

This section of the Draft Environmental Impact Report (DEIR) describes the public services and utilities that serve the General Plan Update (GPU) Planning Area, including fire protection, law enforcement, public schools, parks and recreation, library services, water, wastewater, solid waste, energy, and communications. Each subsection includes descriptions of existing service provider(s), facilities, service standards, funding sources, and potential impacts on each service resulting from implementation of the proposed General Plan Update.

4.12.1 FIRE PROTECTION AND EMERGENCY MEDICAL SERVICES

4.12.1.1 EXISTING SETTING

City of Pinole Fire Department

The Pinole Fire Department (PFD) shares the Public Safety Building, located at 880 Tennent Avenue, with the Police Department. They respond to calls in both the City of Pinole and the unincorporated area of Tara Hills as well as provide backup for the adjacent areas of Hercules, Crockett, Rodeo, San Pablo, and Richmond (Contra Costa LAFCo, 2009b). The total population served is approximately 27,000 and the PFD handles approximately 2,400 calls per year (Contra Costa LAFCo, 2009b).

Coverage responsibilities for the PFD include the major interstate freeway with nearly a quarter million vehicle trips per day, two major rail lines, underground petroleum pipelines, eleven schools, a hospital, and several large senior housing complexes. Geographically significant features include large wildland interface areas as well as San Pablo Bay bordering the city's north side.

Interaction with surrounding departments is also very high, with a large percentage of calls involving automatic or mutual aid. In September of 2000, PFD, the Contra Costa County Fire Protection District, and the Rodeo-Hercules Fire Protection District began a cooperative agreement to establish and function as "Battalion 7." PFD and Rodeo-Hercules Fire District each have two stations within their respective jurisdictions: Stations 73 and 74 in Pinole, and Stations 75 and 76 in Rodeo-Hercules (CCCFFPD, 2007). Each station is staffed by three-person crews consisting of a captain, fire engineer (driver/operator), and firefighter. These agencies provide advanced life support (ALS) care by staffing one of the three positions with a paramedic (CCCFFPD, 2007). The collaboration between these agencies provides common communications, dispatch, training, and integrated automatic aid. The battalion chief coverage is shared among the three jurisdictions on a rotational basis (CCCFFPD, 2007). Other fire agencies that participate in automatic aid in the West County area include the City of El Cerrito Fire Department (three stations), City of Richmond Fire Department (seven stations), and Crockett-Carquinez Fire Protection District (three paid-on-call stations) (CCCFFPD, 2007).

Facilities and Staffing

The Fire Department has 17 full-time firefighters consisting of one fire chief, five captains, four engineers, two engineers/paramedics, and five firefighters/ paramedics. The department uses two fire stations. The locations of the City of Pinole Fire Stations are as follows (City of Pinole, 2009a).

- 1) Station 73 – located at 880 Tennent Avenue in the Public Safety Building
- 2) Station 74 – located at 3700 Pinole Valley Road

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Station 73 (northwestern portion of city) experiences higher call volumes than Station 74 at the southeastern portion of the city. Station 73 responded to 1,756 service calls in 2007 while Station 74 responded to 785 such calls. By comparison, the median fire station in the county fielded 1,207 calls (Contra Costa LAFCo, 2009a).

Response Times and Service Standards

The PFD provides the residents of the City of Pinole and the Planning Area with fire and emergency services including disaster preparedness, fire prevention and safety, fire suppression, paramedic response and emergency transportation and medical services, and public outreach and public education. In 2005 and 2006, the Fire Department had responded to 2,318 and 2,402 calls for service. Emergency medical service (EMS) accounts for 64 percent of call volume. Target response time for fire protection services is 5 minutes or less, with 76 percent of calls responded to within 6 minutes in 2006 (City of Pinole, 2009a).

The Pinole Fire Department utilizes several performance standards for planning purposes, including the goal of maintaining capital facilities sufficient to maintain the following service level:

- First engine company: 5-minute response time in 90 percent of emergency calls
- Water requirements: 3,500 gallons per minute minimum on initial response assignment
- Access widths: turnarounds with minimum inside turning radius of 37.5 feet

The Insurance Services Office (ISO) rating is the recognized classification for a fire department's or district's ability to defend against major fires. The ISO places a grade on community fire protection capabilities and in some cases uses the information for property fire insurance rates. The full survey is performed at approximately ten-year intervals and always begins in December. ISO reviews such components as water supply (hydrant systems), fire apparatus and equipment, staffing levels, maintenance, and training. The grading scale ranges from 1 to 10 with 1 being premium property protection and 10 being minimal fire protection. Pinole is currently graded at a 4; however, a new survey is currently in progress and the city's property protection grade is under review (City of Pinole, 2009b). The survey focuses on large-loss fire potential and not on life-safety and paramedic response components within the fire department.

Funding

The primary source of funding for the PFD is the City General Fund. The City reports that the current financing level is generally adequate to deliver services at an appropriate service level, but is not sustainable (City of Pinole, 2009a). The city's service area requires two staffed stations, yet the addition of the fully staffed Station 74 in 2001 as the second station in the city lacks long-term funding for the second crew. Financial pressures include the scheduled 2012 sunset of the city's utility users tax, the scheduled 2015 sunset of the city's redevelopment project area spending authority, cost inflation trends that exceed revenue projections, extraordinary wastewater expenses to bring the city's wastewater plant into compliance with regulatory requirements, and historically inadequate wastewater fees (until Fiscal Year 2006–07).

A half-cent sales tax was approved in 2006 for funding public safety. The City does not charge a fire safety assessment and is not considering a ballot measure to establish one (City of Pinole, 2009a). Financing opportunities include grant funding, voter-approved extension of the utility users tax, consolidation into a larger fire department to achieve economies of scale and reduce

costs, and implementation of insurance reimbursement billing for medical response to vehicle accidents (City of Pinole, 2009a). The PFD adapted to budget pressures in Fiscal Year 2008–09 by reducing two positions to half-time status. Beginning on July 1, 2010, the PFD will begin “browning out” services at Station 74 for at least 10 shifts each month, or one-third of operations. This reduction in service is anticipated to be in place until June 30, 2011.

PFD expenditures were \$4.0 million in Fiscal Year 2006–07. Of this amount, 83 percent was spent on compensation, 8 percent on services and supplies, and 9 percent on equipment. PFD expenditures were projected at \$4.0 million in Fiscal Year 2008–09 (City of Pinole, 2009a). Revenue sources include the General Fund (72 percent), contract service payments from ConFire (8 percent), Measure S public safety sales tax (14 percent), development impact fees (4 percent), and redevelopment agency (2 percent).

CONTRA COSTA FIRE PROTECTION DISTRICT

The Contra Costa Fire Protection District (CCFPD) provides emergency fire protection and medical services to the cities of Antioch, Clayton, Concord, Lafayette, Martinez, Pittsburg, Pleasant Hill, San Pablo, and Walnut Creek as well as to the Bay Point, El Sobrante, Pacheco, and Port Chicago areas and other unincorporated areas of Contra Costa County. The CCFPD serves approximately 600,000 people and covers an area of nearly 304 square miles. In addition, the CCFPD serves the City of Pinole on a closest resource basis as part of a three-party inter-agency agreement comprising the CCFPD, the City of Pinole Fire Department, and the Rodeo-Hercules Fire District (RHFD). The City of Pinole is within the CCFPD's Battalion 7 (Grace, 2009).

Facilities and Staffing

Two CCFPD fire stations respond to residential and commercial fires within the City of Pinole: Station 69 located at 4640 Appian Way in El Sobrante, and Station 70 located at 13928 San Pablo Avenue in San Pablo. Station 69 is staffed with one captain, one engineer, and one firefighter with at least one of these staff members being a certified paramedic capable of providing advanced life support (ALS) care. Station 70 is staffed with one captain, one engineer, and two firefighters with at least one of these staff members being a certified paramedic capable of providing ALS care. Both stations are considered to be in fair condition with no staffing or equipment shortages (Grace, 2009).

Response Times and Service Standards

Within Battalion 7, the CCFPD has an established goal of responding to 90 percent of all calls within 5 minutes. However, on average, the CCFPD responds to 90 percent of all calls within 10:47 minutes (Grace, 2009).

Funding

Most of the CCFPD's funding is derived from local property tax revenues. Additional funding comes from fees, intergovernmental revenues, dispatching services, and development impact fees. Development impact fees are collected only in the cities of Antioch and Pittsburg, as well as in the unincorporated areas of the county, and can only be utilized for capital expenditures. Future development in these areas would therefore increase funding for the CCFPD (Grace, 2009).

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4.12.1.2 REGULATORY FRAMEWORK

Federal

National Fire Protection Association

The National Fire Protection Association (NFPA) is an international nonprofit organization that provides consensus codes and standards, research, training, and education on fire prevention and public safety. The NFPA develops, publishes, and disseminates more than 300 consensus codes and standards intended to minimize the possibility and effects of fire and other risks (NFPA, 2008). The NFPA publishes the NFPA 1, Uniform Fire Code, which provides requirements to establish a reasonable level of fire safety and property protection in new and existing buildings.

State

California Fire Code

The 2007 California Fire Code (Title 24, Part 9 of the California Code of Regulations) establishes regulations to safeguard against hazards of fire, explosion, or dangerous conditions in new and existing buildings, structures, and premises. The provisions of the Fire Code apply to the construction, alteration, movement, enlargement, replacement, repair, equipment, use and occupancy, location, maintenance, removal, and demolition of every building or structure throughout the State of California. The Fire Code includes regulations regarding fire-resistance-rated construction, fire protection systems such as alarm and sprinkler systems, fire services features such as fire apparatus access roads, means of egress, fire safety during construction and demolition, and wildland-urban interface areas.

California Health and Safety Code

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

California Occupational Safety and Health Administration

In accordance with the California Code of Regulations, Title 8 Sections 1270, Fire Prevention, and 6773, Fire Protection and Fire Fighting Equipment, the California Occupational Safety and Health Administration (Cal-OSHA) has established minimum standards for fire suppression and emergency medical services. The standards include, but are not limited to, guidelines on the handling of highly combustible materials, fire hosing sizing requirements, restrictions on the use of compressed air, access roads, and the testing, maintenance, and use of all firefighting and emergency medical equipment.

City Emergency Response/Evacuation Plans

The State of California passed legislation authorizing the California Emergency Management Agency (Cal EMA) to prepare a Standard Emergency Management System (SEMS) program, which sets forth measures by which a jurisdiction should handle emergency disasters. Noncompliance with SEMS could result in the state withholding disaster relief from the noncomplying jurisdiction in the event of an emergency disaster.

The City of Pinole is responsible for emergency response and evacuation plans within the city limits. In 2006, the City prepared the Emergency Operation Plan (EOP). The goal of the EOP is to effectively and efficiently organize and coordinate the City's response to major emergencies. The plan is designed to be implemented and exercised prior to an emergency. The EOP identifies four phases of emergency management: preparedness, mitigation, response, and recovery.

Local

Contra Costa County General Plan

The Contra Costa County General Plan is used as the "blueprint" to guide future development in unincorporated portions of the county, including sections of the GPU Planning Area that are outside the Pinole city limits. The following Contra Costa County public facilities policies are applicable to the Planning Area outside the existing city limits of Pinole: Policies 7-62 through 7-86 establish response times, new development fire design requirements, firefighting equipment requirements, and long-term financing of fire and medical response services.

City of Pinole Fire Codes and Guidelines

The City of Pinole adopted the California Fire Code (CFC), which sets the basic requirements to be enforced by the Pinole Fire Department and the Contra Costa County Fire District. The CFC establishes the limits for which districts will allow the storage of explosives and natural gas, controls exterior fire hazards, and establishes requirements for the availability of sufficient water flows and pressure for all pipe valves and fittings. In addition to meeting minimum fire flow requirements, all development projects in the GPU Planning Area would be required to meet other various fire protection requirements identified in the plan check and review process.

4.12.1.3 IMPACTS AND MITIGATION MEASURES

Standards of Significance

A significant impact to fire protection and emergency services would occur if implementation of the proposed project would result in the following:

- 1) Create substantial adverse physical impacts associated with the provision of new or physically altered fire related facilities or services, the construction and/or provision of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times, or other performance objectives for fire protection and emergency services.

Methodology

Evaluation of potential fire service impacts was based on consultation with the staff from the fire protection and emergency service providers in the GPU Planning Area, including the City of Pinole Fire Department and the Contra Costa County Fire Protection District, as well as review of the Contra Costa County General Plan and other relevant literature.

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PROJECT IMPACTS AND MITIGATION MEASURES

Increased Demand for Fire Protection and Emergency Medical Services (Standard of Significance 1)

Impact 4.12.1.1 Implementation of the proposed project (General Plan Update, Three Corridors Specific Plan, and Zoning Code Update) could result in increased demand for fire protection and emergency medical services within the GPU Planning Area. This impact is considered **less than significant**.

General Plan Update

Implementation of the proposed General Plan Update is projected to result in population growth within the GPU Planning Area, potentially requiring additional fire protection services. The population of the city is projected to increase from the present population of about 20,100 (2010) to an ultimate General Plan buildout population of 23,875 (2030). Although this population increase would result in a slight increase in demand for fire protection and emergency medical services, it is not anticipated that such an increase would result in any significant impacts to either the CCCFD or PFD. Given the more compact urban form proposed by the General Plan Update, it is anticipated that current service levels could adequately serve the increased population. No new or expanded facilities would be needed. As a result this impact is considered **less than significant**.

Three Corridors Specific Plan

Implementation of the proposed Three Corridors Specific Plan would consist of the revitalization of the San Pablo Avenue, Pinole Valley Road, and Appian Way corridors, which could include new development and/or redevelopment of various urban uses. Due to the city's small supply of developable land, the Three Corridors Specific Plan directs the majority of the city's future growth to opportunity sites for infill mixed-use development along the city's commercial corridors in close proximity to transit and other amenities.

The Specific Plan area contains approximately 300 acres of predominantly developed land. In order to accommodate the projected demand for development and invite further capital investment in the city, the Specific Plan would change land uses in order to replace single-use commercial zoning with various mixed-use zones, eliminate commercial floor area ratio (FAR) as a development constraint, increase opportunities for residential development, and increase residential density. If all of the residential properties within the Specific Plan area were to develop according to the proposed provisions of the land use and development standards contained in the Specific Plan, the city would be expected to experience increased residential development of up to 1,076 residential units by 2030. Based on the Association of Bay Area Governments (ABAG) 2007 estimates of 2.89 persons per household, the Specific Plan could result in an additional 3,110 persons by 2030 (1,076 housing units x 2.89 persons per household). Given the urban infill characteristics of the Three Corridors Specific Plan, it is not anticipated that fire department response times would be lengthened or that current service levels would be rendered inadequate. It is not anticipated that services to the existing number of commercial and office buildings within the Plan area would be affected as well. This impact is considered **less than significant**.

Zoning Code Update

Updates to the Zoning Code are intended to further clarify the types and forms of uses permitted under particular land use designations, but would not result in any development activities beyond that analyzed for the proposed General Plan Update. Therefore, the Zoning Code Update would have an impact similar to that for the General Plan Update as discussed above.

Proposed General Plan Policies and Actions that Address Increased Demand for Fire Protection and Emergency Medical Services

Implementation of the following General Plan policies and actions would further reduce impacts associated with fire protection and emergency medical services.

- Policy CS.2.3 The Fire Department or assisting fire services providers will strive to provide on-scene response to emergency incidents in the city within 5 minutes 90 percent of the time as funding is available.

- Action CS.2.3.1 Continue working with members of Battalion 7 and other emergency services providers to optimize the allocation of resources and most efficiently provide mutual aid in Pinole and surrounding communities.

- Action CS.2.3.2 Explore organizational and facility changes that could support the continuation of services in a more cost-effective manner.

- Action CS.2.3.3 Implement organizational changes and necessary capital improvements through the annual budget and Capital Improvement Program, and explore alternative funding opportunities to support such changes.

- Action CS.2.3.4 The City will encourage public education regarding fire prevention, safety and first aid medical procedures.

- Action CS.2.3.5 The Fire Department will strive to provide on-scene response to emergency incidents in the city within 5 minutes 95% of the time.

- Action CS.2.3.6 The City will develop a Fire Safety Operations Assessment that identifies and compares different approaches to the provision of emergency services and identifies needed facilities and an appropriate organizational structure to provide cost-effective fire and emergency medical services.

- Action CS.2.3.7 In order to continue to provide fire service, the City shall solidify funding for fire services by seeking an extension of the City's Utility Tax. If the City's Utility Tax is not renewed, alternative funding sources shall be researched to ensure adequate funding for City fire services.

- Policy CS.2.4 The City will develop an Open Space Management Plan to identify alternative means of managing open space areas for fire protection and to improve access to, and through, open space areas.

- Action CS.2.4.1 Examine alternative open space ownership structures that could reduce the City's fire safety maintenance obligations.

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- Action CS.2.4.2 Examine opportunities to create all-weather emergency vehicle access through open space in order to shorten response times and improve mutual aid between Pinole, Hercules and El Sobrante.
- Policy HS.1.1 Permit development only in those areas and with design features that mitigate potential danger to the health, safety and welfare of the residents.
- Action HS.1.1.1 Maintain detailed hazard maps for use in development review.
- Action HS.1.1.3 Adopt a Very High Fire Hazard Severity Zone (VHFHSZ) ordinance to implement regulations.
- Policy HS.1.2 Require appropriate studies to assess identified hazards and ensure that impacts are adequately mitigated.
- Action HS.1.2.2 Evaluate ongoing fire protection and emergency medical service delivery in the community, and identify sites for potential relocation of existing fire stations on the General Plan Land Use Map to improve service coverage and decrease response times.

In addition, Chapter 9.0, *Infrastructure and Public Facilities*, of the Three Corridors Specific Plan provides further discussion of fire protection services including service standards and discussions of joint powers agreements that will be in place under buildout conditions. .

The proposed General Plan Update would not result in the need for new or expanded facilities, and there would be a **less than significant impact** to the physical environment.

Mitigation Measures

None required.

4.12.1.4 CUMULATIVE IMPACT ANALYSIS

Cumulative Setting

The cumulative setting for fire protection and emergency medical services includes the service area boundaries of the CCFPD and the PFD. Potential future development and redevelopment of the GPU Planning Area as discussed in Section 4.0, Introduction to the Environmental Analysis and Assumptions Used, would also result in cumulative demands for fire protection and related services.

Cumulative Impacts and Mitigation Measures

Cumulative Fire Protection and Emergency Medical Services

Impact 4.12.1.2 Implementation of the proposed project (General Plan Update, Three Corridors Specific Plan and Zoning Code Update), along with other planned development and redevelopment within the GPU Planning Area, would contribute to the cumulative demand for fire protection and emergency medical services. This is considered a **less than cumulatively considerable** impact.

As described under Impact 4.12.1.1 above, the proposed project would not significantly increase demand for fire protection services in the Planning Area and would not result in the need for new or expanded facilities. Although cumulative development and redevelopment within the GPU Planning Area will result in increased demands for fire protection and emergency medical services, these agencies receive a portion of their funding from property tax revenues and development impact fees and will therefore receive additional funding as development occurs. Therefore, this impact and the proposed project's contribution to this impact are considered to be **less than cumulatively considerable**.

Proposed General Plan Policies and Actions that Address Cumulative Fire Protection and Emergency Medical Services

Implementation of the following General Plan Update policies and actions would reduce impacts associated with fire protection and emergency medical services (see Impact 4.12.1.1 for full policy language). Since these policies and actions have been described in detail in prior impact discussions for this section, the following is limited to only listing the policy and action numbers.

Community Services and Facilities Element

Policy CS.2.3, Action CS.2.3.1, Action CS.2.3.2, Action CS.2.3.3, Action CS.2.3.4, Action CS.2.3.5, Action CS.2.3.6, Action CS.2.3.7, Policy CS.2.4, Action CS.2.4.1, Action CS.2.4.2

Health and Safety Element

Policy HS.1.1, Action HS.1.1.1, Action HS.1.1.3, Policy HS.1.2, Action HS.1.2.2

In addition, Chapter 9.0, *Infrastructure and Public Facilities*, of the Three Corridors Specific Plan provides further discussion of fire protection services including service standards and discussions of joint powers agreements that will be in place under buildout conditions. .

Mitigation Measures

None required.

4.12.2 LAW ENFORCEMENT SERVICES

4.12.2.1 EXISTING SETTING

The Pinole Police Department (PPD) and the Contra Costa Sheriff's Department provide law enforcement services to the Planning Area.

City of Pinole Police Department

The PPD provides all services directly related to enhancement and maintenance of public safety for the City of Pinole. Police services include patrol, traffic enforcement, investigative services, and other special services customarily performed by police departments.

The Pinole Police Department provides all law enforcement services to the City of Pinole, serving approximately 20,000 people. The Police Station is located at 880 Tennent Avenue in the Public Safety Building, which it shares with the Fire Department.

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Facilities and Staffing

The PPD has three divisions: Field Operations, Investigations, and Support Services. The PPD was created to provide services directed toward the enhancement and maintenance of public safety in the community. The City's 2008/09 budget indicates that the department has 56 personnel, consisting of two administrative secretaries, a deputy chief, a support services manager, a lieutenant, seven sergeants, 25 officers, three community service officers, eight dispatchers, three Records and Property Specialists, and two part-time crossing guards (Contra Costa LAFCo, 2009a and 2009b).

As of July 1, 2009, the PPD began handling code enforcement issues. This division enforces a number of laws pertaining to residential property in the city. Most of these laws have been enacted to protect and preserve the basic character and quality of life in residential neighborhoods. These laws may be enforced by more than one department or division of the City, as well as state or county agencies, where applicable.

