a 230-kV. These transmission lines generally run north to south through the central area of the site and terminate northeast of the project site at the Wilson Substation. MID has a 12kV overhead line running through the site serving the City's Water Well 10R2. This line would need to be placed underground and routed out of the way of the Wal-Mart facilities. The applicant would have the option of making an agreement with either MID or PG&E for the provision of electrical services.

Project development would connect to extensions of the existing service lines, with the ultimate configuration to be approved by PG&E or MID. Both utility providers are required to comply with California Public Utilities Commission (CPUC) Decision 95-08-038 for the installation or upgrading of electric facilities and Building Energy Efficiency Standards (Title 24 of the California Code of Regulations) regarding energy efficiency. No new off-site electrical lines would be required for development of the proposed project. The on-site service lines would be sized to meet the demands of the project, and public utility easements would be dedicated for all underground facilities. The location of this infrastructure would be identified in the final project design. As part of the project approval process, the project applicant would coordinate with and meet the requirements of PG&E or MID regarding the extension and locations of on-site infrastructure.

The proposed electrical utility improvements would be required to comply with all existing City, PG&E or MID, and CPUC requirements, and applicable Uniform Building Code and Building Energy Efficiency Standards (Title 24 of the California Code of Regulations) requirements. The City of Merced has identified the need to reduce

energy demands in new development. To meet this goal, the proposed project would be required to implement additional energy efficiency measures; therefore, this impact would be ***potentially significant***.

Mitigation Measure 4.12-4: Incorporated Energy Efficiency Features into Project Designs

The project applicant shall prepare and submit to the City a sustainability plan, which shall incorporate the following energy efficiency features in project designs:

- providing electric maintenance equipment;
- using solar, low-emissions, or central water heaters;
- increasing building insulation beyond Title 24 requirements;
- orienting buildings to take advantage of solar heating and natural cooling;
- limiting the amount of glass on the south and west facades and providing solar protection for south-facing walls through landscaping or earth sheltering;
- installing thermal insulation, double-paned windows, high-tech window glazing, vapor barriers, and controlled air filtration to reduce energy consumption;
- installing skylights, light pipes, light shelves, exterior shade panels, and reflectors to transfer light to the interior of the building; and
- using clean alternative energy features, such as photovoltaic cells, solar panels, small wind turbines, and/or fuel cells, to generate power and reduce power consumption.

Implementation of Mitigation Measure 4.13-4 would reduce potentially significant impacts associated with increased demands for energy to a ***less-than-significant*** level ensuring the proposed project includes energy efficiency measures in project designs.

IMPACT 4.12-5 Increased Demand for Natural Gas and Required Extension of Natural Gas Infrastructure. *Implementation of the proposed project would increase demand for natural gas. PG&E would provide natural gas to the project site, and the increase in demand for natural gas would not be substantial in relation to the existing natural gas consumption in PG&E's service area. The City of Merced has identified the need to reduce energy demands in new development, and the proposed project would be required to include energy efficiency measures in project designs; therefore, this impact would be* ***potentially significant****.*

The proposed project would increase natural gas demand in Merced. Natural gas consumption for the proposed project was estimated based on the Wal-Mart distribution center in Porterville, California, which is similar in size to the proposed project. Using this data, the proposed project would increase natural gas demands by approximately 56,580 therms per year (Gordon, per. comm., 2007).

PG&E would provide natural gas to the project site. Natural gas lines are in the vicinity of the project site along Yosemite Parkway and Childs Avenue, and these lines parallel existing road rights-of-way (Frank, pers comm., 2006). Project development would connect to extensions of these existing off-site service lines, with the ultimate configuration to be approved by PG&E. Additional on-site service lines would be sized to meet the demands of the project, and public utility easements would be dedicated for all underground facilities. The location of infrastructure would be identified in the final project design. As part of the project approval process, the project applicant would coordinate with and meet the requirements of PG&E regarding the extension and locations of on-site infrastructure and comply with all existing City requirements.

The City of Merced has identified the need to reduce energy demands in new development. To meet this goal, the proposed project would be required to include energy efficiency measures in project designs; therefore, this impact would be ***potentially significant***.

Mitigation Measure 4.12-5: Implement Mitigation Measures 4.12-4. The applicant shall implement Mitigation Measure 4.12-4 above to reduce potentially significant impacts associated with increased demands for energy to a less-than-significant level by ensuring the proposed project includes energy efficiency measures in project designs.