The PPD is involved in a number of partnerships. For instance, the PPD funds half a position on the West Contra Costa Narcotics Enforcement Team (WestNET), and the Community Preservation and Safety Unit partners with residential and business community members to develop innovative solutions to quality-of-life issues. The Pinole Police Blotter contains selected crimes and incidents that occurred in Pinole during the listed week. This service is available on the department's website and can also be viewed daily on Pinole Cable Channel 28.

According to the U.S. Federal Bureau of Investigation crime statistics for 2007, Pinole had 112 violent crimes and 792 property crimes, with a rate of 4,797 crimes per 100,000 population (Contra Costa LAFCo, 2009a and 2009b). Crime rates are affected by a number of factors and reflect a city's population, concentration of youth, degree of urbanization, cultural and educational characteristics, geographic location, and modes of transportation, among other factors. Therefore, these rates are a good measure of changed conditions within a city over time, but they should not be considered as a direct evaluation of the adequacy of police services between cities.

According to the PPD *2008 Annual Report*, the PPD completed 3,740 Total Reports in 2008 and responded to 10,302 citizen-initiated calls for service (PPD, 2008). Additionally, the PPD tallied 14,740 officer-initiated calls for service in 2008 (PPD, 2008).

The PPD's *2008 Annual Report* tabulates police response to crimes reported or detected within the City of Pinole and compares the 2008 policing effort with the previous years. According to the report, between 2007 and 2008, calls for service rose by less than 1 percentage point from 28,677 to 28,782, traffic accidents investigated rose 29 percent, and felony crimes rose by 7 percent. During the same time, total arrests (felony and misdemeanor) issued dropped by 30 percent. Also during this time, volunteer hours dropped by 18 percent (PPD, 2008).

Response Times and Service Standards

The City's Police Department utilizes several performance standards for planning purposes, including the goal of providing 1.83 officers per 1,000 residents and maintaining capital facilities sufficient to maintain the following response time (for first unit):

- Code One Service Calls: 60 minutes (assignments are not urgent; however, they shall be completed at the earliest opportunity of the individual assigned)

- Code Two Service Calls: 15 minutes (assignments are urgent, but are not of an emergency nature – response is directly to the assignment)
- Code Three Service Calls: five minutes (emergency assignments calling for all practical haste – police response will allow use of emergency lights and siren)

Funding Mechanisms

The primary source of funding for the Police Department is the City General Fund. Of the 2008/09 budget, 48 percent was allocated for police services (Contra Costa LAFCo, 2009b). Additional funding comes from Measure S funds, the supplemental use tax approved by the voters in 2007 (City of Pinole, 2008). PFD operations are further funded by reimbursements from the City Redevelopment Agency for activities allocated to redevelopment (City of Pinole, 2008).

Contra Costa Sheriff's Department

Facilities and Staffing

The Contra Costa Sheriff's Department (CCSD) provides law enforcement services to all unincorporated portions of western Contra Costa County, including portions of the GPU Planning Area, via its Bay Station located at 5555 Giant Highway in Richmond. The Bay Station is currently staffed with 31 deputy sheriffs, five sergeants, and one lieutenant. One additional sergeant and eight detectives (three positions currently unfilled) are assigned to the Investigations Division in the Planning Area. The community is additionally served by way of an annex office in the Town of El Sobrante, which is primarily staffed by volunteers.

The CCSD is also a participant in a joint mutual aid agreement among all of the law enforcement agencies in Contra Costa County. This agreement states that each of the agencies in the county will maximize its resources to coordinate the resources to respond during time of disaster or emergency. The agreement provides a mechanism for an immediate response to the requesting agency, provided the responding agency has the resources and expertise necessary and available to do so. As such, the GPU Planning Area may be further served by any of the law enforcement agencies in the county when necessary (Bradley, 2008).

Response Times and Service Standards

The CCSD responded to 6,733 calls for service in 2008 in the vicinity of Pinole. The average response time to these calls varied by priority of the call but averaged about 12 minutes from receipt of call to arrival at scene (Bradley, 2008; Contra Costa County, Office of the Sheriff, 2009).

Funding

The Contra Costa Sheriff's Office is funded directly from the County's annual budget (Bradley, 2009).

California Highway Patrol

The California Highway Patrol (CHP) provides traffic regulation and enforcement, and emergency management and assistance on all freeways throughout Contra Costa County as well as on all highways within the unincorporated portions of the county (including Interstates 80 and 680 and State Route 4). The CHP has 81 uniformed officers assigned to the area office

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located at 5001 Blum Road in Martinez. Within the Oakland area, the CHP has three to four officers at all times patrolling Interstate 80 (I-80) between the Toll Plaza at the San Francisco-Oakland Bay Bridge and Appian Way. Within the GPU Planning Area, only one of these officers patrols along I-80 and in the unincorporated areas west of Appian Way. However, a second unit will patrol the unincorporated area of North Richmond from Monday through Friday. The average response time for an Oakland area CHP officer was approximately 10 minutes for the year 2008 (Loetscher, 2009).

4.12.2.2 REGULATORY FRAMEWORK

State

City Emergency Response/Evacuation Plans

The State of California passed legislation authorizing the Office of Emergency Services (OES) to prepare a Standard Emergency Management System (SEMS) program, which sets forth measures by which a jurisdiction should handle emergency disasters. Noncompliance with SEMS could result in the state withholding disaster relief from the noncomplying jurisdiction in the event of an emergency disaster.

The City of Pinole is responsible for emergency response and evacuation plans within the city limits. In 2006, the City prepared the Emergency Operation Plan. The goal of the EOP is to effectively and efficiently organize and coordinate the City's response to major emergencies. The plan is designed to be implemented and exercised prior to an emergency. The EOP identifies four phases of emergency management: preparedness, mitigation, response, and recovery.

Local

Contra Costa County General Plan

The Contra Costa County General Plan is used as the "blueprint" to guide future development in unincorporated portions of the county, including sections of the GPU Planning Area that are outside the Pinole city limits. The following Contra Costa County public facilities policies are applicable to the Planning Area outside the existing city limits of Pinole. Policies 7-57 through 7-61 establish facilities requirements to maintain adequate protection services, response times for efficient use of resources and goal response times for emergencies, and level of service (LOS) requirements.

4.12.2.3 IMPACTS AND MITIGATION MEASURES

Standards of Significance

A significant impact to law enforcement services would occur if implementation of the proposed project would result in the following:

- 1) Create substantial adverse physical impacts associated with the provision of 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 law enforcement services.

Methodology

Evaluation of potential law enforcement impacts was based on consultation with the staff from the law enforcement agencies in the Planning Area, including the City of Pinole Police Department, the Contra Costa County Sheriff's Department, and the California Highway Patrol, as well as review of the Contra Costa County General Plan, Contra Costa LAFCo Municipal Service Review, and other relevant literature.

Project Impacts and Mitigation Measures

Increased Demand for Law Enforcement Services (Standard of Significance 1)

Impact 4.12.2.1 Implementation of the proposed project (General Plan Update, Three Corridor Specific Plan, and Zoning Code Update) would result in increased demand for law enforcement services within the GPU Planning Area. This is a **less than significant** impact.

General Plan Update

Implementation of the proposed General Plan Update is projected to result in population growth within the Planning Area, potentially requiring additional law enforcement services. The population of the city is projected to increase from the present population of about 20,100 (2010) to an ultimate General Plan buildout population of 23,875 (2030). Although this population increase would result in a slight increase in demand for law enforcement services, such an increase would not result in any significant impacts to the department, and no new or expanded facilities, equipment, or staff would be needed to maintain current service levels. Furthermore, department funding would be increased as development occurs through the generation of additional sales, property, and other local taxes.

The service area and population of the CCSD would actually be reduced through implementation of the project as currently unincorporated land is annexed into the city and comes under the jurisdiction of the PPD. Therefore, demand for services from the CCSD could be slightly reduced, and no new or expanded facilities, equipment, or staff would be needed to maintain current service levels.

Finally, the CHP's service area would not be affected by the project, and demand for services would not increase.

Three Corridors Specific Plan

If all of the residential properties within the Specific Plan area were to develop according to the proposed provisions of the land use and development standards contained in the Specific Plan, the city would be expected to experience increased residential development of up to 1,076 residential units by 2030. Based on ABAG's 2007 estimate of 2.89 persons per household, the Specific Plan could result in an additional 3,110 persons by 2030 (1,076 housing units x 2.89 persons per household). Given the urban infill characteristics of the Three Corridors Specific Plan, it is not anticipated that law enforcement services would be affected. It is not anticipated that services to the existing number of commercial and office buildings within the Plan area would be affected as well. This impact is considered **less than significant**.

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Zoning Code Update

Updates to the Zoning Code are intended to further clarify the types and forms of uses permitted under particular land use designations, but would not result in any development activities beyond that analyzed for the proposed General Plan Update. Therefore, the Zoning Code Update would have an impact similar to that for the General Plan Update as discussed above.

Proposed General Plan Policies and Actions that Address Increased Demand for Law Enforcement Services

Implementation of the following General Plan Update policies and actions would further reduce impacts associated with law enforcement services.

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|-----------------|--|
| Policy CS.1.4 | Incorporate Crime Prevention Through Environmental Design (CPTED) principles in projects and improvements. |
| Action CS.1.4.1 | Review Structure Designs. Involve law enforcement agencies in review of the design of new and rehabilitated buildings, including lighting and landscaping, to identify ways to increase resident safety. |
| Policy CS.2.1 | The Police Department will strive to provide on-scene response to emergency incidents in the city within 5 minutes. |
| Action CS.2.1.1 | Explore alternative funding options to increase police services to the community. |
| Policy CS.2.2 | The Police Department will work in partnership with citizens and community organizations to expand community-based crime prevention programs. |
| Action CS.2.2.1 | The City will work with criminal justice agencies and community groups to support programs that offer information about community policing, reporting of child and adult abuse and neglect, and other crime prevention techniques. |
| Action CS.2.2.2 | The City will support efforts to strengthen and expand neighborhood watch programs and encourage businesses to participate in these programs. |
| Action CS.2.2.3 | Work with law enforcement agencies and community groups to promote cleanup, graffiti removal and other neighborhood beautification efforts. |

In addition, Chapter 9.0, *Infrastructure and Public Facilities*, of the Three Corridors Specific Plan provides further discussion of law enforcement services and confirms that existing law enforcement facilities and equipment appear to be adequate to serve the incremental growth of the Specific Plan project areas. Further, Chapter 7.0, *Private Realm Design Guidelines*, and Chapter 8.0, *Public Realm Standards and Design Guidelines*, of the Specific Plan incorporate principles of Crime Prevention Through Environmental Design (CPTED), which is primarily concerned with promoting safety by providing natural surveillance ("eyes on the street"), controlling and directing access to permitted areas and deterring access to unauthorized or inappropriate areas, and creating a sense of ownership through regular maintenance and a

clear delineation between private and public space. Standards and guidelines based on CPTED will assist in further reducing impacts associated with law enforcement services. .

As no new or expanded facilities or equipment would be needed to maintain current law enforcement service levels, no environmental effects are anticipated. This impact is **less than significant**.

Mitigation Measures

None required.

4.12.2.4 CUMULATIVE IMPACT ANALYSIS

Cumulative Setting

The cumulative setting for law enforcement services includes the current service area boundaries of the City of Pinole Police Department, as well as the entire GPU Planning Area. The reader is referred to Section 4.0 regarding the development assumptions within this setting area at buildout of the proposed project.

Cumulative Impacts and Mitigation Measures

Cumulative Law Enforcement Impacts

Impact 4.12.2.2 Implementation of the proposed project (General Plan Update, Three Corridors Specific Plan and Zoning Code Update), along with other planned development and redevelopment within the GPU Planning Area, would contribute to the cumulative demand for law enforcement services. This is considered a **less than cumulatively considerable** impact.

The PPD would provide law enforcement services to all portions of the GPU Planning Area that are annexed to the city or within the City's SOI. Therefore, at buildout of the proposed General Plan Update, the entire cumulative setting area would be served by the PPD. As discussed under Impact 4.12.2.1 above, the proposed project would not significantly impact the PPD's services, and no new or expanded facilities or equipment would be needed to maintain current service levels. Department funding would increase as development occurs through the generation of additional sales, property, and other local taxes.

Since the project would have less significant impact on law enforcement services provided by the PPD or other law enforcement service agencies in the GPU Planning Area, it would not contribute significantly to cumulative impacts on these services. Therefore, this impact would be **less than cumulatively considerable**.

Proposed General Plan Policies and Actions that Address Cumulative Law Enforcement Impacts

Implementation of the following General Plan Update policies and actions would further reduce impacts associated with law enforcement services (see Impact 4.12.2.1 for full policy language). Since these policies and action items have been described in detail in prior impact discussions for this section, the following is limited to only listing the policy and action item numbers.

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Community Services and Facilities Element

Policy CS.1.4, Action CS.1.4.1, Policy CS.2.1, Action CS.2.1.1, Policy CS.2.2, Action CS.2.2.1, Action CS.2.2.2, Action CS.2.2.3

In addition, Chapter 9.0, *Infrastructure and Public Facilities*, of the Three Corridors Specific Plan provides further discussion of law enforcement services and confirms that existing law enforcement facilities and equipment appear to be adequate to serve the incremental growth of the Specific Plan project areas. Further, Chapter 7.0, *Private Realm Design Guidelines*, and Chapter 8.0, *Public Realm Standards and Design Guidelines*, of the Specific Plan incorporate principles of Crime Prevention Through Environmental Design (CPTED), which is primarily concerned with promoting safety by providing natural surveillance (“eyes on the street”), controlling and directing access to permitted areas and deterring access to unauthorized or inappropriate areas, and creating a sense of ownership through regular maintenance and a clear delineation between private and public space. Standards and guidelines based on CPTED will assist in further reducing impacts associated with law enforcement services.

Mitigation Measures

None required.

4.12.3 PUBLIC SCHOOLS

4.12.3.1 EXISTING SETTING

The GPU Planning Area is served by the West Contra Costa Unified School District (WCCUSD) as well as the Contra Costa Community College District (CCCCD). Each district is discussed in more detail below.

West Contra Costa Unified School District

The WCCUSD encompasses approximately 110 square miles and serves the cities of Richmond, Hercules, Pinole, El Cerrito, and San Pablo as well as the unincorporated communities of El Sobrante, Kensington, Montalvin, North Richmond, and Tara Hills. The district is made up of 64 schools including 39 elementary schools, 8 middle schools, 9 high schools, and 6 alternative and continuation schools. Based on current facilities, the WCCUSD has a capacity of 36,239 students. As of the 2008–2009 school year, the district had a total student enrollment of about 30,769. Most schools in the GPU Planning Area are below capacity, allowing for more student enrollment. WCCUSD adopted an amended Facilities Master Plan in June 2006, which identified major issues and detailed information on the district’s future school needs, funding options, and cost estimates. The WCCUSD has not experienced a significant increase in enrollment in recent years and enrollment is expected to decrease by 2010 (WCCUSD, 2009). The schools located within the GPU Planning Area are shown in **Table 4.12.3-1** below.

**TABLE 4.12.3-1
PUBLIC SCHOOLS WITHIN PLANNING AREA**

School	Grade Levels	Location	Current Enrollment
Elementary Schools			
Collins	K-6	City	425
Ellerhorst	K-5	City	441
Montalvin Manor	K-6	Planning Area	472
Shannon	K-5	City	317
Stewart	K-6	City	519
Tara Hills	K-6	Planning Area	498
Middle Schools			
Pinole	7-8	City	719
High Schools			
Pinole Valley	9-12	City	1,652
Other			
North Campus Continuation	9-12	Planning Area	189

Source: EDP, 2009

Funding Mechanisms

Districts typically fund new schools and facilities through a combination of local bonds, developer fees, and state bonds. State bonds pay for almost half the costs of new facilities and schools, with local bonds generated from property taxes providing an important source of additional funding. The passage of state bonds is not linked to any increase in property taxes. The principal and interest on state bonds are paid for by the state's general fund, which is made up of mainly personal and corporate income taxes and sales tax revenues. In addition to local bonds, the Kindergarten-University Public Education Facilities Bond Act of 2002 (Prop. 47) was approved by voters in November 2002 and provides for a bond issue of \$13.05 billion to fund necessary education facilities to relieve overcrowding and to repair older schools. Funds are determined by the areas of greatest need and must be spent according to strict accountability measures. Under the Leroy F. Greene School Facilities Act (SB 50) and Government Code Section 65995, school districts can levy a mandatory per square foot fees on new residential development, with the amount determined by the State Board of Education.

Service Standards

All school districts in California are required to prepare a facilities master plan (FMP), which includes service standards based on student generation rates and school capacities to determine a particular district's needs through its current plan period. FMPs typically have a planning horizon of ten years, provide a detailed forecast of the district's needs, and identify strategic plans and actions to fulfill those needs. The FMP addresses how many classrooms are needed, at which grade levels, and the cost and timing of identified improvements. The identified improvements are balanced against the available district resources, existing and ultimate capacity constraints, current and projected revenue sources, and outside funding

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options. FMPs are influenced by market pressures such as commercial expansion, the phasing and timing of housing developments, availability of state funds, changes in state laws, and the viability of local bond elections. Districts select school sites in accordance with criteria developed by the California Department of Education (CDOE). The CDOE must review and approve all sites considered for selection and use by a district. Student generation rates are used to determine the projected number of students that will result from residential development. Site selection criteria and projected student generation are the basis for determining the location, type, and number of schools required to serve a new development.

Contra Costa Community College District

The Contra Costa Community College District consists of Contra Costa College located in San Pablo, Diablo Valley College located in Pleasant Hill, Los Medanos College located in Pittsburg, the San Ramon Campus, and the Walnut Creek and Brentwood Centers (CCCCD, 2009). None of these campuses are located within the GPU Planning Area. However, the GPU Planning Area is located within the service area of Contra Costa College, which is located just southwest of the GPU Planning Area in the City of San Pablo (CCCCD, 2002).

In 2008, the CCCCCD had a total student head count of nearly 40,000, or about 14,400 full-time equivalent students. Contra Costa College had a student head count of approximately 8,411, or about 2,887 full-time equivalent students (Benjamin, 2008).

Funding Mechanisms

The district is funded by a combination of direct state funding, tuition and fee revenues, bonds and government grants. Due to a recent state budget decision, California community college enrollment fees have been increased from \$20 to \$26 per unit since the fall 2009 term (CCCCD, 2009). Two facilities bonds were recently approved totaling \$406.5 million. This includes Measure A for \$120 million approved in 2002 by county voters to refurbish aging facilities, build new facilities, and purchase needed equipment for classrooms, and Measure A+ for \$286.5 million approved in 2006 by county voters to continue the district's facilities modernization program (CCCCD, 2008).

REGULATORY FRAMEWORK

State

Leroy F. Greene School Facilities Act of 1998 (SB 50)

As discussed above, California voters approved Proposition 1A in November of 1998. Proposition 1A's companion legislation (Chapter 407, Statutes of 1998, SB 50) went into effect upon the measure's approval. Senate Bill (SB) 50 significantly altered the system of fees that can be placed on new development in order to pay for the construction of school facilities. Prior to the passage of Proposition 1A, school districts were limited in the amount of school facility developer fees they could charge. Also, as a result of the Mira, Hart, and Murietta decisions made in the years preceding the passage of Proposition 1A, cities and counties were able to impose additional school facility fees on development as a condition of obtaining land use approval. SB 50 and Proposition 1A provided a comprehensive school facilities financing and reform program by authorizing the \$9.2 billion school facilities bond issue, school construction cost containment provisions, and an eight-year suspension of the Mira, Hart, and Murietta court cases. SB 50 created different levels of developer fees and prohibited local agencies from denying either legislative or adjudicative land use approvals on the basis that school facilities

are inadequate. They also reinstated the school facility fee cap for legislative actions, which is adjusted biannually in January. According to Government Code Section 65996, the development fees authorized by SB 50 are deemed to be full and complete school facilities mitigation. These provisions were in effect until 2006 and will remain in place as long as subsequent state bonds are approved and available.

The three levels of developer fees established by SB 50 are described below.

- 1) Level 1 fees are base statutory fees. As of January 30, 2008, the maximum assessment for fees was \$2.97 per square foot of residential development and \$0.47 per square foot of commercial/industrial development.
- 2) Level 2 fees allow the school district to impose developer fees above the statutory levels, up to 50 percent of certain costs under designated circumstances. The state would match the 50 percent funding if funds are available.
- 3) Level 3 fees apply if the state runs out of bond funds after 2006, allowing the school district to impose 100 percent of the cost of the school facility or mitigation minus any local dedicated school monies.

In order to levy the alternate (Level 2) fee and qualify for 50 percent state-matching funds, a school district must prepare and adopt a School Facilities Needs Analysis, apply and be eligible for state funding, and satisfy specified criteria. The ability of a city or county to impose fees is limited to the statutory and potential additional charges allowed by the act, as described above.

California Department of Education

The California Department of Education (CDE) establishes standards for school sites pursuant to Education Code Section 17251 and adopts school site regulations, which are contained in the California Code of Regulations, Title 5, commencing with Section 14001 (CDE, 2000). Certain health and safety requirements for school site selection are governed by state regulations and the policies of the CDE School Facilities Planning Division (SFPD) relating to:

- Proximity to airports, high-voltage power transmission lines, railroads, and major roadways;
- Presence of toxic and hazardous substances;
- Hazardous facilities and hazardous air emissions within one-quarter mile;
- Proximity to high-pressure natural gas lines, propane storage facilities, gasoline lines, pressurized sewer lines, or high-pressure water pipelines;
- Noise;
- Results of geological studies or soil analyses; and
- Traffic and school bus safety issues.

The SFPD prepared the *Guide to School Site Analysis and Development* in 1966. The guide assists school districts in determining the amount of land needed to support their educational programs

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in accord with their stated goals and in accord with recommendations of the CDE. Site size standards were updated in 1999–2000 to reflect significant changes in education, such as class size reduction in kindergarten through grade three, implementation of the (federal) Education Amendments of 1977, Title IX (gender equity), parental and community involvement, and technology. In addition to the educational reforms noted above, changes regarding the expanded use of buildings and grounds for community use and agency joint use and legislative changes in the site-selection process regarding environmental, toxic, and other student and staff safety issues were included in the updated standards. The guide contains specific recommendations for school size and suggests a ratio of 2:1 between the developed grounds and the building area. CDE is aware that in a number of cases, primarily in urban settings, smaller sites cannot accommodate this ratio. In such cases, the SFPD may approve an amount of acreage less than the recommended gross site size and building-to-ground ratio.

The Kindergarten-University Public Education Facilities Bond Act of 2002 (Prop. 47)

This act was approved by voters in November 2002 and provides for a bond issue of \$13,050,000,000 (thirteen billion fifty million dollars) to fund necessary education facilities to relieve overcrowding and to repair older schools. Funds will be targeted to areas of greatest need and must be spent according to strict accountability measures. Funds will also be used to upgrade and build new classrooms in the California community colleges, the California State University, and the University of California to provide adequate higher education facilities to accommodate growing student enrollment.

Local

Contra Costa County General Plan

The Contra Costa County General Plan is used as the “blueprint” to guide future development in unincorporated portions of the county, including sections of the Pinole GPU Planning Area that are outside the Pinole city limits. The Contra Costa County public facilities policies that are applicable to the Planning Area outside the existing city limits are Policy 7-136 through 7-146. These policies address environmental reviews for new schools, the mitigation of new development to provide funding for school facilities, the use of efficient school facility plans to consider relocatable facilities and boundary adjustments, and the use of state/federal funds to fund schools that have been impacted by growth.

4.12.3.3 IMPACTS AND MITIGATION MEASURES

Standards of Significance

An impact on public schools is considered significant if implementation of the proposed project would result in the following:

- 1) Increased demand for additional personnel, equipment, or facilities and/or results in a negative effect that impairs the ability of the service provider to maintain acceptable level of service for public schools that would result in a physical impact on the environment.

Methodology

Evaluation of potential public school impacts was based on review of the WCCUSD Master Plan and consultations with school district staff.

Impacts and Mitigation Measures

Increased Student Enrollments (Standard of Significance 1)

Impact 4.12.3.1 Implementation of the proposed project (General Plan Update, Three Corridors Specific Plan, and Zoning Code Update) would increase student enrollment within the WCCUSD and may require new school facilities and related services. This is considered a **less than significant** impact.

General Plan Update

Implementation of the proposed General Plan Update is projected to result in population growth within the GPU Planning Area, resulting in increased enrollment at schools within the Planning Area. The city's population is projected to increase by about 3,775 persons from current (2010) population of 20,100, by the year 2030. Projected growth associated with implementation of the proposed project would increase student enrollment, which could result in the need for new school facilities and support personnel. Areas of impact include, but are not limited to, the following:

- Classrooms
- Offices, including corporate offices
- Maintenance and transportation facilities
- Personnel for each department

The City has no direct control over the location and construction of schools. However, it does have approval authority over subdivision maps that may propose school sites. The City also makes decisions on infrastructure projects that may be required to support a new or expanded school, such as water and sewer lines and roadways.

WCCUSD's current development impact mitigation fee is \$2.97 per square foot of building space for residential development and \$0.46 per square foot of building space for commercial/industrial land uses. California Government Code Sections 65995(h) and 65996(b) provide full and complete school facilities mitigation for California Environmental Quality Act (CEQA) purposes. Section 65995(h) states that the payment or satisfaction of a fee, charge, or other requirement levied or imposed pursuant to Section 17620 of the Education Code is deemed to be full and complete mitigation of the impacts for the planning, use, development, or provision of adequate school facilities.

As previously mentioned, the WCCUSD has a capacity of 36,239 students. As of the 2008–2009 school year, the district had a total student enrollment of about 30,769 and most schools in the GPU Planning Area are below capacity, allowing for more student enrollments. In 2008, WCCUSD determined there was a need to review the number of school facilities the district operates to address the issue of declining enrollment. The district developed criteria, examined school capacities and enrollments, reviewed program needs, examined facility condition data and studied the projected demographics of each community, and held numerous public meetings to receive input from the WCCUSD community in order to examine and develop a plan for school consolidation (WCCUSD, 2009). This impact would be **less than significant**.

Three Corridors Specific Plan

Implementation of the proposed Three Corridors Specific Plan would consist of the revitalization of the San Pablo Avenue, Pinole Valley Road, and Appian Way corridors, which could include

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new development and/or redevelopment of various urban uses. This would result in the city experiencing increased residential development of up to 1,076 residential units by 2030. Based on ABAG's 2007 estimate of 2.89 persons per household, the Specific Plan could result in an additional 3,110 persons by 2030 (1,076 housing units x 2.89 persons per household), only a portion of which would be of the age group requiring public school enrollment. As discussed above, the WCCUSD has a capacity of 36,239 students and most schools in the GPU Planning Area are below capacity, allowing for more student enrollments. Therefore this impact is considered **less than significant**.

Zoning Code Update

Updates to the Zoning Code are intended to further clarify the types and forms of uses permitted under particular land use designations, but would not result in any development activities beyond that analyzed for the proposed General Plan Update. Therefore, the Zoning Code Update would have an impact similar to that for the General Plan Update as discussed above.

Proposed General Plan Policies and Action Items that Address Increased Student Enrollments

Listed below are proposed General Plan policies designed, in part, to reduce impacts to the natural environment because of school development.

Policy CS.4.1 The City will assist the West Contra Costa Unified School District to ensure mitigation of impacts on school facilities from new growth within Pinole.

Policy CS.4.2 The City will cooperate with the West Contra Costa Unified School District to obtain funds from other sources to provide high-quality public educational facilities.

Implementation of the above General Plan policies, along with payment of state and district fees, would ensure that the proposed project's impacts to public schools would be less than significant.

Mitigation Measures

None required.

4.12.3.4 CUMULATIVE SETTING, IMPACTS, AND MITIGATION MEASURES

Cumulative Setting

The GPU Planning Area is served by the West Contra Costa Unified School District. The WCCUSD service area encompasses approximately 110 square miles and serves the cities of Richmond, Hercules, Pinole, El Cerrito, and San Pablo as well as the unincorporated communities of El Sobrante, Kensington, Montalvin, North Richmond, and Tara Hills. Therefore, the cumulative setting for public school impacts is western Contra Costa County including each of the cities and communities within the WCCUSD and CCCCDC service areas. The reader is referred to Section 4.0 for a discussion of anticipated development within the area.

Cumulative Impacts and Mitigation Measures

Cumulative Public School Impacts

Impact 4.12.3.2 Implementation of the proposed project (General Plan Update, Three Corridors Specific Plan, and Zoning Code Update), as well as potential development within the cumulative setting area, would result in cumulative public school impacts. These cumulative public school impacts are considered **less than cumulatively considerable**.

New schools planned within WCCUSD would provide additional capacity to accommodate existing and future enrollment. Additional development would be subject to mitigation consistent with payment of fees as established between the school district, the state, and the local jurisdictions. However, per the Leroy F. Greene School Facilities Act, local jurisdictions are restricted in imposing additional impact fees. Pursuant to state law, payment of statutory fees represents full and complete school facilities mitigation. Per California Government Code Sections 65995(h) and 65996(b), the existing fee mechanisms would fully mitigate the environmental effects of the increased population.

The additional capacity to serve growth anticipated by WCCUSD has the potential to create environmental effects, including increased traffic, noise, potential loss of habitat, water service, water quality, wastewater, and solid waste. Specific impacts cannot be known at this time as the potential size and location of future school facilities are unknown. Therefore, this DEIR evaluates environmental impacts at a programmatic level. If additional facilities, or expansion of existing facilities, were required as a result of the growth associated with the proposed project, environmental impacts would be evaluated at a project level as required by CEQA. Those impacts would be considered at the time that adequate project information was available and the project was being considered for approval by WCCUSD.

Proposed General Plan Policies and Action Items that Address Cumulative Public School Impacts

The proposed General Plan Update contains several policies and actions that would assist in reducing this cumulative public schools impact. The following list contains those policies and actions that include specific, enforceable requirements and/or restrictions and corresponding performance standards that assist in reducing this impact. Since these policies and actions have been described in detail in prior impact discussions for this section, the following is limited to only listing the policy and action item numbers.

Community Services and Facilities Element

Policy CS.4.1, Policy CS.4.2

The proposed General Plan policies listed above would ensure that proposed land uses associated with the proposed project do not adversely affect school facilities. Implementation of the above General Plan policies and associated action items, along with payment of state and district fees, would ensure that the proposed project's impacts to public schools would be less than cumulatively considerable.

Mitigation Measures

None required.

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4.12.4 PARKS AND RECREATION

4.12.4.1 EXISTING SETTING

The City of Pinole Recreation Department (PRD) and East Bay Regional Park District (EBRPD) oversee the park and recreational facilities within the GPU Planning Area. The PRD service area boundaries are coterminous with the Pinole city limits. The EBRPD service area boundaries encompass approximately 95,000 acres of open space land and preserves within Contra Costa and Alameda counties.

City of Pinole Recreation Department

Facilities and Staffing

The operations facility of the PRD is located at 635 Tennent Avenue. According to the 2007 City of Pinole Recreation Park and Facility 5-Year Master Plan, the PRD operates and maintains a total of 14 parks, totaling approximately 329 acres. In addition, the PRD is in charge of maintaining six recreational facilities including the Swim Center, Pinole Community Playhouse, Pinole Valley Tennis Courts, Senior Center, Tiny Tots Center, and Youth Center.

Generally, park sites are improved with turf, irrigation, trees, walkways, and tot lot equipment. Other amenities located in parks may include youth sports fields, picnic tables, barbecues, gazebos, basketball facilities, and restrooms.

The PRD operates the Swim Center, which contains the Tiny Tots Center, swimming pool, wading pool, snack bar, and restrooms. The Pinole Youth Center offers programs for youth in grade levels 6 through 12 including after-school programs for grade levels 6 through 8. The center includes a 40-person meeting room, a main recreation room, a study room, nine computer labs, a snack bar, and a back patio. Additionally, PRD oversees the Pinole Community Playhouse, which is a community theater utilized by the City of Pinole School of Performing Arts, the Pinole Community Players, and East Bay Improv. The playhouse facility includes a 100-person theater, a green room, storage, and a snack bar, lobby, and back patio. The Pinole Senior Center is a 15,000 square foot facility that includes a 250-person hall, a lounge, pool room, arts room, computer lab, personal services salon, and meeting room. The center provides social, educational, recreational, health, nutritional, and consumer services and activities.

Service Standards

California Government Code Section 66477, often referred to as the Quimby Act, permits local jurisdictions to require the dedication of land and/or the payment of in-lieu fees for park and recreation purposes. The required dedication and/or fees are based upon the residential density, parkland cost and other factors. Land dedicated and fees collected pursuant to the Quimby Act may only be used for the purpose of developing new or rehabilitating existing park or recreational facilities. The maximum dedication and/or fee allowed under state law are equivalent to providing 5 acres of parkland per 1,000 persons. The PRD adopted the Quimby Act standard for park acreage standards of 3 to 5 acres per 1,000 persons. Currently the City of Pinole has a total of 329 acres of community and neighborhood parks, and a population of approximately 20,100. This equates to a parks ratio of approximately 16.3 acres per 1,000 city residents. Therefore, the City of Pinole park acreage standards are consistent with the Quimby Act or the National Recreation Association standard of 3 to 5 acres per 1,000 residents.

Funding Mechanisms

Along with the need for more parks, there is a need to fund improvements and maintenance of existing facilities. The PRD has identified several mechanisms to provide funding for park improvement projects. Additionally, some projects would be funded by several different funds. The funds for parks and recreation improvements include:

- Redevelopment Agency Recreation/Open Space Fund
- Redevelopment Agency Fernandez Park Fund
- Park Dedication Fund
- Public Facilities Renovation Fund
- Public Works Maintenance Fund
- Senior Center Club Board Fund

East Bay Regional Parks District

Facilities and Staffing

Currently, the EBRPD manages 65 regional parks, 95,000 acres of open space, and 1,100 miles of trails throughout Contra Costa and Alameda counties, including the 212-acre San Pablo Bay Regional Shoreline, portions of which are located within the GPU Planning Area. Additionally, EBRPD manages two golf courses and multiple campsites, fishing docks, interpretive centers, and wedding, banquet, and meeting facilities. The portions of the San Pablo Bay Regional Shoreline within the GPU Planning Area comprise approximately 30 acres and are primarily in a land bank status (Holt, 2009).

Service Standards

The EBRPD is a regional jurisdiction and is therefore not subject to the Quimby Act provisions. As such, the EBRPD has not established any regional parkland acreage standards (Holt, 2009).

Funding Mechanism

The EBRPD receives its funding primarily through an ongoing property tax and assessment the district levies in Alameda and Contra Costa counties. These two funding sources account for approximately 87 percent of the district's total budget. Charges for district services such as park fees, leases, services, and concessions account for 10 percent of the district's total budget. The other 3 percent of the budget includes 1 percent from rents and leases, 1 percent from interest, and 1 percent from miscellaneous sources.

Measure WW, approved by Alameda County and Contra Costa County voters in November of 2008, includes an allocation of \$855,000 to acquire and restore the scenic San Pablo Bay shoreline to provide access and wildlife viewing to bayside natural resources and to provide Bay Trail amenities to enhance public use of the bay shoreline (Holt, 2009).

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Existing Parks and Recreation Facilities within Planning Area

Parks and recreation facilities serving the Planning Area, along with the location, size, and providing agency for each, are shown in **Table 4.12.4-1** below.

**TABLE 4.12.4-1
PARKS AND RECREATIONAL FACILITIES WITHIN PLANNING AREA**

Park or Facility	Location within Planning Area	Size (acres)	Amenities
City of Pinole Recreation Department			
Amber Swartz Park	Southeast	5	undeveloped
Bayfront Park	Northwest	2	open field area, tables, BBQ, Restroom, hiking trails, scenic views
Canyon Drive Park	Central	0.5	tables, play area
Dog Park	Southeast	-	two play areas for dogs
Fernandez Park	Northwest	6	tables, BBQ, play area, restroom, drinking fountain, baseball, basketball, gazebo
Louis Francis Park	Northwest	2	tables, BBQ, play area
Hugh Young Park	Southeast	10	undeveloped
Meadow Park	Northwest	1.5	tables, play area, drinking fountain, basketball
Pinole Valley Park	Southeast	231	tables, play area, restroom, drinking fountain, baseball, basketball, soccer
Pinole Valley Picnic Grove	Southeast	-	tables, BBQ, restroom, drinking fountain, hiking trail
Pinon Park	Northwest	0.5	tables, BBQ, benches, play area
Sarah Drive Park	Central	4	undeveloped, natural habitat
View Park	Central	2	benches, hiking trail, drinking fountain, scenic views
Wilson Point Park	Northwest	10	hiking trails
Pinole Valley Tennis Courts	Central	-	lighted tennis courts
Community Playhouse (Memorial Hall)	Central	-	theatre
Swim Center	Southeast	-	pool, wading pool, snack bar
Pinole Sports and Fitness Center	Northwest	-	multi-sport complex
Tiny Tots	Southeast	-	preschool programs
East Bay Regional Parks District			
Point Pinole Regional Shoreline	West of Pinole on San Pablo shoreline	2,315 acres	trails, wildlife, beaches, fishing
Sobrante Ridge Regional Preserve	Southeast of Pinole adjacent to	277 acres	wildlife, trails, picnic facilities

Park or Facility	Location within Planning Area	Size (acres)	Amenities
	city limits		
San Francisco Bay Trail	Northwest	-	400-mile regional trail system

Sources: City of Pinole Recreation Department, 2009; Holt, 2009

4.12.4.2 REGULATORY FRAMEWORK

State

The California Parklands Act of 1980

Although a recreation element is not mandated by law to be included in a general plan, recreation resources are to be considered in the open space element of a general plan (Government Code Section 65560). The California Parklands Act of 1980 (Public Resources Code Section 5096.141–5096.143) identifies “the public interest for the state to acquire, develop, and restore areas for recreation . . . and to aid local governments of the state in acquiring, developing and restoring such areas” The California Parklands Act also identifies the necessity of local agencies to exercise vigilance to see that the parks, recreation areas, and recreational facilities they now have are not lost to other uses.

Quimby Act

The goal of the 1975 Quimby Act (California Government Code Section 66477) was to require developers to help mitigate the impacts of property improvements by requiring them to set aside land, donate conservation easements, or pay fees for park improvements. The Quimby Act gave authority for passage of land dedication ordinances only to cities and counties, thus requiring special districts to work with cities and/or counties to receive parkland dedication and/or in-lieu fees. The fees must be paid and land conveyed directly to the local public agencies that provide park and recreation services community-wide. Revenues generated through the Quimby Act cannot be used for the operation and maintenance of park facilities (Westrup, 2002).

Originally, the Quimby Act was designed to ensure “adequate” open space acreage in jurisdictions adopting Quimby Act standards (e.g., 3 to 5 acres per 1,000 residents). In some California communities the acreage fee was very high where property values were high, and many local governments did not differentiate on their Quimby fees between infill projects and greenbelt developments. In 1982, the Quimby Act was substantially amended via AB 1600. The amendments further defined acceptable uses of or restrictions on Quimby funds, provided acreage/population standards and formulas for determining the exaction, and indicated that the exactions must be closely tied (nexus) to a project’s impacts as identified through traffic studies required by CEQA. In other words, AB 1600 requires agencies to clearly show a reasonable relationship between the public need for the recreation facility or park land and the type of development project upon which the fee is imposed (Westrup, 2002). Cities or counties with a high ratio of parkland to inhabitants can set a standard of 5 acres per 1,000 residents for new development. Cities or counties with a lower ratio can only require the provision of up to 3 acres of parkland per 1,000 residents. The calculation of a city’s or county’s parkland-to-population ratio is based on a comparison of the population count of the last federal census to the amount of city- or county-owned parkland.

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Local

Contra Costa County General Plan

The Contra Costa County General Plan is used as the “blueprint” to guide future development in unincorporated portions of the county, including sections of the GPU Planning Area that are outside the Pinole city limits. The Contra Costa County open space policies that are applicable to the Planning Area outside the existing city limits are Policies 9-40 through 9-98. These policies address performance standards for parks and recreation in the Growth Management Elements; the distribution of parks based on the intensity of residential development; access for all capabilities of residents; the protection of water-related recreation; the utilization of funds from agencies to purchase levees and acquire easements; the integration of public trail facilities into flood control facilities; the development of recreational facilities that complement natural topography, waterways, vegetation, and soil characteristics; and controlling adverse environmental impacts between uses and trespassing.

East Bay Regional Park District Master Plan

The purpose of the master plan is to define the vision and the mission of the East Bay Regional Park District and sets the priorities until the year 2007. The plan explains the district’s responsibilities and provides a framework for the board of directors and the staff. Additionally, the plan provides policies and guidelines for achieving the standards of service in the areas of resource conservation, management, public access, and recreation.

City of Pinole Recreation Park and Facility 5-Year Master Plan

The City of Pinole Recreation Department has prepared a master plan for fiscal years 2006/2007 through 2010/2011. The plan includes an inventory of the City’s existing recreational facilities and amenities and identified safety and liability issues. Based on this inventory, the plan outlines needed improvements throughout the park system and identifies funding sources for each improvement (City of Pinole Recreation Department, 2007).

4.12.4.3 IMPACTS AND MITIGATION MEASURES

Standards of Significance

An impact on public services or utilities is considered significant if implementation of the project would result in any of the following:

- 1) Increased demand for additional personnel, equipment, or facilities, and/or results in a negative effect that impairs the ability of the service provider to maintain an acceptable level of service for maintenance of public facilities that results in a physical impact on the environment.

Methodology

This section was prepared and evaluated based on consultation with City of Pinole Recreation Department and East Bay Regional Parks District staff and review of the City’s Recreation Park and Facility 5-Year Master Plan.

Impacts and Mitigation Measures

Increased Demand for Park and Recreational Facilities (Standard of Significance 1)

Impact 4.12.4.1 Implementation of the proposed project (General Plan Update, Three Corridor Specific Plan, and Zoning Code Update) would increase the demand for existing facilities and require additional parks and recreational facilities to accommodate the anticipated growth associated with the proposed project. This would be a **less than significant** impact.

General Plan Update

Implementation of the proposed General Plan Update is projected to result in population growth within the GPU Planning Area, resulting in increased visitation to and use of Pinole parks. The city's population is projected to increase by an additional 3,775 persons by the year 2030, or a total population of 23,875 persons by the year 2030 versus the current (2010) population of 20,100 persons. A population of 23,875 with current parks facilities (329 acres) would equate to a parks ratio of approximately 13.7 acres per 1,000 city residents. The City of Pinole has over 329 acres of existing lands designated for park uses, and the proposed GPU is increasing this acreage to 331 acres of parkland. This increase would result in a ratio of 27.6 acres per 1,000 city residents. Therefore, the City of Pinole park acreage standards are in compliance with the Quimby Act and the National Recreation Association standard of 3 to 5 acres per 1,000 residents and would be adequate to meet the GPU Planning Area's current and projected population through 2030. This impact would be **less than significant**.

Three Corridors Specific Plan

The Three Corridors Specific Plan is intended to establish more housing choices and job opportunities within the city's commercial corridors.

If all of the residential properties within the Specific Plan area were to develop according to the proposed provisions of the land use and development standards contained in the Specific Plan, the city would be expected to experience increased residential development of up to 1,076 residential units by 2030. Based on ABAG's 2007 estimate of 2.89 persons per household, the Specific Plan could result in an additional 3,110 persons by 2030 (1,076 housing units x 2.89 persons per household), resulting in the need for 3 additional acres of park land. The proposed GPU is increasing the total number of acres of land designated for park use from 329 acres to 331 acres, which would be adequate to meet the Three Corridors Specific Plan area's projected population as well as the projected population under the proposed GPU. Therefore, no significant increase in demand for parks and recreation would result. This impact is considered to be **less than significant**.