IMPACT 4.12-6 Required Extension of Telecommunications Services. *Implementation of the proposed project would require extension of existing telecommunication services. AT&T would provide service to the project site and upgrade existing facilities, as necessary, to serve the project. This impact would be* ***less than significant****.*

Telecommunications infrastructure is currently located throughout the City and in the vicinity of the project site, and no off-site improvements would be necessary. AT&T would provide telephone communications service to the proposed project. AT&T would augment its existing facilities, as necessary, in the project vicinity and extend service into the project site. As part of the project approval process, the project applicant would coordinate with and meet the requirements of AT&T regarding the extension and locations of on-site infrastructure. All new on-site infrastructure would be installed in conformance with City and AT&T standards. This impact is would be ***less than significant***.

Mitigation Measure

No mitigation is required.

IMPACT 4.12-7 Increased Demand for Fire Protection Facilities, Systems, Equipment, and Services. *Development of the proposed project would result in increased demand for fire protection facilities and services. The City of Merced Fire Department has indicated it would be capable of serving the proposed project, project designs would incorporate all California Fire Code requirements, and project applicant would be required to pay its fair share of costs through payment of the Public Facilities Impact Fees and Permit Inspection Fees; therefore, this impact would be* ***less than significant****.*

Development of the proposed project would result in increased demand for fire protection facilities and services. The project site is in the service area of the City of Merced Fire Department. The project site is located in Fire District 4, and Station 54, approximately 3.9 miles northwest of the project site, currently provides first-response service to the project area (City of Merced 2005b). The average response time to emergency calls is between 4 and 6 minutes. The City of Merced Fire Department has indicated it would be capable of responding to fires and emergencies within the desired response time (Franco, pers. comm.).

Project designs include a 1,600-square-foot fire pump house that would include the primary and stand-by fire pumps serving the building fire sprinkler systems and site fire hydrants. Adjacent to the fire pump house would be two 300,000-gallon steel aboveground water storage tanks. The tanks would serve the fire protection system and would not be connected to the domestic water system. The tanks would each provide 625 gpm at 45 psi for a duration of 8 hours. These facilities would provide adequate water flow for fire suppression to meet California Fire Code requirements. The project applicant would be required to incorporate California Fire Code and City Fire Code requirements into project designs, which include adequate on-site circulation, equipment access during emergency conditions, adequate firefighting water flow, hydrant spacing, and other fire safety standards. During annual facility inspections, the City of Merced Fire Department would approve receptacles, vehicles, building devices, premises, storage spaces, or areas to be used to ensure facility operations meet California Fire Code requirements.

The City requires new development to pay its fair share of the costs associated with increase demand for fire protection facilities and services, as appropriate, through the City's Public Facilities Impact Fees Ordinance. Once operational, the facility would require annual inspections and permits. Fees associated with inspections and permits would be offset with the collection of Permit Inspection Fees (Franco, pers. comm. 2006).

The City of Merced Fire Department has indicated it would be capable of serving the proposed project, project designs would incorporate all California Fire Code and City Fire Code requirements, and project applicant would be required to pay its fair share of costs through payment of the Public Facilities Impact Fees and Permit Inspection Fees (Franco, pers. Comm., 2006). Therefore, this impact would be ***less than significant***.

Mitigation Measure

No mitigation is required.

IMPACT 4.12-8 **Increased Demand for Police Protection Facilities, Systems, Equipment, and Services.** *Development of the proposed project would result in increased demand for police protection facilities and services. Project designs would incorporate on-site security measures, and the project applicant would be required to pay its fair share of costs through payment of the Public Facilities Impact Fees; therefore, this impact would be less than significant.*

Development of the proposed project would result in increased demand for police protection facilities and services. Police services would be provided to the proposed project site by the City of Merced Police Department, Central District Station, approximately 5.2 miles northwest of the project (City of Merced 2005c). The average response time for in-progress calls is between 2 and 4 minutes, while the average response time for not-in-progress calls can range from 2 minutes to over an hour, depending on the type of call.

Employment of facility staff would not be expected to substantially increase the number of residents in the City of Merced because the large majority of employees would be hired from the local population base. Therefore, no construction or expansion of police facilities would be necessary to maintain the existing levels of service and response times. In addition, the City requires new development to pay its fair share of the costs associated with increased demand for police protection facilities and services, as appropriate, through the City's Public Facilities Impact Fees Ordinance.

Project designs would include on-site security measures. A truck gate would be located on the truck driveway serving the site and would contain workspace for two security officers. The project site would be surrounded by security fencing, and the tractor/trailer driveway and parking area would be secured by the truck gate and by a 6-foot-high chain-link fence with three strands of barbwire.

Because project designs would incorporate on-site security measures, and the project applicant would be required to pay Public Facilities Impact Fees, adequate police protection services would be provided to serve the demands of the proposed project. This impact would be ***less than significant***.

Mitigation Measure

No mitigation is required.