Zoning Code Update

Updates to the Zoning Code are intended to further clarify the types and forms of uses permitted under particular land use designations, but would not result in any development activities beyond that analyzed for the proposed General Plan Update. Therefore, the Zoning Code Update would have an impact similar to that for the General Plan Update as discussed above.

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Proposed General Plan Policies and Action Items that Address Increased Demand for Park and Recreational Facilities

The following General Plan policies and action items address impacts related to parks and recreational facilities:

- Action CS.1.3.4 The City shall periodically prepare and update the Recreation Park and Facility Master Plan to monitor the condition of recreation facilities and to ensure community needs are adequately addressed.

- Action CS.3.1.1 The City will utilize the Recreation Park and Facility Master Plan to identify areas that are underserved by recreation facilities and identify opportunity sites that may satisfy existing and projected park and recreation needs.

- Action CS.3.1.2 The City will work with community organizations, nonprofit and civic groups, and local schools to provide high-quality recreation programs that address the recreation needs of all ages and cultural interests of the community.

- Action CS.3.1.3 The City will seek available funding opportunities to support recreation in Pinole and to leverage available City and Redevelopment Agency financial resources.

- Action CS.3.3.4 Implement the trail improvements identified in the Pinole Creek Greenway Master Plan.

- Action CS.3.3.6 Explore alternative funding options to acquire land to expand Pinole's trail system.

- Action CS.3.3.7 Where possible, secure rights to public access and incorporate trail improvements in development proposals.

- Action CS.3.4.1 Prepare and implement a Recreation Facility Master Plan to ensure that the amount of available recreation space is adequate to meet ongoing recreation service needs over time.

- Action CS.3.4.2 Future park sites should be planned for neighborhoods that do not currently have a park within walking or bicycling distance.

- Action CS.3.4.3 Review of development proposals shall be organized in conjunction with the Recreation Department in order to designate sites for new parks and recreation facilities.

- Action CS.3.4.4 Consider allowing incentives such as density bonuses for development projects that provide parks and/or recreational open space.

- Action CS.3.4.5 Implement a program to acquire recreational open space areas and permanently protect the land from other future development.

- Action CS.3.4.6 Utilize community facilities districts, Mello-Roos and/or lighting districts to provide funding for ongoing maintenance and operation of parks and recreation facilities.
- Action CS.3.4.7 The City shall seek out opportunities to work with other government agencies, local land trusts, and other stakeholder groups and organizations to expand park and recreation opportunities within or in close proximity to Pinole.
- Policy OS.3.3 Cluster Development. Encourage cluster development and other creative site planning techniques to preserve open space, trails and visual, habitat, recreation and archaeological resources.
- Policy OS.3.12 Balance Recreation and Habitat Needs in Open Space. Provide for a variety of recreational activities in open space areas within the City of Pinole while ensuring the protection of important habitat through environmental education and development of Open Space Management Plan.
- Policy OS.4.1 Coordinate with other City-wide and regional trail planning efforts to establish a comprehensive network of trails through and Open Space Plan in Pinole.
- Policy OS 7.1 Funding for Maintenance. Pursue efforts and partnerships that help provide for a sustainable open space system through adequate funding for maintenance and management of open space.

In addition, Chapter 9.0, *Infrastructure and Public Facilities*, of the Three Corridors Specific Plan provides further discussion of parks and recreation including service standards and planned capitol improvement projects that may further reduce this impact.

Implementation of the above General Plan policies and actions and payment of necessary fees would ensure that impacts under the proposed project related to parks services would be **less than significant**.

Mitigation Measures

None required.

4.12.4.4 CUMULATIVE IMPACT ANALYSIS

Cumulative Setting

The cumulative setting associated with adoption of the proposed project includes proposed, planned, reasonably foreseeable, and approved projects in the region (see Section 4.0), as well as full development of the GPU Planning Area as proposed in the proposed project, expected to occur in the year 2030 and beyond. Under the proposed project, the City would operate and maintain the City's parks and recreation facilities.

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Cumulative Impacts and Mitigation Measures

Cumulative Park and Recreation Impacts

Impact 4.12.4.2 Implementation of the proposed project (General Plan Update, Three Corridors Specific Plan, and Zoning Code Update), in combination with other reasonably foreseeable development, would require additional park and recreation facilities within the GPU Planning Area. This would be a **less than cumulatively considerable** impact.

Implementation of proposed and approved projects associated with the proposed project and other reasonably foreseeable development would contribute to the cumulative demand for regional and local recreational facilities. Cumulative parks and recreational facility impacts are anticipated to be less than cumulatively considerable.

Proposed General Plan Policies and Action Items that Address Cumulative Park and Recreation Impacts

The proposed General Plan Update contains several goals, policies, and actions that would assist in reducing this cumulative parks impact. The following list contains those policies and actions that include specific, enforceable requirements and/or restrictions and corresponding performance standards that assist in reducing this impact. Since these policies and actions have been described in detail in prior impact discussions for this section, the following is limited to only listing the policies and action numbers.

Community Services and Facilities Element

Action CS.1.3.4, Action CS.3.1.1, Action CS.3.1.2, Action CS.3.1.3, Action CS.3.3.4, Action CS.3.3.6, Action CS.3.3.7, Action CS.3.4.1, Action CS.3.4.2, Action CS.3.4.3, Action CS.3.4.4, Action CS.3.4.5, Action CS.3.4.6, Action CS.3.4.7

Natural Resources and Open Space Element

Policy OS.3.3, Policy OS.3.12, Policy OS.4.1, Policy OS.7.1

In addition, Chapter 9.0, *Infrastructure and Public Facilities*, of the Three Corridors Specific Plan provides further discussion of parks and recreation including service standards and planned capitol improvement projects that may further reduce this impact.

Mitigation Measures

None required.

4.12.5 WATER SERVICE

4.12.5.1 EXISTING SETTING

East Bay Municipal Utility District

The East Bay Municipal Utility District (EBMUD) is a public agency that provides drinking water to approximately 1.3 million people and wastewater systems for 640,000 people within its 331

square mile service area in portions of Contra Costa and Alameda counties. The service boundaries for the EBMUD drinking water system extends from Crockett on the north to San Lorenzo on the south (including the cities of Oakland and Berkeley) and encompasses approximately 325 square miles. The EBMUD water system provides service to the entire City of Pinole General Plan Update Planning Area. EBMUD's wastewater system boundaries extend from Richmond on the north to San Leandro on the south and encompass approximately 83 square miles. The EBMUD wastewater system does not extend to the Planning Area (Dudek, 2008). The Wastewater Service subsection contains a discussion of wastewater service in the Planning Area.

Water Supply

EBMUD provides both wholesale and retail water to its customers. Historically, 90 percent of the water used by EBMUD comes from the 577 square mile protected Mokelumne River watershed located on the western slope of the Sierra Nevada range and the remaining 10 percent originates as runoff from protected watershed lands in the East Bay area (EBMUD, 2005). EBMUD has water rights for up to 325 million gallons per day (mgd) or a total of 364,000 acre-feet per year (af/yr) from the Mokelumne River. However, this supply is subject to the availability of Mokelumne River runoff and senior rights of other water users. EBMUD's position in the hierarchy of Mokelumne water users is determined by a variety of agreements between Mokelumne water rights holders, the appropriative water rights permits and licenses which have been issued by the state, pre-1914 rights, and riparian rights. Conditions which restrict EBMUD's ability to use its full entitlements include (EBMUD, 2005):

- Upstream water use by prior right holders;
- Downstream water use by riparian and senior appropriators and other downstream obligations, including protection of public trust resources; and
- Variability in rainfall and runoff.

The availability of water from local runoff is dependent on two factors: hydrologic conditions and storage availability. In dry years, evaporation can exceed runoff, resulting in no net supply. In addition, storage for capturing local runoff is limited. On average, local runoff supply put to beneficial use is 15 to 25 mgd during normal years and close to zero during dry/drought years (EBMUD, 2005).

Due to the above conditions, EBMUD relies on the storage capacity of the Pardee and Comanche reservoirs to make the Mokelumne River's yield more dependable. These reservoirs are discussed in more detail below.

Water Supply Facilities and Infrastructure

The EBMUD water supply system consists of a network of raw water reservoirs, aqueducts, water treatment plants, pumping plants, and distribution pipelines. Major EBMUD water storage and conveyance facilities are discussed in more detail below.

Pardee Dam and Reservoir

The Pardee Dam and Reservoir is located 38 miles northeast of Stockton near the city of Jackson. Pardee Reservoir is used primarily for municipal water supply, for power generation, and also as a source of water for the Jackson Valley Irrigation District. Other uses include non-contact recreational facilities and maintenance of Lower Mokelumne River and fish hatchery

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water quality and quantity objectives. The Pardee Reservoir has a licensed capacity of 209,950 acre-feet (AF); however the maximum capacity is 197,950 AF at the spillway crest elevation of 567.7 feet (EBMUD, 2005, 2009a).

Comanche Dam and Reservoir

The Comanche Dam and Reservoir is located 10 miles downstream from the Pardee Dam on the Mokelumne River. The Comanche Dam is operated jointly with the Pardee Dam and functions to store water for irrigation and stream flow regulations, to provide flood protection, to provide water for water rights holders of the Mokelumne River, and to provide water for fisheries and riparian habitat. Comanche Reservoir has a surface area of 7,470 acres. The capacity of the Comanche Reservoir is 417,120 AF at the spillway crest elevation (EBMUD, 2005). The total capacity is not available for water supply storage, however, because as a condition of its water rights, EBMUD manages Comanche and Pardee reservoirs to provide up to 200,000 AF of flood control space each year under an agreement with the U.S. Army Corps of Engineers (USACE). Flood control requirements are based on available storage space and expected runoff during the winter and spring months (EBMUD, 2009a).

Conveyance/Mokelumne Aqueduct System

Water from the Pardee Reservoir travels approximately 91 miles to East Bay water treatment plants and terminal reservoirs through the Pardee Tunnel, the Mokelumne Aqueducts, and the Lafayette Aqueducts. Raw water from the Pardee Reservoir travels first through the Pardee Tunnel, a 2.2-mile, 8-foot-high horseshoe structure completed in 1929, to the Mokelumne Aqueduct System near Valley Springs in Calaveras County. There the raw enters the three 82-mile steel pipelines known as the Mokelumne Aqueducts. The Mokelumne Aqueduct system pipelines have a capacity to carry a total of 200 mgd by gravity flow and up to 325 mgd with pumping at the Walnut Creek pumping plants. These pipelines transport water from the Pardee Tunnel at Camp Seco to Walnut Creek at the east end of two Lafayette Aqueducts. Water flowing by gravity from the Pardee Reservoir takes approximately 30 to 45 hours to reach the Bay Area (EBMUD, 2009a).

Once the raw water enters the EBMUD service area, it is distributed by the Lafayette Aqueducts to filter plants in Walnut Creek, Lafayette, or Orinda for treatment and distribution or stored in one of the terminal reservoirs discussed above for later use. Water is distributed throughout EBMUD's service area (includes both counties) via 4,100 miles of pipelines, 140 pumping plants, and 170 local neighborhood reservoirs having a total capacity of 830 mgd. Average daily system-wide demand in 2008 was approximately 220 mgd (Dudek, 2008).

Pressure Zones

EBMUD's service area is divided into 122 pressure zones ranging in elevation from sea level to 1,450 feet. A pressure zone is an area within a specified elevation range (e.g., 250 to 450 feet) where storage and distribution facilities are designed to deliver water at a pressure range suitable for customer use. Coordination among facilities in different pressure zones is important for maintaining system operations. Generally, the pumping plant(s) in one pressure zone will pump water up to reservoirs in the next higher zone. Pumping plants in that higher pressure zone will in turn pump water up to higher zones. Reservoirs in higher zones provide water by gravity flow to lower-elevation pressure zones (ESA, 2006).

East Bay Terminal Reservoirs

EBMUD operates five terminal reservoirs within the East Bay service area, including the Briones, San Pablo, Upper San Leandro, Chabot, and Lafayette reservoirs. The Briones, San Pablo, and Upper San Leandro reservoirs serve EBMUD throughout the year, and the Chabot and Lafayette reservoirs serve as emergency sources of supply. These five reservoirs have a total storage capacity of 155,550 AF and serve multiple functions, including regulating Mokelumne River supplies in winter and spring, augmenting supplies in with local runoff, providing emergency sources of supply, providing environmental and recreational benefits to East Bay communities, and flood protection (EBMUD, 2009a).

Water Treatment Facilities

EBMUD operates six water treatment plants (WTPs): Walnut Creek, Lafayette, Orinda, Sobrante, Upper San Leandro, and San Pablo. Together the WTPs treat an average-annual demand of 222 mgd. There is substantial overlap in the service areas of the Sobrante, Orinda, and Upper San Leandro WTPs as well as between the service areas of the Lafayette and Orinda WTPs. This overlap notwithstanding, on any given day, production from one WTP could offset some or all of the production from another. In the spring, summer, and fall all but the San Pablo WTP must be operated to meet demands. No service area is shown for the San Pablo WTP because it is a standby facility used only during planned outages of key facilities (ESA, 2006).

Full conventional treatment (treatment process train) consisting of five basic steps — coagulation, flocculation, sedimentation, filtration, and disinfection — is used at the Upper San Leandro, San Pablo, and Sobrante WTPs. The Upper San Leandro and Sobrante WTPs conduct an additional step (ozonation) for taste and odor control. The water sources for these WTPs are East Bay reservoirs that have higher levels of sediment and algae than the Pardee Reservoir and high algae levels can create a grassy taste or smell in treated water. The Upper San Leandro, San Pablo, and Sobrante WTPs are referred to as “conventional” WTPs while the Orinda, Lafayette, and Walnut Creek WTPs use only coagulation, filtration, and disinfection processes for raw water because their source water comes directly from Pardee Reservoir via the Mokelumne Aqueducts and needs less treatment. The treatment process at these WTPs is referred to as “in-line filtration” (ESA, 2006).

The City of Pinole General Plan Update Planning Area is served by the Sobrante Water Treatment Plant. The Lafayette Aqueducts and local creeks supply water to the San Pablo Reservoir, which supplies the Sobrante WTP. Water treated at the Sobrante WTP is distributed to the northern part of the service area (Pinole, Hercules, Richmond, El Sobrante, Rodeo, and Crockett) (ESA, 2006). The sustainable treatment capacity of the Sobrante WTP is 45 mgd to support Claremont Tunnel outages and other emergency operations. However, normal operations include the ozonation processes for taste and odor issues (as discussed above), which limit the WTP's production to approximately 30 mgd during summer operations (ESA, 2006).

Water Treatment and Transmission Improvements Program

EBMUD's Water Treatment and Transmission Improvements Program (WTTIP) is a comprehensive program to improve EBMUD water service by enhancing and modernizing water treatment and moving water quickly and efficiently to where it is needed. The WTTIP includes projects to address a variety of overlapping needs, including meeting existing and future water demands (2030 capacity), meeting future regulatory standards related to water quality, complying with environmental permit conditions, and replacing and upgrading aging infrastructure (ESA, 2006).

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Improvements identified in the WTTIP include more than 20 projects that will be staggered over more than ten years. These improvements include both construction of new facilities and updating or refurbishing existing facilities. Changes are planned for EBMUD's Lafayette, Orinda, Walnut Creek, Upper San Leandro, and Sobrante WTPs. Many improvements to the water distribution system are also planned, including neighborhood pipelines, pumping plants, and water storage tanks.

Regional projects identified in the WTTIP include the Bayside Groundwater Project, the Freeport Regional Water Project, and regional desalination projects. These projects are described in more detail below. Projected future water supply quantities from these projects are shown in **Table 4.12.5-1**.

Bayside Groundwater Project – The Bayside Groundwater Project provides a modest, locally available supplemental water supply to help reduce the need for rationing in a prolonged drought by storing treated drinking water in a deep underground aquifer during wet years for future recovery, re-treatment, and distribution to customers during drought. Phase 1, which will be ready for service in 2010, will store an annual average of 1 mgd of water in a deep aquifer beneath San Lorenzo. Water stored in wet years would supply customers in dry years at a delivery rate that does not exceed 1 mgd on a yearly average. After successfully operating Phase 1, EBMUD will consider a larger Phase 2 Bayside Project that would store 2 to 10 mgd. Before moving forward, EBMUD will review results from the groundwater monitoring system and “Extensometer,” which measures minute changes (if any) in ground surface elevation during Phase 1 operation (EBMUD, 2010).

Freeport Regional Water Project – EBMUD and the Sacramento County Water Agency (SCWA), in association with the City of Sacramento and the U.S. Bureau of Reclamation, partnered to build a regional water supply project to provide water for East Bay customers in dry years and needed water for the Sacramento region by drawing water from the Sacramento River near the town of Freeport. The Freeport Regional Water Project consists of a new 185-mgd water intake structure and pumping plant on the Sacramento River north of Freeport, a new large-diameter pipeline to transport water eastward from the intake to a new SCWA water treatment plant and to the existing Folsom South Canal, a new water treatment plant in central Sacramento County to treat the water for municipal use by SCWA customers, and two new pumping plants and a large-diameter pipeline to transport water from the southern end of the Folsom South Canal to EBMUD's Mokelumne Aqueducts for use by EBMUD customers. Construction on the Freeport Regional Water Project began in January 2007 and is 95 percent complete. All pipelines have been installed and crews are finishing construction of the intake and pump stations and are testing facilities to prepare for operations. The work is expected to be completed in 2010 (EBMUD, 2010).

Regional Desalination Projects – Four Bay Area water agencies (EBMUD, the Contra Costa Water District, the San Francisco Public Utilities Commission, and the Santa Clara Valley Water District) are jointly exploring a regional desalination project that could improve overall local supply availability in the Bay Area, including emergency water supplies, supplemental supplies during droughts, and alternate supplies during maintenance of water supply facilities. A pilot test in 2009 in eastern Contra Costa County collected data on technical feasibility and environmental impacts. A final report will be completed by the end of 2010 and next steps will be determined once the final report is completed (EBMUD, 2010). It is anticipated that desalinated water could yield as much as 24,080 acre-feet per year for municipal and industrial uses (EBMUD, 2005).

**TABLE 4.12.5-1
PROJECTED FUTURE WATER SUPPLY QUANTITIES**

Project Name	Normal Year AF to EBMUD	Single Dry Year AF to EBMUD	Multiple Dry Years (AF to EBMUD)		
			Year 1	Year 2	Year 3
Freeport Regional Water Project	0	Up to 112,000 ¹	165,000 over three years		
Bayside Groundwater Project (Phase 1)	0	1,120	1,120	1,120	1,120

Note: ¹ Contractual single year limit of supply from the U.S. Bureau of Reclamation is 133,000 AF. For continuous operation at 100 MGD, EBMUD's allocation capacity in the Freeport Regional Water Project yields an annual delivery 112,000 AF.
Source: EBMUD, 2005

Projected Supply and Demand

A summary of EBMUD's demand and supply projections through 2030, as identified in the EBMUD Urban Water Management Plan 2005 (UWMP), is shown in **Table 4.12.5-2** below.

**TABLE 4.12.5-2
EBMUD SUPPLY AND DEMAND PROJECTIONS**

	2005	2010	2015	2020	2025	2030
Projected Demand (mgd)						
Customer Demand	241	258	267	277	279	281
Demand Adjusted for Conservation	(13)	(21)	(27)	(35)	(35)	(35)
Demand Adjusted for Recycled Water	(6)	(12)	(14)	(14)	(14)	(14)
Planning Level of Demand	222	225	226	228	230	232
Projected Available Supply and Need for Supplemental Supply (mgd)						
Normal Water Year						
Available Supply	222	225	226	228	230	232
Supplemental Supply Need ¹	0	0	0	0	0	0
Single Dry Water Year (Multiple Dry Years – Year 1)						
Available Supply	211	213	215	217	219	220
Deficiency ²	5%	5%	5%	5%	5%	5%
Supplemental Supply Need	69	0	0	0	0	0
Multiple Dry Water Years – Year 2						
Available Supply	167	168	170	171	173	174
Deficiency ³	25%	25%	25%	25%	25%	25%
Supplemental Supply Need	40	0	0	0	0	0
Multiple Dry Water Years – Year 3						
Available Supply	43	167	166	153	151	147

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	2005	2010	2015	2020	2025	2030
Deficiency ⁴	56%	26%	27%	33%	34%	37%
Supplemental Supply Need	15	1	4	18	22	27
Three-Year Drought						
Total Supplemental Supply Need (to limit deficiency to 25%)	124	1	4	18	22	27

Notes:

¹ Supplemental supply need represents the additional amount of water (in mgd) that is necessary to limit customer rationing to 25% in a multiple-year drought while continuing to meet the requirements of senior downstream water rights holders and the provisions of agreements.

² Through the Freeport Regional Water Project, the supplemental dry year supply of Central Valley Project water will be used to reduce the rationing goal to 5% of customer demand during the first year of a drought.

³ Beginning in 2010, the Freeport Regional Water Project supply, along with aggressive EBMUD conservation and recycling programs, will be used to limit rationing to 25% of customer demand during the second year of a 3-year drought.

⁴ After completion of the Freeport Regional Water Project in 2010, forecasted supply deficiencies range from 26% to 37% of customer demand during the last year of a 3-year drought.

Source: EBMUD, 2005

As shown, the available supply is greater than or equal to demand during normal year conditions; therefore EBMUD can adequately meet customer demands through the year 2030 during normal year conditions. However, as EBMUD's Mokelumne River supply continues to decrease commensurate with increases in diversions from senior water rights holders upstream, the frequency of normal year conditions will also decrease. Furthermore, EBMUD has been required to increase downstream releases for the protection of fish, wildlife, and riparian habitat as part of settlement agreements in regulatory proceedings. These two factors could reduce the flexibility in EBMUD's operation to manage carry-over storage for multiple dry years (EBMUD, 2005). Unless additional water supply improvements are developed, years where rationing is implemented may increase.

The EBMUD's UWMP identifies several supplemental water supply initiatives to meet projected shortfall, including the Freeport Regional Water Project, the Bayside Groundwater Project, and regional desalination projects. These are described in more detail under the Water Treatment and Transmission Improvements Program subsection above. In addition, recycled water projects and conservation efforts reduce demands on potable water supply, thus extending the existing water supply (EBMUD, 2005).

Water Supply Management Program 2040 Plan

In October of 2009, EBMUD adopted the *Water Supply Management Program 2040 Plan* (WSMP 2040). The WSMP 2040 estimates water supply needs in the EBMUD service area to the year 2040 and sets forth a program of policies and initiatives to meet those needs. The primary purpose of the WSMP 2040 is to identify and recommend solutions for needed supplemental water supplies during dry years. The WSMP presents a set of interrelated actions, or a water supply portfolio, that seeks to ensure reliability for uncertain future conditions and supplies. The WSMP 2040 consists of a rationing level of 10 percent, conservation totaling 39 mgd, recycling totaling 11 mgd, and several supplemental supply components. In addition to the Bayside Groundwater Project and regional desalination projects which are discussed above, supplemental water supply components identified in the WSMP 2040 are discussed below.

Northern California Water Transfers – This component consists involves EBMUD seeking water transfers to supplement dry year supplies. Specific partners, and thus sources, have not been

identified; however the Draft Program Environmental Impact Report (February 2009) for the WSMP assumes that the partners will be in the Sacramento Valley or will be partners with water sources originating north of the Delta. That EIR also assumes conveyance of transferred water would be accomplished via the Freeport Regional Water Project. Other transfer partners or conveyance facilities are not precluded (EBMUD, 2009b).

Sacramento Basin Groundwater Banking/Exchange – This component consists of the development of in-lieu or artificial groundwater recharge and recovery in cooperation/partnership with Sacramento area interests such as SCWA and/or the Sacramento County Groundwater Authority (SCGWA). As conceptualized, EBMUD would support development of facilities to recharge the Sacramento groundwater basin and would receive, as a dry year supply, either groundwater extracted from the basin or surface water in exchange for a portion of the water stored (EBMUD, 2009b).

Enlargement of Pardee Reservoir – Enlargement of the Pardee Reservoir would increase the existing maximum reservoir level by 33 feet and the maximum flood control elevation by 46 feet. This would increase the storage capacity from 209,950 acre-feet to 370,000 acre-feet and, during dry years, would create an additional 51 mgd of water supply in each year for up to three consecutive dry years (EBMUD, 2009b).

Enlargement of Lower Bear Reservoir – Enlargement of the Lower Bear Reservoir would raise the dam by 32 feet and increase the storage capacity within the upper Mokelumne watershed. The Draft Program Environmental Impact Report (February 2009) for the WSMP assumes that, as a partner agency in such a project, EBMUD would receive approximately 4,500 acre-feet during a wet or normal year and 2,500 acre-feet during a dry year (EBMUD, 2009b).

Mokelumne Inter-Regional Conjunctive Use Project (IRCUP)/San Joaquin Groundwater Banking/Exchange – Under this component, one or more IRCUP partners would either obtain a new water right or modify an existing water right to enable surface water to be diverted from the Mokelumne River and banked in the eastern San Joaquin groundwater basin for later use by one or more IRCUP partners (EBMUD, 2009b).

Drought Management Plan

EBMUD determines its water supply availability in April of each year (and as necessary during dry periods) and initiates water reduction programs if the projected supply is unable to fully meet customer needs. EBMUD's Drought Management Program (DMP) follows guidelines based on the projected storage criteria shown in **Table 4.12.5-3**.

**TABLE 4.12.5-3
EBMUD DMP STORAGE CRITERIA**

Stage	If the Projected Storage in Thousand Acre Feet (TAF) on September 30 Forecast in April is:	Percent of Maximum System Storage	Rationing Reduction Goal
	500 TAF or more	65 % and greater	None
Moderate	500 – 450 TAF	65 to 59%	0 to 15%
Severe	450 – 300 TAF	59 to 39%	15 to 25%
Critical	Less than 300 TAF	39% and below	25%

Source: EBMUD, 2005

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In the Supply and Demand Projections table above (**Table 4.12.5-3**), the single dry water year is the year where EBMUD would implement DMP elements at the moderate stage with the goal of achieving up to 15 percent reduction in customer demand. Year 2 of multiple dry water years is the year where EBMUD would implement DMP elements at the severe stage with the goal of achieving between 15 and 25 percent reduction in customer demand. Year 3 of multiple dry water years is the year where EBMUD would implement DMP elements at the critical stage with the goal of achieving between 15 and 25 percent reduction in customer demand.

The DMP establishes both mandatory and voluntary water conservation goals for customers, with measures becoming mandatory when EBMUD declares a water shortage emergency. Section 28 (Water Use During Water Shortage Emergency Condition) of EBMUD's *Regulations Governing Water Service to Customers* defines the water use reduction goals based on customer account type, specifies the water uses that are prohibited during the drought, and provides guidelines on effective water use practices to help customers conserve. Prohibited water uses during drought include using water for decorative ponds, fountains, and other water features that do not recirculate water; washing cars, boats, trailers, aircraft, or other vehicles by hose without a shutoff nozzle; washing sidewalks, walkways, driveways, patios, parking lots, or other hard-surfaced areas with water; irrigating lawn or garden areas on consecutive days or more frequently than three days per week; flushing sewers, hydrants, or washing streets with potable EBMUD water supplies; and using EBMUD potable water for construction, soil compaction, or dust control if a feasible alternative source of water for exists.

4.12.5.2 REGULATORY FRAMEWORK

In addition to the various plans and regulations discussed under the Existing Setting subsection above, the following state and local plans/regulations pertain to the proposed project:

Federal

Safe Drinking Water Act

The Safe Drinking Water Act (SDWA) was originally passed by Congress in 1974 to protect public health by regulating the nation's public drinking water supply. The law was amended in 1986 and 1996 and requires many actions to protect drinking water and its sources — rivers, lakes, reservoirs, springs, and groundwater wells. The SDWA applies to every public water system in the United States but does not regulate private wells that serve fewer than 25 individuals.

The SDWA authorizes the United States Environmental Protection Agency (USEPA) to set national health-based standards for drinking water to protect against both naturally-occurring and man-made contaminants that may be found in drinking water. Originally, the SDWA focused primarily on treatment as the means of providing safe drinking water at the tap. The 1996 amendments changed the existing law by recognizing source water protection, operator training, funding for water system improvements, and public information as important components of safe drinking water. This approach is intended to ensure the quality of drinking water by protecting it from source to tap (USEPA, 2010).

State

Urban Water Management Planning Act

The California Department of Water Resources (DWR) provides urban water management planning services to local and regional urban water suppliers. In 1983, the California Legislature

enacted the Urban Water Management Planning Act (Water Code Sections 10610–10656). The act states that every urban water supplier that provides water to 3,000 or more customers, or that provides over 3,000 acre-feet of water annually, should make every effort to ensure the appropriate level of reliability in its water service sufficient to meet the needs of its various categories of customers during normal, dry, and multiple dry years. The act requires that urban water suppliers develop water management plans to actively pursue the efficient use of available supplies. The act describes the contents of the UWMPs as well as how urban water suppliers should adopt and implement the plans (DWR, 2010). The adopted plan must be updated at least once every five years on or before December 31 in years ending in five and zero. An urban water supplier that does not prepare, adopt, and submit its UWMP to the DWR is ineligible to receive drought assistance from the State of California. The East Bay Municipal Utility District completed its 2005 UWMP in November of 2005. The next cycle of UWMPs (2010) are due to the DWR on July 1, 2011 (DWR, 2010).

Senate Bill 610

Senate Bill (SB) 610 makes changes to the Urban Water Management Planning Act to require additional information in UWMPs if groundwater is identified as a source available to the supplier. Required information includes a copy of any groundwater management plan adopted by the supplier, a copy of the adjudication order or decree for adjudicated basins, and if non-adjudicated, whether the basin has been identified as being overdrafted or projected to be overdrafted in the most current DWR publication on that basin. If the basin is in overdraft, that plan must include current efforts to eliminate any long-term overdraft. A key provision in SB 610 requires that any project subject to the California Environmental Quality Act supplied with water from a public water system be provided a specified water supply assessment, except as specified in the law (DWR, 2010).

Assembly Bill 901

Assembly Bill (AB) 901 requires UWMPs to include information relating to the quality of existing sources of water available to an urban water supplier over given time periods and the manner in which water quality affects water management strategies and supply (DWR, 2010).

Senate Bill 221

SB 221 prohibits approval of subdivisions consisting of more than 500 dwelling units unless there is verification of sufficient water supplies for the project from the applicable water supplier(s). This requirement also applies to increases of 10 percent or more of service connections for public water systems with less than 500 service connections. The law defines criteria for determining “sufficient water supply” such as using normal, single-dry, and multiple-dry year hydrology and identifying the amount of water that the supplier can reasonably rely on to meet existing and future planned uses. Rights to extract additional groundwater, if groundwater is to be used for the project, must be substantiated (DWR, 2010).

California Urban Water Conservation Council

The California Urban Water Conservation Council (CUWCC) was created in 1991 by numerous urban water agencies, public interest organizations, and private entities throughout California to assist in increasing water conservation in the state. The goal of the CUWCC is to integrate best management practices (BMPs) into the planning and management of California's water resources. A Memorandum of Understanding (MOU) Regarding Urban Water Conservation in California (2007) was signed by these agencies and formalizes an agreement to implement the

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BMPs and makes a cooperative effort to reduce the consumption of California's water resources (CUWCC, 2010). By signing the CUWCC's MOU, members agree to implement 14 BMPs to conserve water in urban areas. The CUWCC's BMPs were updated in 2008 to include current technology and to credit agencies for innovative water conservation programs. The 14 BMPs are now organized into five categories. Two categories, Utility Operations and Education, are Foundational BMPs, because they are considered to be essential water conservation activities by any utility and are adopted for implementation by all signatories to the MOU as ongoing practices with no time limits. The remaining BMPs are Programmatic BMPs and are organized into Residential, Commercial, Industrial, and Institutional (CII), and Landscape categories. The BMPs are shown in **Table 4.12.5-4** below. As a signatory to the CUWCC MOU, the East Bay Municipal Utility District is making a good faith effort to implement all of the BMPs (EBMUD, 2005).

**TABLE 4.12.5-4
CUWCC REVISED BMPs**

Old BMP Number & Name	New BMP category
1. Water Survey Programs for Single-Family Residential and Multi-Family Residential Customers	Programmatic: Residential
2. Residential Plumbing Retrofit	Programmatic: Residential
3. System Water Audits, Leak Detection and Repair	Foundational: Utility Operations – Water Loss Control
4. Metering with Commodity Rates for All New Connections and Retrofit of Existing Connections	Foundational: Utility Operations – Metering
5. Large Landscape Conservation Programs and Incentives	Programmatic: Landscape
6. High-Efficiency Clothes Washing Machine Financial Incentive Programs	Programmatic: Residential
7. Public Information Programs	Foundational: Education – Public Information Programs
8. School Education Programs	Foundational: Education – School Education Programs
9. Conservation Programs for Commercial, Industrial, and Institutional (CII) Accounts	Programmatic: Commercial, Industrial, and Institutional
10. Wholesale Agency Assistance Programs	Foundational: Utility Operations – Operations
11. Retail Conservation Pricing	Foundational: Utility Operations – Pricing
12. Conservation Coordinator	Foundational: Utility Operations – Operations
13. Water Waste Prohibition	Foundational: Utility Operations – Operations
14. Residential ULFT Replacement Programs	Programmatic: Residential

Source: CUWCC, 2010

Local

Regulations Governing Water Service to Customers of EBMUD

Section 29 (Prohibiting Wasteful Use of Water) of EBMUD's *Regulations Governing Water Service to Customers* sets forth regulations and restrictions on both residential and nonresidential water use in order to conserve EBMUD's water supply for the greatest public benefit and to reduce the quantity of water used by EBMUD's customers. If EBMUD observes from meter readings that apparently excessive water use is occurring at a customer's premises, it can authorize installation of a flow-restricting device on the service line after a written warning to the customer. The regulations also allow for discontinuation of service for continued violations.

4.12.5.3 IMPACTS AND MITIGATION MEASURES

Standards of Significance

The impact analysis provided below is based on the following State CEQA Guidelines Appendix G thresholds of significance. A water supply impact is considered significant if implementation of the project would:

- 1) Result in the need for new systems or a substantial expansion or alteration to the local or regional water treatment or distribution facilities that would result in a physical impact to the environment.
- 2) Not have sufficient water supplies available to serve the project from existing entitlements and resources, thus resulting in the need for new or expanded entitlements.

Methodology

The analysis of water supply and infrastructure impacts contained in this subsection is based primarily on review of EBMUD's *Urban Water Management Plan 2005, Water Supply Management Program 2040 Plan*, and the *Water Treatment and Transmission Improvements Program Draft Environmental Impact Report (2006)*. Water supply and demand projections, as well as infrastructure conditions and needs, discussed in these documents were compared to potential impacts resulting from growth anticipated in association with the proposed project and whether those impacts would have a significant effect on the physical environment. Proposed General Plan policies that would reduce identified impacts are listed, as are mitigation measures that would further lessen impacts.

Impacts and Mitigation Measures

Increased Demand for Water Supplies and Water Supply Infrastructure (Standards of Significance 1 and 2)

Impact 4.12.5.1 Implementation of the General Plan Update, Three Corridor Specific Plan, and Zoning Code Update would require additional water supplies, as well as additional water supply infrastructure, to meet the projected water demands. This is considered a **less than significant** impact.

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General Plan Update and Three Corridors Specific Plan

Water service would continue to be supplied to the GPU Planning Area by EBMUD after implementation of the General Plan Update. Future development within the Planning Area consistent with land uses identified in the General Plan Update would result in an increase in water demand over current conditions. However, EBMUD can adequately meet its projected customer demands through the year 2030 during normal year conditions. EBMUD's water demand projections are based on a study conducted in 2000, *Districtwide Update of Water Demand Projections* (2000 Demand Study). As discussed in the EBMUD 2005 UWMP, the 2000 Demand Study reflects future land uses based on adopted general and specific plans in 1998. As shown in **Table 4.12.5-2** above, the 2005 UWMP identifies the 2000 Demand Study forecasts of customer demand of 281 mgd in 2030, which is reduced to 232 mgd to take into account projected savings from EBMUD's conservation and recycled water programs. The 2000 Demand Study would have used population projections from the City of Pinole 1995 General Plan, which was the City's adopted General Plan in 1998. The 1995 General Plan projected that the Pinole Planning Area would grow by 3,231 people over its 20-year planning period, from 27,069 people in 1990 to 30,300 people in the year 2010. Currently, the City of Pinole is built out and most large land holdings in the city have been developed. As such, under the proposed update to its General Plan, it is anticipated that the City of Pinole will have minimal growth in the future. The City does not anticipate expanding its Sphere of Influence (SOI) or annexing any land into the city in the foreseeable future. Due to the city's small supply of developable land, the updated General Plan and the Three Corridors Specific Plan direct the majority of the city's future growth to sites designated for mixed and multiple-family use in the San Pablo Avenue, Pinole Valley Road, and Appian Way corridors. The Three Corridors Specific Plan also identifies opportunity sites for infill mixed-use development along the city's commercial corridors in close proximity to transit and other amenities. As such, implementation of the Specific Plan could result in an additional 1,076 housing units in the city by 2030. Therefore, the total population of the city could increase from the current (2010) population of 20,100 to 23,875 by the General Plan buildout year of 2030 (2.89 persons per household x 1,076 housing units + existing population of 20,100 = 23,875 persons). This growth and development projection is even lower than that identified in the City of Pinole 1995 General Plan for the year 2010. Therefore, growth projections associated with the proposed General Plan Update and Three Corridors Specific Plan would be consistent with those used in EBMUD's 2000 Demand Study and it is anticipated that EBMUD would have adequate supplies to meet increased demand in the City of Pinole in normal years. Furthermore, EBMUD has indicated that it would be able to serve project sites under the proposed General Plan Update in the City of Pinole from existing water supplies (Rehnstrom, 2009).

EBMUD also indicated, however, that customers should plan for shortages in times of drought. Due to the continued decrease of EBMUD's Mokelumne River commensurate with increases in diversions from senior water rights holders upstream and required increases in downstream releases for the protection of fish, wildlife, and riparian habitat as part of settlement agreements in regulatory proceedings, the flexibility in EBMUD's operation to manage carry-over storage for multiple dry years will be reduced in the future. Therefore, unless additional water supply improvements are developed, years where rationing is implemented may increase.

As described in more detail under the Existing Setting subsection, EBMUD has identified several supplemental water supply initiatives to meet projected shortfall. Supplemental water supply projects, along with projected supplies from each project, are shown in **Table 4.12.5-5** below.

TABLE 4.12.5-5
EBMUD SUPPLEMENTAL WATER SUPPLY PROJECTS

Supplemental Supply Project	Projected Water Supply
Freeport Regional Water Project	112,000 AF/YR in single dry year 165,000 AF over three years in multiple-year drought
Bayside Groundwater Project (Phase 1)	1,120 AF/YR in each year of a three-year drought
Regional Desalination Projects	24,080 AF/YR
Northern California Water Transfers	Unknown
Sacramento Basin Groundwater Banking/Exchange	Unknown
Enlargement of Pardee Reservoir	51 mgd in each year of a three-year drought
Enlargement of Lower Bear Reservoir	4,500 AF/YR in wet or normal years 2,500 AF/YR in dry years
Mokelumne Inter-Regional Conjunctive Use Project (IRCUP)/San Joaquin Groundwater Banking/Exchange	Unknown

Source: EBMUD, 2005; EBMUD, 2009b

In addition to infrastructure required for the supplemental supply projects listed above, the provision of expanded water service to the City under the proposed General Plan Update and Three Corridors Specific Plan could require the expansion and development of new water infrastructure facilities, including water supply conveyance pipelines and treatment facilities. EBMUD has indicated that projects developed under the General Plan Update would more than likely be served from existing water treatment plant capacity (Rehnstrom, 2009). However, future development could require water main extensions in order to ensure adequate water supplies, fire flows, and system redundancy. Future development could also result in the need for pipeline or fire hydrant relocation, as well as off-site pipeline improvements (Kirkpatrick, 2007). Future development projects would be required to consult with the EBMUD New Business Office to determine cost and infrastructure needs for providing water service, including additional water treatment capacity or water conveyance pipelines. Therefore impacts to water supply and infrastructure are considered **less than significant**.

Zoning Code Update

Updates to the Zoning Code are intended to further clarify the types and forms of uses permitted under particular land use designations, but would not result in any development activities beyond that analyzed for the proposed General Plan Update. Therefore, the Zoning Code Update would have an impact similar to that for the General Plan Update as discussed above.

Proposed General Plan Policies and Action Items that Address Increased Demand for Water Supply and Water Supply Infrastructure

The proposed General Plan incorporates the following policies and actions that provide mitigation to minimize impacts associated with increased demand for water supplies and water supply infrastructure:

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Policy GM.2.1 Plan for Public Facility and Service Needs. Future development shall be planned based on public facility and service capacity, community-wide needs, sound citywide and neighborhood planning, and public improvement programming.

Action GM.2.2.1 Service Standards. Periodically monitor, review and update Pinole's service standards to maintain fire, police, parks, sewer, water, and flood control services within Pinole. The following standards will be used to guide decision making through the development review process.

Parks and Recreation

Parks: 3.0 acres of neighborhood or regional parks, or 5.0 acres of dedicated open space per 1,000 residents.

Fire

Pinole will endeavor to maintain capital facilities, equipment and staffing sufficient to maintain the following service level:

1. First Engine Company: 5-minute response time for emergency calls 90 percent of the time.
2. Water Requirements: 3,500 gallons per minute (gpm) minimum on initial response assignment.

Police

Pinole will strive to maintain capital facilities, equipment and staffing to maintain a 5-minute response time for emergency calls.

Sanitary Facilities

Pinole will continue to work with Hercules and the West County Wastewater District to monitor, manage and maintain Pinole's wastewater collection and treatment system and to upgrade as necessary to meet permit requirements and capacity needed for current flow amounts and projected future growth.

Water

Verification by East Bay Municipal Utility District (EBMUD) that adequate water supply and quality can be provided and shall be required for approval of new development.

Flood Control

1. Capacity: Flood protection facilities should be designed to contain a 100-year flood event, as determined by the Federal Emergency Management Agency (FEMA).

2. Climate Change: Flood protection improvements should anticipate the probable effect of climate changes as they relate to sea level.
3. Upstream Improvements: Coordinate with EBMUD to plan for a detention/diversion basin south of the city to meter peak period flows in Pinole Creek.

Policy GM.2.2 Costs of New Development. Ensure that any new development in the city pays its share of the costs associated with the provision of facilities for fire, police, schools, parks, sanitary facilities, water and flood control necessitated by it, by attaching project-specific mitigation requirements as conditions of approval.

Action GM.2.2.3 Growth Management Capital Projects. Include capital projects, generally showing complete project cost and intended project phasing, in Pinole's annual Capital Improvement Program which are necessary to:

1. Extend services to new development.
2. Maintain traffic standards established in the General Plan.
3. Address the City's responsibilities under the adopted West Contra Costa Action Plan.
4. Maintain standards for fire, police, parks, sewer, water and flood control established in Pinole's Growth Management Element. (Note: See Measure J program relating to Capital Improvement Program.)

Action GM.2.2.4 Development Review. Participate in regional review of development proposals that have the potential to impact regional facilities, resources and services.

1. Circulate environmental documents to surrounding jurisdictions for review and comment.
2. Submit to the West Contra Costa County Technical Advisory Committee proposed revision(s) to the West County Action Plan to mitigate impacts associated with proposed General Plan amendments over the threshold specified in the adopted West County Action Plan.
3. Participate in the conflict resolution process established by the CCTA in the Growth Management Implementation Documents as a means of resolving disputes between neighboring jurisdictions related to the Action Plan and other Measure C/J transportation-related issues.
4. Ensure that all new development bears a fair share cost of mitigating impacts on the City's ability to provide essential services.

Policy GM.2.3 Development Costs. Services and capital improvements necessary to serve new development should be installed and funded by the project.

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Action GM.2.3.1	Where feasible, development should provide improvements necessary to ensure adequate service to the project and create an adequate mechanism for ensuring ongoing funding for necessary services.
Action GM.2.3.2	Where improvements are needed to serve multiple projects or existing development, the City will maintain a development mitigation program to collect the proportionate share of a development's contribution to capital and service costs associated with regional and local facilities and services needed to support the development. The development mitigation program may include, but not be limited to: <ol style="list-style-type: none">1. Development Impact Fees;2. User Fees;3. Quimby Act Fees or other Park and Recreation Fees;4. Transportation Management Fees; and5. Connection Fees.
Policy CS.5.1	The City will make improvements to the water supply system to maintain system capability and reliability.
Policy CS.5.2	The City will continue to promote the conservation of water by all users.
Action CS.5.2.1	The City shall investigate establishing new guidelines requiring water use restrictions for irrigation systems and use of drought-resistant and native plants in landscaping.
Policy OS.8.1	Manage and encourage water sustainably through planning, conservation, reclamation and recycling.
Action OS.8.1.1	The City will collaborate with local, regional and state water suppliers and water resource managers to comprehensively plan for a sustainable water supply.
Action OS.8.1.2	Will coordinate water resource management planning with other conservation planning efforts, such as open space and park planning, and creek restoration. Action OS.8.1.3 Continue to work with the East Bay Municipal Water District to create a master plan for reclaimed water infrastructure (a "purple pipe" system) in Pinole.
Action OS.8.1.6	Explore mechanisms with EBMUD to install infrastructure to transport existing or future supplies of reclaimed water ("purple pipe") or pay an in-lieu fee equal to the cost of installation, to be used toward the implementation of the City-wide system.
Policy OS.8.2	Low Impact Development. Integrate Low Impact Development (LID) practices in all new development to reduce, treat, infiltrate and manage runoff flows caused by storms, urban runoff and impervious surfaces.

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Action OS.8.2.1	Pursue Municipal Code changes that support LID development standards.
Policy OS.8.3	Groundwater Recharge. Encourage natural groundwater recharge and identify groundwater recharge opportunities to combine groundwater recharge with habitat protection and recreational land uses, as part of other conservation planning efforts such as open space and park planning and creek restoration, where appropriate.
Policy OS.8.7	Interagency Water Resource Projects. Help implement interagency projects, such as expansion of wastewater treatment capacity, joint development of new treatment or distribution infrastructure, water exchanges, and reclaimed water sales with local, regional and state water suppliers and water resource managers to ensure a sustainable water supply.
Action OS.8.7.3	Work cooperatively with applicable agencies to encourage water conservation by disseminating education and outreach materials and providing local water conservation incentives.
Action OS.8.7.4	Work cooperatively with other wastewater system operators to identify and implement projects that result in reuse of treated wastewater, particularly in landscaping and public facilities, consistent with public health requirements.
Policy SE.9.1	Encourage policies to prudently manage water resources to sustain plant and animal life, support urban activities and protect public health and safety.
Action SE.9.1.1	Where feasible, institute a water conservation program for City of Pinole facilities; for example, installation of waterless urinals and low-flow sinks and showers.
Action SE.9.1.2	Encourage the use of recycled water and drought-resistant landscaping in Pinole facilities, public roadway landscape, and new development.
Action SE.9.1.3	Establish incentives for development projects that achieve a 20% reduction in water use over baseline of 1995.
Action SE.9.4.1	Conduct a water reclamation study for using reclaimed wastewater for irrigation.
Action SE.9.4.2	Establish criteria and standards to permit the safe and effective use of gray water (on-site water recycling). Review, and appropriately revise, without compromising health or safety, other building code requirements that might prevent the use of such systems.
Action SE.9.4.3	Create an inventory of non-potable water uses within the jurisdiction that could be served with recycled water.
Action SE.9.4.4	Establish a water conservation plan that may include such policies and actions as reducing per capita water consumption, restricting landscape watering, performance standards for irrigation equipment and water

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fixtures, and requirements that increased demand from new construction be offset with reductions so that there is no net increase in water use.

Action SE.9.4.5 Implement a public outreach campaign to promote water conservation.

Action SE.9.5.3 Pinole will install water-efficient landscapes and irrigation, including planting drought-tolerant plants and native species, covering exposed dirt with moisture-retaining mulch, using advanced technology such as moisture-sensing irrigation controls, and promoting urban agriculture by installing edible landscapes that provide local food.

In addition, guidelines in Chapter 7.0, *Private Realm Standards and Design Guidelines*, and Chapter 8.0, *Public Realm Standards and Design Guidelines*, of the Three Corridors Specific Plan encourage the use of native, drought-tolerant species in landscaping designs as well as the limiting of turf, the use of custom irrigation systems that conserve water, and the use of recycled water to reduce water consumption. The reader is also referred to Chapter 9.0, *Infrastructure and Public Facilities*, of the Specific Plan, which confirms that new development must “pay for itself.” Therefore, if new development proposed within the Specific Plan Area causes an increased demand on the system, the developer would be responsible for paying for the necessary system improvements (new distribution pipelines, water supply or storage) in order to meet the increased demand and/or higher flow requirements.

Implementation of the above General Plan Update policies and actions, as well as Specific Plan standards and guidelines, would ensure that the new development under the General Plan Update would not proceed without adequate water supply and necessary water supply infrastructure. Particularly, Action GM.2.2.1 establishes service standards that require new development projects to obtain verification from EBMUD that adequate water supply and quality can be provided. Policy GM.2.2 requires the City to attach project-specific mitigation requirements as conditions of approval to ensure that new development pays its share of the costs associated with the provision of facilities for water services. General Plan Update policies also encourage water conservation and the use of recycled water in order to decrease demands on EBMUD potable water supply. Given these conditions, this impact is considered **less than significant**.

Mitigation Measures

None required.

4.12.5.4 CUMULATIVE IMPACT ANALYSIS

Cumulative Setting

The cumulative water supply setting includes the water service area of EBMUD, which consists of 325 square miles in portions of Contra Costa and Alameda counties. The service boundaries for the EBMUD drinking water system extends from Crockett on the north to San Lorenzo on the south (including the cities of Oakland and Berkeley). EBMUD's boundaries within Contra Costa County include the cities of Danville, El Cerrito, Hercules, Lafayette, Moraga, Orinda, Pinole, Richmond, and an Pablo; portions of the cities of Pleasant Hill, San Ramon, and Walnut Creek; and unincorporated communities of Alamo, Crockett, Diablo, El Sobrante, Kensington, and Rodeo. According to the *Final Water and Wastewater Services Municipal Services Review for West Contra Costa County* (Dudek, 2008), the 2008 estimated population for EBMUD's service area in Contra Costa County was 460,000 residents. The population served by EBMUD within

Contra Costa County is expected to reach 570,000 by 2030, with an average annual growth rate of 0.8 percent (Dudek, 2008).

The cumulative setting includes all existing, planned, proposed, approved, and reasonably foreseeable development within the EBMUD service area that currently places demand on EBMUD water supplies and infrastructure or is expected to place demand on them in the future.

Cumulative Impacts and Mitigation Measures

Cumulative Water Supply and Water Supply Infrastructure Impacts

Impact 4.12.5.2 Implementation of the proposed General Plan Update and its associated project components would contribute to the cumulative demand for water supply and associated infrastructure in EBMUD's service area. This is considered a **cumulatively considerable** impact.

As stated under Impact 4.12.5.1 above, EBMUD has adequate water supplies to serve its service area in normal or wet years; however supplemental water supplies would be required during dry years. Future development in the Pinole Planning Area, as well as other existing, planned, proposed, approved, and reasonably foreseeable development within the EBMUD service area, would place further demands on EBMUD's supplies and could result in greater cumulative shortages. EBMUD has identified several supplemental water supply initiatives to meet projected shortfall, as shown in **Table 4.12.5-5** above. Furthermore, development in the Pinole Planning Area, along with other development in the service area, would require the expansion and development of new water infrastructure facilities, including water supply conveyance pipelines and treatment facilities. All future development projects in the EBMUD service area would be required to consult with the EBMUD New Business Office to determine cost and infrastructure needs for providing water service, including additional water treatment capacity or water conveyance pipelines. The documented and potential physical environmental effects of these facilities are detailed under Impact 4.12.5.1 above.

Proposed General Plan Policies and Action Items that Cumulative Water Supply and Water Supply Infrastructure

The proposed General Plan incorporates the following policies and actions that provide mitigation to minimize the proposed project's contribution to cumulative water supply and infrastructure impacts. Since these policies and action items have been described in detail in prior impact discussions for this section, the following is limited to only listing the policy and action item numbers.

Growth Management Element

Policy GM.2.1, Action GM.2.2.1, Policy GM.2.2, Action GM.2.2.3, Action GM.2.2.4, Policy GM.2.3, Action GM.2.3.1, Action GM.2.3.2

Community Services and Facilities Element

Policy CS.5.1, Policy CS.5.2, Action CS.5.2.1

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Natural Resources and Open Space Element

Policy OS.8.1, Action OS.8.1.1, Action OS.8.1.2, Action OS.8.1.3, Action OS.8.1.6, Policy OS.8.2, Action OS.8.2.1, Policy OS.8.3, Policy OS.8.7, Action OS.8.7.3, Action OS.8.7.4

Sustainability Element

Policy SE.9.1, Action SE.9.1.1, Action SE.9.1.2, Action SE.9.1.3, Action SE.9.4.1, Action SE.9.4.2, Action SE.9.4.3, Action SE.9.4.4, Action SE.9.4.5, Action SE.9.5.3

In addition, guidelines in Chapter 7.0, *Private Realm Standards and Design Guidelines*, and Chapter 8.0, *Public Realm Standards and Design Guidelines*, of the Three Corridors Specific Plan encourage the use of native, drought-tolerant species in landscaping designs as well as the limiting of turf, the use of custom irrigation systems that conserve water, and the use of recycled water to reduce water consumption. The reader is also referred to Chapter 9.0, *Infrastructure and Public Facilities*, of the Specific Plan, which confirms that new development must “pay for itself.” Therefore, if new development proposed within the Specific Plan Area causes an increased demand on the system, the developer would be responsible for paying for the necessary system improvements (new distribution pipelines, water supply or storage) in order to meet the increased demand and/or higher flow requirements.

Implementation of the above General Plan Update policies and actions, as well as Specific Plan standards and guidelines, would ensure that new development under the General Plan Update would not proceed without adequate water supply and necessary water supply infrastructure. Additionally, policies and action items would reduce the General Plan Update's contribution to cumulative water supply and infrastructure impacts by encouraging water conservation and the use of recycled water in order to decrease demands on EBMUD's potable water supply. This impact is considered to have a **less than cumulatively considerable** impact.

Mitigation Measures

None required.

4.12.6 WASTEWATER SERVICE

4.12.6.1 EXISTING SETTING

The City of Pinole Public Works Department and the West County Wastewater District (WCWD) provide public wastewater conveyance, treatment, and disposal services within the GPU Planning Area.

City of Pinole Public Works Department

The City of Pinole Public Works Department provides public wastewater conveyance, disposal, and treatment via the Pinole/Hercules Water Pollution Control Plant for approximately 14,300 properties within the cities of Pinole and Hercules.

Wastewater Facilities and Infrastructure

The City of Pinole's wastewater infrastructure consists of a collection and conveyance system, shared ownership of the Pinole/Hercules Water Pollution Control Plant a shallow water outfall, and a deep water outfall shared with the Rodeo Sanitary District (Dudek, 2008).

Pinole/Hercules Water Pollution Control Plant

The Pinole/Hercules Water Pollution Control Plant (WPCP) is located at the foot of Tennent Avenue in the City of Pinole. The cities of Hercules and Pinole jointly share in this facility; the City of Pinole is the designated operator. The WPCP was originally built in 1955 as a primary treatment facility and has since undergone two major expansions and several modifications. In 1972 the WPCP was upgraded from a primary to a secondary treatment facility, with 2 million gallons per day (mgd) flow capacity (City of Pinole, 2010). In 1985, the WPCP was again upgraded to its current capacity of 4.06 mgd average dry weather flow (ADWF) and peak wet weather flow (PWWF) of 10.3 mgd. Of the 4.06 mgd capacity, 1.79 mgd is allocated to Pinole and 2.27 mgd is allocated to Hercules. However, the improvements that were made in the 1980s significantly underestimated solids loading. This imbalance in processing solids has reduced the actual capacity of the WPCP from 4.06 mgd to 3.2 mgd. The plant process (activated sludge) removes approximately 97 percent of the waste from the water. The water is then disinfected with hypochlorite. Secondary effluent is conveyed to the Rodeo Sanitary District (RSD) Water Pollution Control Plant where it is combined with RSD effluent and discharged from a deep water outfall in Rodeo that discharges into San Pablo Bay (Dudek, 2010). When the combined flow of the WPCP and RSD exceed the capacity of the deep water outfall or when wet weather flows exceed the 10 mgd capacity of the WPCP, effluent is discharged from a shallow water outfall located at the WPCP.

Currently, average dry weather flows at the WPCP are 3.0 mgd, with 1.60 mgd from Hercules and 1.40 mgd from Pinole (JPA, 2010). However, the plant has recently experienced wet weather flows of approximately 20 mgd, which exceeds permitted capacity (see **Table 4.12.6-1**).

**TABLE 4.12.6-1
ACTUAL FLOW DATA PHWWTP**

	Currently	As Designed
Dry Weather Flow	3.0 mgd	4.06 mgd
Wet Weather Flow	20 mgd	10.3 mgd

Source: JPA, 2010

As discussed under the Regulatory Framework subsection below, discharge from the WPCP is regulated by the San Francisco Bay Regional Water Quality Control Board (RWQCB) under Order R2-2007-0024 issued in March of 2007. The order mandates corrective measures to increase the wet weather treatment capacity at the WPCP and to correct issues related to the effluent discharge from the shallow water outfall at the WPCP. The San Francisco Bay RWQCB has set a compliance time schedule requiring that all facilities be completed and online by June 1, 2016. As a result, the cities of Pinole and Hercules will be requesting a permit that would increase the maximum daily wet weather treatment capacity of the WPCP. The City of Pinole will also request that the RWQCB consider including a permit term that would allow an instantaneous wet weather flow capacity of 20 mgd to accommodate extremely high rainfall events (AECOM, 2010).

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In order to increase wet weather flow capacity at the WPCP and comply with San Francisco Bay RWQCB Order R2-2007-0024, the City is currently in the process of analyzing ways to meet the Board's order. The *Draft Environmental Impact Report, Pinole-Hercules Water Pollution Control Plant Improvement Project*, completed by AECOM in March of 2010, analyzes two options for improving the WPCP – a larger effluent pipe to the RSD and Pinole-only flows at the existing plant (AECOM, 2010).

Collection and Conveyance System

The City's wastewater collection system includes 46.5 miles of sewer pipelines and two lift stations (Dudek, 2008). The City provides preventive maintenance on the system, including hydroflushing and mechanical cleaning and inspecting for root intrusion, pipe integrity, and removal of foreign objects. The City has issues with inflow and infiltration due to the age of the sewer mains in the older parts of the City's collection system (Dudek, 2008).

Shallow and Deep Water Outfalls

Pinole discharges treated wastewater through a deep water outfall that is shared with the City of Hercules and RSD. The outfall is located in Rodeo and discharges into San Pablo Bay. Management and use of the outfall is governed by a Joint Powers Agreement (JPA) that the three agencies entered into in 1977. RSD manages the facility, and the agencies share proportionally in administrative and capital costs based on peak hourly wet weather flows (Dudek, 2008).

In addition to the deep water outfall, there is a shallow water outfall at the WPCP. This outfall is used when the combined flow of the WPCP and RSD exceed the capacity of the deep water outfall, when the deep water discharge is being repaired, or when wet weather flows exceed the 10 mgd capacity of the WPCP. As previously mentioned, the City is required to complete tasks outlined in the RWQCB order to prevent discharge to the shallow water outfall (Dudek, 2008).

West County Wastewater District

The West County Wastewater District (WCWD) is a publicly owned wastewater agency providing sewage collection, treatment, and disposal services to a 16.9 square mile service area that includes the City of San Pablo, all of the northern subdivisions of Richmond, portions of the City of Pinole, the communities of El Sobrante, East Richmond Heights, Tara Hills, Rollingwood and Bayview, and portions of the unincorporated county (WCWD, 2010). Within the GPU Planning Area, the WCWD provides service for 0.4 square miles of the City of Pinole and the unincorporated community of El Sobrante and Tara Hills.

The WCWD also provides contract services to the Crockett Community Services District for lift station maintenance, sanitary sewer maintenance, emergency response, and engineering support for the Crockett wastewater collection system. WCWD maintains a large County-owned stormwater pump station and the West County Justice Center wastewater pump station by contract with the County (Dudek, 2008).

Wastewater Facilities and Infrastructure

WCWD's infrastructure consists of a wastewater collection and conveyance system and treatment facilities, as well as disposal facilities owned by the West County Agency, a joint powers authority between WCWD, the City of Richmond, and the Richmond Municipal Sewer

District (RMSD). The joint powers authority was formed in 1977 for the purpose of constructing and maintaining effluent and sludge disposal facilities, including the Bay outfall, 5-mile pipeline, dechlorination facilities, biosolids drying beds, and laboratory facilities.

Water Pollution Control Plant

WCWD's Water Pollution Control Plant is located at 2377 Garden Tract in North Richmond. The plant has a permitted dry weather capacity of 12.5 mgd and 21 mgd wet weather capacity; the current average dry weather flows are approximately 7.9 mgd and the average wet weather flows are 14 mgd (Dudek, 2008). The WCWD provides approximately 3 mgd of secondary effluent to EBMUD's North Richmond Water Reclamation Facility (NRWRP), where it receives tertiary treatment and is used in the cooling towers at Chevron's refinery or for irrigation at the Richmond Country Club. Secondary effluent that is not used at the NRWRP is conveyed to the Richmond plant where effluent from both plants is dechlorinated and discharged to San Francisco Bay through a deep water outfall (Dudek, 2008).

Collection and Conveyance System

The WCWD wastewater collection system includes 242.3 miles of gravity sewer pipelines and 11 miles of force mains. The City of Pinole constituted a small portion of the District's service area. As the WCWD's service area is characterized by hilly terrain, the collection system operates with 18 pump stations and gravity flow. WCWD's collection system includes approximately 117 miles of 6-inch clay pipe, much of which was constructed prior to 1970. The concrete used to seal the old joints has been gradually decomposing, leading to increased infiltration and inflow. Therefore, the WCWD is replacing 6-inch pipelines with pipe with an 8-inch minimum diameter and using a longer-lasting joint material, thus reducing the potential for sanitary sewer overflows and infiltration and inflow (Dudek, 2008).

The WCWD collection system within the Planning Area consists of the Tara Hills Pump Station, Pinole Lift Station, Fitzgerald Lift Station, and several miles of gravity sewer lines. The Tara Hills Pump Station and associated gravity sewer mains serve the portion of the Planning area located north of Interstate 80 (I-80). The Pinole Lift Station and Fitzgerald Lift Station and associated sewer gravity mains serve the portion of the Planning Area located south of I-80. The approximate average dry weather flow (ADWF) from the WCWD pump stations located within the Planning Area is 0.27 mgd (City of Pinole, 2009a and 2009b).

Disposal Facilities

Treated wastewater from the WCWD wastewater plant that is conveyed to the Richmond plant is combined with the effluent from the Richmond plant, dechlorinated, and discharged through a combined 72-inch diameter deep water outfall into central San Francisco Bay (Dudek, 2008).

4.12.6.2 REGULATORY FRAMEWORK

Federal

Clean Water Act

The Clean Water Act (CWA) is the primary federal legislation governing surface water quality protection. The statute employs a variety of regulatory and nonregulatory tools to sharply reduce direct pollutant discharges into waterways, finance municipal wastewater treatment facilities, and manage polluted runoff. These tools are employed to achieve the broader goal of

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restoring and maintaining the chemical, physical, and biological integrity of the nation's waters so that they can support "the protection and propagation of fish, shellfish, and wildlife and recreation in and on the water." Pollutants regulated under the CWA include "priority" pollutants, including various toxic pollutants; "conventional" pollutants, such as biochemical oxygen demand (BOD), total suspended solids (TSS), fecal coliform, oil and grease, and pH; and "non-conventional" pollutants, including any pollutant not identified as either conventional or priority. The CWA regulates both direct and indirect discharges (USEPA, 2010).

National Pollutant Discharge Elimination System

As authorized by Section 402 of the Clean Water Act, the National Pollutant Discharge Elimination System (NPDES) Permit Program controls water pollution by regulating point sources that discharge pollutants into waters of the United States. It is the responsibility of the Regional Water Quality Control Boards to preserve and enhance the quality of the state's waters through the development of water quality control plans and the issuance of waste discharge requirements (WDRs). WDRs for discharges to surface waters also serve as NPDES permits (SWRCB, 2010).

Under Phase I, which started in 1990, the Regional Water Quality Control Boards have adopted NPDES stormwater permits for medium (serving between 100,000 and 250,000 people) and large (serving more than 250,000 people) municipalities. As part of Phase II, the State Water Resources Control Board adopted a General Permit for the Discharge of Storm Water from Small MS4s (WQ Order No. 2003-0005-DWQ) to provide permit coverage for smaller municipalities, including non-traditional small MS4s, which are governmental facilities such as military bases, public campuses, and prison and hospital complexes. The MS4 permits require the discharger to develop and implement a stormwater management plan/program with the goal of reducing the discharge of pollutants to the maximum extent practicable (MEP). MEP is the performance standard specified in Section 402(p) of the Clean Water Act. The management programs specify what best management practices (BMPs) will be used to address certain program areas. The program areas include public education and outreach, illicit discharge detection and elimination, construction and post-construction, and good housekeeping for municipal operations (SWRCB, 2010).

On September 2, 2009, the SWRCB adopted a new NPDES Construction General Permit that will become effective on July 1, 2010, and will replace Order 99-08-DWQ. The new permit has some significantly different requirements from the existing permit. Under the existing permit, dischargers who implement BMPs to the best of their ability are deemed to be in compliance with the permit. The new permit, however, sets quantitative standards that must be achieved, regardless of the BMPs that are implemented. In addition, whereas the existing permit relies on discharger-developed stormwater pollution prevention plans (SWPPPs) as its primary compliance mechanism, the effect of SWPPPs is much more limited under the new permit. Significant changes and additions to the new permit include a new risk-based permitting approach, numeric action levels and numeric effluent limitations, post-construction standards, increased BMP requirements, rain event action plans, increased monitoring and reporting requirements, certification requirements for key project personnel, and new penalties for violations of permit conditions.

General Pretreatment Regulations

Another type of discharge that is regulated by the CWA is discharge that goes to a publicly owned treatment works (POTW). POTWs collect wastewater from homes, commercial buildings, and industrial facilities and transport it via a collection system to the treatment plant. Here, the

POTW removes harmful organisms and other contaminants from the sewage so it can be discharged safely into the receiving stream. Generally, POTWs are designed to treat domestic sewage only. However, POTWs also receive wastewater from industrial (non-domestic) users. The General Pretreatment Regulations establish responsibilities of federal, state, and local government, industry, and the public to implement pretreatment standards to protect municipal wastewater treatment plants from damage that may occur when hazardous, toxic, or other wastes are discharged into a sewer system and to protect the quality of sludge generated by these plants. Discharges to a POTW are regulated primarily by the POTW itself, rather than the state/tribe or USEPA (USEPA, 2010).

State

Porter-Cologne Water Quality Act

In 1969, the California Legislature enacted the Porter-Cologne Water Quality Control Act to preserve, enhance, and restore the quality of the state's water resources. The act established the State Water Resources Control Board and nine Regional Water Quality Control Boards as the principal state agencies with the responsibility for controlling water quality in California. Under the act, water quality policy is established, water quality standards are enforced for both surface water and groundwater, and the discharges of pollutants from point and nonpoint sources are regulated. The act authorizes the State Water Resources Control Board to establish water quality principles and guidelines for long-range resource planning including groundwater and surface water management programs and control and use of recycled water (DOE, 2010).

State Water Resources Control Board

Created by the State Legislature in 1967, the five-member State Water Resources Control Board (SWRCB) allocates water rights, adjudicates water right disputes, develops statewide water protection plans, establishes water quality standards, and guides the nine Regional Water Quality Control Boards located in the major watersheds of the state. The joint authority of water allocation and water quality protection enables SWRCB to provide comprehensive protection for California's waters (SWRCB, 2010).

SWRCB is responsible for implementing the CWA and issues NPDES permits to cities and counties through Regional Water Quality Control Boards. The GPU Planning Area is located within a portion of the state that is regulated by the San Francisco Bay RWQCB.

Waste Discharge Requirements Program

In general, the Waste Discharge Requirements (WDR) Program (sometimes also referred to as the Non Chapter 15 (Non 15) Program) regulates point discharges that are exempt pursuant to Subsection 20090 of Title 27 and not subject to the federal Water Pollution Control Act. Exemptions from Title 27 may be granted for nine categories of discharges (e.g., sewage, wastewater) that meet, and continue to meet, the preconditions listed for each specific exemption. The scope of the WDR Program also includes the discharge of wastes classified as inert, pursuant to Section 20230 of Title 27. Several SWRCB programs are administered under the WDR Program, including the Sanitary Sewer Order and recycled water programs (SWRCB, 2010).

Sanitary Sewer Order

A sanitary sewer overflow (SSO) is any overflow, spill, release, discharge, or diversion of untreated or partially treated wastewater from a sanitary sewer system. SSOs often contain high levels of

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suspended solids, pathogenic organisms, toxic pollutants, nutrients, oil, and grease and can pollute surface and ground waters, threaten public health, adversely affect aquatic life, and impair the recreational use and aesthetic enjoyment of surface waters. To provide a consistent, statewide regulatory approach to address SSOs, SWRCB adopted Statewide General Waste Discharge Requirements for Sanitary Sewer Systems, Water Quality Order No. 2006-0003 (Sanitary Sewer Order) on May 2, 2006. The Sanitary Sewer Order requires public agencies that own or operate sanitary sewer systems to develop and implement sewer system management plans and report all SSOs to the State Water Resources Control Board's online SSO database known as the California Integrated Water Quality System (CIWQS). All public agencies that own or operate a sanitary sewer system that comprises more than one mile of pipes or sewer lines which conveys wastewater to a publicly owned treatment facility must apply for coverage under the Sanitary Sewer Order (SWRCB, 2010). Therefore, both the City of Pinole and the West County Wastewater District are required to report all sanitary sewer overflows to the CIWQS and to prepare Sewer System Management Plans (SSMP) in accordance with the requirements of Order No. 2006-0003.

- **City of Pinole** – In 2008, the City of Pinole reported nine SSOs, the largest of which released 4,500 gallons of wastewater (CIWQS, 2010). Pinole has prepared an SSMP that includes an Emergency SSO Response Plan and a Pumping and Collection Systems Reliability and Management Plan. Emergency response personnel from the City's Public Works Department are on call 24 hours per day, 7 days a week (Dudek, 2008).
- **WCWD** – In 2009, the WCWD reported 14 SSOs, the largest of which released 5,000 gallons of wastewater (CIWQS, 2010). WCWD is preparing its SSMP, which includes a Fats, Oils and Grease Control Program that is expected to reduce the number of blockages and retain capacity within the sewer system. WCWD has an Overflow Emergency Response Plan that includes an on-call response team. The WCWD is also reducing the risk of future SSOs through its sewer ordinance, which requires testing of building sewers and sewer laterals under specific circumstances. Sewers and laterals that do not pass the prescribed tests must be repaired or replaced per the WCWD's policies (Dudek, 2008).

Recycled Water Policy

To establish uniform requirements for the use of recycled water, SWRCB adopted a statewide Recycled Water Policy on February 3, 2009. The purpose of the policy is to increase the use of recycled water from municipal wastewater sources that meets the definition in Water Code Section 13050(n), in a manner that implements state and federal water quality laws. The policy describes permitting criteria that are intended to streamline the permitting of the vast majority of recycled water projects. The intent of this streamlined permit process is to expedite the implementation of recycled water projects in a manner that implements state and federal water quality laws while allowing the Regional Water Quality Control Boards to focus on projects that require substantial regulatory review due to unique site-specific conditions (SWRCB, 2010).

Statewide General Permit for Landscape Irrigation Uses of Recycled Water

In July 2009, the State Water Resources Control Board adopted General Waste Discharge Requirements for Landscape Irrigation Uses of Municipal Recycled Water (General Permit). The intent of the law is to develop a uniform interpretation of state standards to ensure the safe, reliable use of recycled water for landscape irrigation uses, consistent with state and federal water quality law, and for which the California Department of Public Health has established uniform statewide standards. The law is also intended to reduce costs to producers and users of recycled water by streamlining the permitting process for using recycled water for landscape irrigation (SWRCB, 2010).

Department of Public Health

The California Department of Public Health (DPH), formerly the Department of Health Services, is responsible for establishing criteria to protect public health in association with recycled water use. The criteria issued by DPH are found in the California Code of Regulations, Title 22, Division 4, Chapter 3, entitled Water Recycling Criteria. Commonly referred to as Title 22 Criteria, the criteria contain treatment and effluent quality requirements that vary based on the proposed type of water reuse. Title 22 sets bacteriological water quality standards on the basis of the expected degree of public contact with recycled water. For water reuse applications with a high potential for the public to come into contact with the reclaimed water, Title 22 requires disinfected tertiary treatment. For applications with a lower potential for public contact, Title 22 requires three levels of secondary treatment, basically differing by the amount of disinfectant required (South Bay Water Recycling, 2010).

Title 22 also specifies the reliability and redundancy for each recycled water treatment and use operation. Treatment plant design must allow for efficiency and convenience in operation and maintenance and provide the highest possible degree of treatment under varying circumstances. For recycled water piping, DPH has requirements for preventing backflow of recycled water into the public water system and for avoiding cross-connection between the recycled and potable water systems (South Bay Water Recycling, 2010).

DPH does not have enforcement authority for the Title 22 criteria; instead the RWQCBs enforce them through enforcement of their permits containing the applicable criteria (CWRTF, 2003).

Regional

San Francisco Bay Regional Water Quality Control Board

The GPU Planning Area is within the jurisdiction of the San Francisco Bay RWQCB. Wastewater generators must obtain a permit from the San Francisco Bay RWQCB to discharge their wastewater. Pursuant to the federal Clean Water Act and California's Porter-Cologne Water Quality Control Act as discussed above, the San Francisco Bay RWQCB regulates wastewater discharges to surface waters, like San Francisco Bay and San Pablo Bay, through the NPDES program. Stormwater is also subject to NPDES regulations, but it is regulated separately. Under California law, the San Francisco Bay RWQCB requires WDRs for some discharges in addition to those subject to NPDES permits. For example, the San Francisco Bay RWQCB issues WDRs for wastewater recycled for reuse and wastewater discharged to land, including on-site treatment systems (RWQCB, 2010).

Order No. R2-2007-0024 – Waste Discharge Requirements for the Pinole-Hercules Water Pollution Control Plant

In March 2007, the San Francisco Bay RWQCB issued Order No. R2-2007-0024 permitting discharge from the WPCP. The City of Pinole is the named discharger. The order includes requirements that Pinole undertake corrective measures to increase dry and wet weather capacity at the WPCP in order to eliminate blending at the deep water outfall and prevent discharge at the shallow outfall. As a 50 percent owner, the City of Hercules is responsible for assisting Pinole as needed and cost sharing in these requirements.

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Order No. R2-2008-0004 – Revised Tentative CDO Requiring West County Agency, West County Wastewater District, the City of Richmond, and the Richmond Municipal Sewer District No. 1 to Cease and Desist Discharging Wastewater in Violation of Requirements to Waters of the State

In January 2008, the San Francisco Bay RWQCB adopted Order No. R2-2008-0004, a Revised Tentative Cease and Desist Order, with effluent limitations that the WCWD and other agencies will have to meet by 2016. The order includes time schedules for compliance; capital improvements may not be necessary if compliance can be met through best management practices and other efforts.

Local

Pinole Municipal Code

Chapter 13.05, Regulation of Waste Discharge, of the City of Pinole Municipal Code sets forth uniform requirements for contributors to the wastewater collection and treatment system of the WPCP and enables the City to comply with all applicable state and federal laws required by the Clean Water Act and the General Pretreatment Regulations, which are described above.

City of Hercules Sewer Lateral Ordinance

On May 13, 2010 the City of Hercules adopted a Sewer Lateral Ordinance (No. 457). The purposes of this ordinance are (1) to provide for operation and maintenance of the City's sewer system in a reliable and serviceable condition, (2) to eliminate or minimize sewage overflows by eliminating or minimizing stoppages and reducing sources of infiltration and inflow in the City's sewer system, (3) to comply with applicable legal requirements pertaining to the City's sewer system and (4) to protect the public health and safety by establishing and providing a mechanism for enforcing performance standards for private sewer laterals that connect or are connected to a City Public Sewer Main. The requirements to obtain a Sewer Lateral Certificate of Compliance are to act in accordance with the Sewer Lateral Ordinance Requirements.

Impacts and Mitigation Measures

Standards of Significance

The impact analysis provided below is based on the following State CEQA Guidelines Appendix G thresholds of significance. A wastewater service impact is considered significant if implementation of the project would:

- 1) Exceed wastewater treatment requirements of the applicable Regional Water Quality Control Board.
- 2) 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.
- 3) Result in a determination by the wastewater treatment provider that serves or may serve the project that it has inadequate capacity to serve the project's projected demand, in addition to the provider's existing commitments.

Methodology

The analysis of wastewater service impacts contained in this subsection is based primarily on consultation with the City of Pinole Public Works Department and the West County Wastewater District, as well as review of municipal service reviews prepared for the Contra Costa Local Agency Formation Commission. Future wastewater flow projections, as well as infrastructure conditions and needs, discussed in these documents were compared to potential impacts resulting from growth anticipated in association with the proposed project and whether those impacts would have a significant effect on the physical environment. Proposed General Plan policies that would reduce identified impacts are listed, as are mitigation measures that would further lessen impacts.

Impacts and Mitigation Measures

Increased Demand for Wastewater Service (Standards of Significance 2 and 3)

Impact 4.12.6.1 Implementation of the General Plan Update, Three Corridor Specific Plan, and Zoning Code Update would increase wastewater flows and demand for sanitary sewer facilities. Increased flows could exceed the capacity of the wastewater conveyance, treatment, and disposal systems of the City of Pinole Public Works Department and the West County Wastewater District. This is considered a **less than significant** impact.

General Plan Update and Three Corridors Specific Plan

The City of Pinole Public Works Department and the West County Wastewater District provide public wastewater conveyance, treatment, and disposal services within the Planning Area. Currently, the City of Pinole is built out, and most large land holdings in the city have been developed. As such, under the proposed update to its General Plan, it is anticipated that the City of Pinole will have minimal growth in the future. The City does not anticipate expanding its Sphere of Influence (SOI) or annexing any land into the city in the foreseeable future. Due to the city's small supply of developable land, the updated General Plan and the Three Corridors Specific Plan direct the majority of the city's future growth to sites designated for mixed and multiple-family use in the San Pablo Avenue, Pinole Valley Road, and Appian Way corridors. The Three Corridors Specific Plan also identifies opportunity sites for infill mixed-use development along the city's commercial corridors in close proximity to transit and other amenities. As such, implementation of the Specific Plan could result in an additional 1,076 housing units in the city by 2030. Therefore, the total population of the city could increase from the current (2010) population of 20,100 to 23,875 (2.89 persons per household x 1,076 housing units + existing population of 20,100 = 23,875 persons). Increased population and development would increase wastewater flows which would, in turn, result in increased demand for wastewater services. Meeting increased demand would require the extension of new wastewater collection system infrastructure including collectors, trunks, and interceptor sewer lines and appurtenances. Increased treatment and disposal capacity would also be required to ensure adequate treatment of the City's wastewater flows.

Wastewater Treatment

Pinole/Hercules WPCP

Currently, the WPCP is permitted to treat 4.06 mgd average dry weather flow and 10.3 mgd peak wet weather flow. The proposed General Plan Update estimates that the 2030 flow

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amount would be 3.93 mgd (**Table 4.12.6-2**), which is below the existing capacity of the WPCP (4.06 mgd). Therefore, it is anticipated that the average dry weather capacity of the WPCP will not need to be expanded as a result of development under the General Plan Update and Three Corridors Specific Plan. However, as discussed above, the improvements that were made in the 1980s significantly underestimated solids loading, resulting in a reduction of actual capacity at the WPCP from 4.06 mgd to 3.2 mgd. The WPCP will need to improve its ability to process solids, such as by the use of clarifiers and aeration basins, in order to realize the actual capacity of the plant. Furthermore, the WPCP has experienced wet weather flows of almost 20 mgd, which exceeds permitted capacity. Any development resulting in increased flows over existing conditions would exacerbate this inadequacy. This is a **significant** impact.

TABLE 4.12.6-2
CITY OF PINOLE DRY WEATHER FLOW

Dry Weather Flow	Hercules	Pinole	Combined
Current flows at PHWWTP	1.60 mgd	1.40 mgd	3.00 mgd
Anticipated 2030 Flows	0.63 mgd	0.30 mgd	0.93 mgd
Total	2.23 mgd	1.70 mgd	3.93 mgd

Source: AECOM, 2010

The City is currently considering the Pinole-Hercules WPCP Improvement Project, which involves (1) the construction of upgrades at the existing plant, relocation of the City of Pinole Corporation Yard, and construction of a new parallel force main to the Rodeo Sanitary District to serve a portion of the City of Pinole and the City of Hercules, or (2) treatment of a portion of the City of Pinole flows only at the existing plant and upgrades to the WPCP facility.

Environmental review is in progress for the WPCP improvements necessary to serve the City and meet regulatory requirements. The *Draft Environmental Impact Report, Pinole-Hercules Water Pollution Control Plant Improvement Project* (AECOM, 2010) identifies environmental impacts associated with improvements to the WPCP. Since future development under the proposed General Plan Update and Three Corridors Specific Plan would utilize wastewater treatment infrastructure analyzed in this EIR, development under the proposed General Plan Update and Three Corridors Specific Plan would indirectly contribute to the following significant environmental effects identified therein (AECOM, 2010):

- Short-term increases in construction source noise levels;
- Short-term construction impacts to air quality; and
- Long-term operational air pollutant emissions.

WCWD

As previously discussed, the WCWD Water Pollution Control Plant has a permitted dry weather capacity of 12.5 mgd and 21 mgd wet weather capacity; the current ADWF is approximately 7.9 mgd and the AWWF is 14 mgd. The WCWD has indicated that there is adequate capacity at the plant to serve existing and future development under the General Plan Update (WCWD, 2009).

Wastewater Conveyance

As discussed under Existing Setting above, both the City's and the WCWD's current wastewater collection systems have significant amounts of inflow and infiltration. Increased wastewater flows

would exacerbate these conditions and could result in inadequate wastewater conveyance. In addition, the provision of expanded wastewater services to the city under the proposed General Plan Update and Three Corridors Specific Plan could require the expansion and development of new wastewater conveyance infrastructure.

Table 4.12.6-3 identifies types of potential project-specific environmental impacts from the improvement and/or extension of wastewater treatment and conveyance infrastructure. However, the potential programmatic environmental impacts that could be associated with construction/expansion of these facilities have been identified and disclosed in this DEIR as part of overall development of the Planning Area.

**TABLE 4.12.6-3
TYPES OF POTENTIAL ENVIRONMENTAL IMPACTS ASSOCIATED WITH
NEW WASTEWATER TREATMENT AND SUPPLY INFRASTRUCTURE**

Types of Potentially Affected Resources	Related and Potential Impacts
Geology and Soils	Increase in erosion and sedimentation from construction activities; geologic hazards could cause problems for new facilities and their operators if they are not sited carefully.
Wetlands	Changes in the amount or functions and values of various types of wetlands from the construction of new facilities.
Botanical Resources including Special-status Species	Disturbance to rare plants and their habitat and other types of vegetation from construction activities.
Wildlife Resources including Special-status Species	Changes in the amount and quality of affected wildlife habitat from construction activities.
Visual Resources	Short-term direct visual impacts associated with construction activities (trunk sewers). Addition of new project facilities could affect the visual environment. New pipelines and pumping stations near or in residential areas or highly visited areas would cause negative impacts. Adverse visual impacts during the construction and operation of new or expanded wastewater infrastructure.
Agriculture	Permanent direct loss of agricultural productivity (trunk sewer construction, operation and percolation ponds) and potential indirect conversion of agricultural land by expansion of urban services through agricultural lands within the Planning Area (sewer mains). Some irrigated land or grazing land could be taken out of production where project conveyance facilities need to be located to accommodate growth.
Cultural Resources	Historic, prehistoric, and ethnographic resources could be affected by the construction and maintenance of new facilities.
Public Utilities	The routing and siting of new project facilities could interfere with the operation or maintenance of existing or planned public utilities, including communication and energy infrastructure.

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Types of Potentially Affected Resources	Related and Potential Impacts
Air Quality and Noise	Air quality emissions (direct) of oxides of nitrogen (NOx) during construction (trunk and sewer mains, wastewater treatment capacity expansion). Traffic and loud noises could occur during the construction phase of new projects. Short-term increases in noise during construction (trunk and sewer mains) as well as operational noise from new or expanded lift stations would likely impact nearby residents and recreationists. Adverse odor impacts during the construction and operation of new or expanded wastewater infrastructure.
Transportation	Local roads would experience traffic increases during construction. Property access would be temporarily disrupted during trunk sewer construction.
Public Health and Safety	Construction activities could create some safety hazards. Temporary direct disruption or property access (trunk sewer construction).
Water Quality	Degradation of water quality (groundwater). Any expansion of the TWWTP would require a Waste Discharge Requirement (WDR) permit from the RWQCB. This would substantially reduce the possibility of significant water quality impacts.
Growth-inducing Effects	New wastewater infrastructure would likely cause growth-inducing impacts.

Zoning Code Update

Updates to the Zoning Code will be administrative in nature to further clarify the types and forms of uses permitted under particular land use designations, but would not result in any development activities beyond that analyzed for the proposed General Plan Update. Therefore, the proposed Zoning Code update would have **no impact** associated with increased demand for wastewater services.

Proposed General Plan Policies and Action Items that Address Increased Demand for Wastewater Service

The proposed General Plan incorporates the following policies and actions that provide mitigation for wastewater service impacts:

Action GM.1.1.5 Hercules. Endeavor to work with the City of Hercules to address wastewater treatment and disposal issues and opportunities to ensure compliance with operating permits, to provide sewage disposal to accommodate anticipated growth, and to remedy existing facilities deficiencies.

Policy GM.2.1 Plan for Public Facility and Service Needs. Future development shall be planned based on public facility and service capacity, community-wide needs, sound citywide and neighborhood planning, and public improvement programming.

Action GM.2.2.1 Service Standards. Periodically monitor, review and update Pinole's service standards to maintain fire, police, parks, sewer, water, and flood control services within Pinole. The following standards will be used to guide decision making through the development review process.

Parks and Recreation

Parks: 3.0 acres of neighborhood or regional parks, or 5.0 acres of dedicated open space per 1,000 residents.

Fire

Pinole will endeavor to maintain capital facilities, equipment and staffing sufficient to maintain the following service level:

1. First Engine Company: 5-minute response time for emergency calls.
2. Water Requirements: 3,500 gallons per minute (gpm) minimum on initial response assignment.

Police

Pinole will strive to maintain capital facilities, equipment and staffing to maintain a 5-minute response time for emergency calls.

Sanitary Facilities

Pinole will continue to work with Hercules and the West County Wastewater District to monitor, manage and maintain Pinole's wastewater collection and treatment system and to upgrade as necessary to meet permit requirements and capacity needed for current flow amounts and projected future growth.

Water

Verification by East Bay Municipal Utility District (EBMUD) that adequate water supply and quality can be provided and shall be required for approval of new development.

Flood Control

1. Capacity: Flood protection facilities should be designed to contain a 100-year flood event, as determined by the Federal Emergency Management Agency (FEMA).
2. Climate Change: Flood protection improvements should anticipate the probable effect of climate changes as they relate to sea level.
3. Upstream Improvements: Coordinate with EBMUD to plan for a detention/diversion basin south of the city to meter peak period flows in Pinole Creek.

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Policy GM.2.2	Costs of New Development. Ensure that any new development in the city pays its share of the costs associated with the provision of facilities for fire, police, schools, parks, sanitary facilities, water and flood control necessitated by it, by attaching project-specific mitigation requirements as conditions of approval.
Action GM.2.2.3	Growth Management Capital Projects. Include capital projects, generally showing complete project cost and intended project phasing, in Pinole's annual Capital Improvement Program which are necessary to: <ol style="list-style-type: none">1. Extend services to new development.2. Maintain traffic standards established in the General Plan.3. Address the City's responsibilities under the adopted West Contra Costa Action Plan.4. Maintain standards for fire, police, parks, sewer, water and flood control established in Pinole's Growth Management Element. (Note: See Measure J program relating to Capital Improvement Program.)
Action GM.2.2.4	Development Review. Participate in regional review of development proposals that have the potential to impact regional facilities, resources and services. <ol style="list-style-type: none">1. Circulate environmental documents to surrounding jurisdictions for review and comment.2. Submit to the West Contra Costa County Technical Advisory Committee proposed revision(s) to the West County Action Plan to mitigate impacts associated with proposed General Plan amendments over the threshold specified in the adopted West County Action Plan.3. Participate in the conflict resolution process established by the CCTA in the Growth Management Implementation Documents as a means of resolving disputes between neighboring jurisdictions related to the Action Plan and other Measure C/J transportation-related issues.4. Ensure that all new development bears a fair share cost of mitigating impacts on the City's ability to provide essential services.
Policy GM.2.3	Development Costs. Services and capital improvements necessary to serve new development should be installed and funded by the project.
Action GM.2.3.1	Where feasible, development should provide improvements necessary to ensure adequate service to the project and create an adequate mechanism for ensuring ongoing funding for necessary services.
Action GM.2.3.2	Where improvements are needed to serve multiple projects or existing development, the City will maintain a development mitigation program to collect the proportionate share of a development's contribution to

capital and service costs associated with regional and local facilities and services needed to support the development. The development mitigation program may include, but not be limited to:

1. Development Impact Fees;
2. User Fees;
3. Quimby Act Fees or other Park and Recreation Fees;
4. Transportation Management Fees; and
5. Connection Fees.

Policy GM.4.1	Planning for Present and Future Community Needs. Plan for, provide and maintain a level of public infrastructure facilities and services that adequately serves the present and future needs of the community.
Policy CS.6.1	The City shall continue to make capital improvements to the wastewater collection and treatment system to maintain system capability and reliability.
Action CS.6.1.1	The City shall ensure that all parts of the collection system are maintained in adequately safe condition.
Action CS.6.1.2	The City shall implement treatment plant improvements as necessary to ensure that all permit requirements are met and the system is adequate to accept and treat all flows.
Action CS.6.1.3	The City will continue to implement a program to inspect and repair the City's sewer collection system to reduce both infiltration and inflow.
Action CS.6.1.4	New sewer collection and transmission systems shall be designed and constructed to minimize potential inflow and infiltration, and the existing collection system will be upgraded to reduce inflow and infiltration.
Policy CS.6.2	The City will strive to provide sufficient capacity at the Pinole/Hercules Water Pollution Control Plant to serve anticipated demand in the service area.
Action CS.6.2.1	The Pinole Public Works Department shall be given the opportunity to review and make recommendations on all new development proposals to ensure there is adequate capacity to serve the project.
Action CS.6.2.2	The City will strive to prepare a capital replacement plant management report and update as needed to implement Goal CS.6.
Action CS.6.2.3	The City will strive to update the Water Pollution Control Plant to improve the plant's ability to process solids to solve the imbalance in solids processing that has reduced the actual capacity of the plant.

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- Policy CS.6.3 The City will assure that all improvements to the sewer system necessitated by the approval of new projects are proportionately financed by the project sponsor.
- Policy CS.6.4 The City shall promote beneficial uses of wastewater biosolids and effluent.
- Action OS.8.5.1 Continue to employ pollution prevention techniques in all city operations and maintenance activities, consistent with Contra Costa County Clean Water Program regulations.
- Action SE.9.1.5 Continue to plan and implement upgrades or other options to improve solids processing, comply with permit requirements, and help prevent overflow and runoff into the Bay.

In addition, Chapter 9.0, *Infrastructure and Public Facilities*, of the Three Corridors Specific Plan provides further discussion of wastewater service in the Specific Plan areas, including service standards, RWQCB requirements, and planned capitol improvement projects that may further reduce this impact.

As discussed above, existing wastewater treatment and conveyance infrastructure would not be adequate to accommodate wastewater service demands resulting from the proposed General Plan Update. However, implementation of the proposed General Plan policies and actions listed above would reduce this impact by requiring the City to ensure that adequate wastewater facilities would be available to serve new development and. The policies also require the City to continue to make capital improvements to the wastewater collection and treatment system to maintain system capability and reliability and to update the WPCP to improve the plant's ability to process solids to solve the imbalance in solids processing that has reduced the actual capacity of the plant. The policies also require the City to continue to implement a program to inspect and repair the City's sewer collection system to reduce infiltration and inflow and to design new infrastructure to avoid infiltration and inflow. Furthermore, new or expanded wastewater conveyance and treatment facilities needed to serve new development would undergo site-specific, project-level CEQA analysis at such time as they are proposed for development. Therefore, impacts associated with wastewater conveyance and treatment facilities would be considered **less than significant**.

Mitigation Measures

None required.

Waste Discharge Requirements (Standard of Significance 1)

- Impact 4.12.6.2** Implementation of the General Plan Update, Three Corridor Specific Plan, and Zoning Code Update could result in wastewater discharge that would exceed wastewater treatment requirements of the San Francisco Bay Regional Water Quality Control Board. This impact is considered **less than significant**.

General Plan Update

Since the primary growth in the city will be concentrated in the Three Corridors Specific Plan area, the wastewater analysis for the GPU Planning Area and the Three Corridors Specific Plan is combined below.

Three Corridors Specific Plan

As identified under Impact 4.12.6.1 above, the proposed General Plan Update and its associated project components would increase wastewater flows in the Planning Area. Increased wastewater flows associated with the proposed project could result in failure to meet the discharge requirements set forth by the San Francisco Bay RWQCB. The San Francisco RWQCB has issued two WDR orders that pertain to the City's Planning Area. Order No. R2-2007-0024 permits discharge from the WPCP and includes requirements that Pinole undertake corrective measures to increase dry and wet weather capacity at the WPCP in order to eliminate blending at the deep water outfall and prevent discharge at the shallow outfall. Order No. R2-2008-0004, a Revised Tentative Cease and Desist Order, sets forth effluent limitations that the West County Wastewater District and other agencies will have to meet by 2016. The order includes time schedules for compliance; capital improvements may not be necessary if compliance can be met through best management practices and other efforts.

The potential environmental effects of infrastructure upgrades necessary to meet future demands and comply with these WDR orders are discussed under Impact 4.12.6.1 above. This impact is considered to be **potentially significant**.

Zoning Code Update

Updates to the Zoning Code are intended to further clarify the types and forms of uses permitted under particular land use designations, but would not result in any development activities beyond that analyzed for the proposed General Plan Update. Therefore, the Zoning Code Update would have an impact similar to that for the General Plan Update as discussed above.

Proposed General Plan Policies and Action Items that Address Wastewater Discharge Requirements

The proposed General Plan incorporates the following policies and actions that provide mitigation for wastewater discharge impacts:

- | | |
|-----------------|---|
| Policy CS.6.1 | The City shall continue to make capital improvements to the wastewater collection and treatment system to maintain system capability and reliability. |
| Action CS.6.1.1 | The City shall ensure that all parts of the collection system are maintained in adequately safe condition. |
| Action CS.6.1.2 | The City shall implement treatment plant improvements as necessary to ensure that all permit requirements are met and the system is adequate to accept and treat all flows. |
| Action CS.6.1.3 | The City will continue to implement a program to inspect and repair the City's sewer collection system to reduce both infiltration and inflow. |

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- Action CS.6.1.4 New sewer collection and transmission systems shall be designed and constructed to minimize potential inflow and infiltration, and the existing collection system will be upgraded to reduce inflow and infiltration.
- Action OS 8.5.1 Continue to employ pollution prevention techniques in all city operations and maintenance activities, consistent with Contra Costa County Clean Water Program regulations.
- Action SE.9.1.5 Continue to plan and implement upgrades or other options to improve solids processing, comply with permit requirements, and help prevent overflow and runoff into the Bay.

In addition, Chapter 9.0, *Infrastructure and Public Facilities*, of the Three Corridors Specific Plan provides further discussion of wastewater service in the Specific Plan areas, including service standards, RWQCB requirements, and planned capitol improvement projects that may further reduce this impact.

Mitigation Measures

In addition to the proposed General Plan policies and actions listed above, the following mitigation measure shall be implemented:

- MM 4.12.6.2** The City shall include an action in the General Plan requiring all future development to demonstrate that there is sufficient sewer/wastewater treatment capacity to accommodate the proposed development and that the required sewer/wastewater infrastructure is in place before issuance of Certificate of Occupancy. Furthermore, all on-site and off-site sewer conveyance systems shall be in place prior to the issuance of Certificate of Occupancy and all financing shall be assured to the satisfaction of the City.

Implementation of the above mitigation measure would ensure that sufficient sewer/wastewater treatment capacity would be available to accommodate future development in the Planning Area. Therefore, this impact would be reduced to a **less than significant level**.

CUMULATIVE IMPACT ANALYSIS

Cumulative Setting

The cumulative setting for wastewater services includes the entire service area of the PHWWTP as well as a portion of the service area of the WCWWTP. The service area of the PHWWTP includes the entire City of Hercules, and a portion of the City of Pinole; the service area of the WCWWTP includes a portion of the City of Pinole and a portion of its Sphere of Influence. The cumulative setting also encompasses all existing, planned, proposed, approved, and reasonably foreseeable development within the City's wastewater service area and the existing portion of the WCWD service area within the Planning Area at buildout of the proposed General Plan, expected to occur by 2030. The reader is referred to Table 4.0-1 in Section 4.0 of this DEIR for a list of development projects within the Planning Area.

Cumulative Impacts and Mitigation Measures

Cumulative Wastewater Service Impacts

Impact 4.12.6.3 Implementation of the General Plan Update, Three Corridor Specific Plan, and Zoning Code Update, as well as existing, planned, proposed, approved, and reasonably foreseeable development in the City of Pinole Public Works Department and West County Wastewater District wastewater service areas, would increase wastewater flows and require additional infrastructure and treatment capacity to accommodate anticipated demands. The proposed project's contribution to this impact is considered to be **less than cumulatively considerable**.

Under cumulative conditions, both the City of Pinole and the WCWD would provide wastewater services to the Planning Area. As discussed under Impact 4.12.6.1 above, existing wastewater conveyance and treatment infrastructure would not be adequate to accommodate wastewater service demands resulting from implementation of the General Plan Update and its associated project components. Other existing, planned, proposed, approved, and reasonably foreseeable development in the City's and WCWD's service area would contribute to further cumulative shortages of capacity. However, implementation of the proposed General Plan policies listed below would reduce this impact by requiring the City to ensure that adequate wastewater facilities would be available to serve new development and by requiring the City to continue to make capital improvements to the wastewater collection and treatment system to maintain system capability and reliability. The policies also require the City to continue to implement a program to inspect and repair the City's sewer collection system to reduce infiltration and inflow and to design new infrastructure to avoid infiltration and inflow. In addition, while the specific environmental impacts associated with new or expanded wastewater facilities have not been determined since project-level design and CEQA analysis is not within the scope of this DEIR, the programmatic environmental impacts associated with these facilities will result in impacts to the environment as discussed under Impact 4.12.6.1. Therefore, the proposed General Plan Update would not contribute significantly to cumulative wastewater infrastructure impacts, and this impact is considered **less than cumulatively considerable**.

Proposed General Plan Policies and Action Items that Address Cumulative Wastewater Service Impacts

The proposed General Plan incorporates the following policies and actions that provide mitigation to minimize the proposed project's contribution to cumulative wastewater service impacts. Since these policies and action items have been described in detail in prior impact discussions for this section, the following is limited to only listing the policy and action item numbers.

Growth Management Element

Action GM.1.1.5, Policy GM.2.1, Action GM.2.2.1, Policy GM.2.2, Action GM.2.2.3, Action GM.2.2.4, Policy GM.2.3, Action GM.2.3.1, Action GM.2.3.2, Policy GM.4.1

Community Services and Facilities Element

Policy CS.6.1, Action CS.6.1.1, Action CS.6.1.2, Action CS.6.1.3, Action CS.6.1.4, Policy CS.6.2, Action CS.6.2.1, Action CS.6.2.2, Action CS.6.2.3, Policy CS.6.3, Policy CS.6.4

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Natural Resources and Open Space Element

Action OS.8.5.1

Sustainability Element

Action SE. 9.1.5

In addition, Chapter 9.0, *Infrastructure and Public Facilities*, of the Three Corridors Specific Plan provides further discussion of wastewater service including service standards, RWQCB requirements, and planned capitol improvement projects that may further reduce cumulative impacts.

Mitigation Measures

None required.

4.12.7 SOLID WASTE

4.12.7.1 EXISTING SETTING

West Contra Costa Integrated Waste Management Authority

The West Contra Costa Integrated Waste Management Authority (WCCIWMA) is a California Joint Exercise of Powers that is responsible for maintaining solid waste management systems for residents and businesses within an approximately 74 square mile area of western Contra Costa County including the cities of El Cerrito, Hercules, Pinole, Richmond, and San Pablo as well as unincorporated areas of El Sobrante, Tara Hills, Bayview/Montalvin, East Richmond Heights, Rollingwood, and North Richmond. These areas receive solid waste collection services from Richmond Sanitary Service, Inc. (RSS) under an exclusive collection franchise agreement between Contra Costa County and RSS dated October 12, 1993. The WCCIWMA manages all solid waste services provided after the material is collected, such as:

- Transfer and landfill collected garbage
- Process collected recyclables
- Process collected green waste
- Operate the Authority (staffing and administrative)
- Implement household hazardous waste programs
- Implement waste prevention and recycling programs
- Public education and outreach (Lehon, 2009)

Richmond Sanitary Service

The commercial, residential, and industrial solid waste hauler for the Planning Area is Richmond Sanitary Service (RSS). The City encourages recycling and has included information on recycling programs on its website. The City of Pinole is currently meeting the diversion rate mandated by Assembly Bill (AB) 939. Household hazardous waste is taken to the West County Drive-Through Household Hazardous Waste Collection Facility, located at 101 Pittsburg Avenue in Richmond at the Richmond Parkway.

Solid Waste Facilities

In October 2006, the West Contra Costa County Sanitary Landfill (WCCSL) was closed. Solid waste from Pinole is now transported to the closed WCCSL site, where waste is processed at the Golden Bear Transfer Station. Golden Bear Transfer Services, Inc., a subsidiary of Republic Services, Inc., opened the transfer facility when the landfill was closed. From there, unrecyclable materials are transferred to the Keller Canyon Landfill for disposal (Lehon, 2009).

The Keller Canyon Landfill is located at 901 Bailey Road in Pittsburg in Contra Costa County. The landfill is operated under Permit Number 07-AA-0032, with a disposal area of 244 acres, and is classified as a Class II landfill accepting agricultural, construction/demolition, and industrial wastes as well as sludge (biosolids) in addition to mixed municipal waste. The landfill is permitted to accept a maximum of 3,500 tons per day and has a total permitted capacity of 75,018,280 cubic yards. As of November 2004, this landfill had 63,408,410 cubic yards of remaining capacity and is estimated to cease operation in December 2030 (Lehon, 2009; CIWMB, 2009a).

Recyclable materials collected by RSS are processed at the Integrated Resource Recovery Facility (IRRF). This facility is owned and operated by the WCCIWMA and is located just off the Richmond Parkway at 101 Pittsburg Avenue in North Richmond. Household hazardous waste is collected at a permanent facility located at the IRRF. The household hazardous waste facility is open two days a week and the first Saturday of each month and accepts a wide variety of materials from local residents and small businesses. Some of the items accepted are electronic waste, pharmaceuticals, sharps and syringes, and used cooking oil/grease. The material is reused, recycled, or properly disposed. Yard debris is taken to the closed WCCSL and is processed into ground cover and mulch and for other beneficial reuse. The WCCIWMA also maintains a database of local resources and facilities that take various materials such as tires, appliances, and mixed plastics (Lehon, 2009).

Service Standards/Solid Waste Diversion

There are no established service standards for solid waste within the Planning Area. However, under AB 939, the County's Integrated Waste Management Plan requires recycling programs that are intended to result in a 50 percent diversion away from landfills. In 2006, the WCCIWMA, which includes the City of Pinole, had an estimated diversion rate of 53 percent (CIWMB, 2009b). In order to achieve the required 50 percent diversion rate, the WCCIWMA implements various source reduction, recycling, and reuse efforts including a commingled recycling collection program and green waste collection for residents within its service area.

Funding Mechanisms

West Contra Costa Integrated Waste Management Authority

Funding for services provided by the WCCIWMA is obtained via a monthly fee called the IRRF Fee. The IRRF Fee is included in monthly garbage bills sent to customers. This fee is calculated annually based on an annual operating budget and then adjusted based on the actual costs. The fee provides funding for the following services (excluding collection):

- Transfer, transportation, and disposal services
- Recycling processing services
- Household hazardous waste collection and management services
- Public education and outreach programs

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The WCCIWMA also receives a portion of net revenues from the sale of recyclable materials at the IRRF. Sixty-five (65) percent of this revenue is used to stabilize rates charged to customers. In addition, the WCCIWMA has secured over \$1.4 million of grant funds over the past ten years to complement programs and services and offset costs (Lehon, 2009).

It should be noted that the current solid waste service fees and rates in western Contra Costa County are some of the highest rates of all nine Bay Area counties and, historically, the community is sensitive to any cost or price increases to expand solid waste services (Lehon, 2009).

4.12.7.2 REGULATORY FRAMEWORK

Federal

Resource Conservation and Recovery Act

The Resource Conservation and Recovery Act (RCRA) was enacted in 1976 to address the huge volumes of municipal and industrial solid waste generated nationwide. After several amendments, the act as it stands today governs the management of solid and hazardous waste and underground storage tanks (USTs). The RCRA, enacted in 1976, is an amendment to the Solid Waste Disposal Act of 1965. The RCRA has been amended several times, most significantly by the Hazardous and Solid Waste Amendments (HSWA) of 1984. The RCRA is a combination of the first solid waste statutes and all subsequent amendments. The act authorizes the USEPA to regulate waste management activities and authorizes states to develop and enforce their own waste management programs, in lieu of the federal program, if a state's waste management program is substantially equivalent to, consistent with, and no less stringent than the federal program.

State

California Integrated Waste Management Act (AB 939)

The California Integrated Waste Management Act of 1989 (AB 939) requires every city and county in the state to prepare a Solid Reduction and Recycling Element (SRRE) to its Solid Waste Management Plan that identifies how each jurisdiction will meet the mandatory state waste diversion goals of 25 percent by 1995 and 50 percent by 2000. The purpose of AB 939 is to "reduce, recycle, and re-use solid waste generated in the State to the maximum extent feasible."

The term "integrated waste management" refers to the use of a variety of waste management practices to safely and effectively handle the municipal solid waste stream with the least adverse impact on human health and the environment. The act has established a waste management hierarchy, as follows:

- Source Reduction
- Recycling
- Composting
- Transformation
- Disposal

California Integrated Waste Management Board Model Ordinance

Subsequent to the Integrated Waste Management Act, additional legislation was passed to assist local jurisdictions in accomplishing the goals of AB 939. The California Solid Waste Re-use and Recycling Access Act of 1991 (Sections 42900–42911 of the Public Resources Code) required the CIWMB to approve a model ordinance for adoption by any local government for the transfer, receipt, storage, and loading of recyclable materials in development projects by March 1, 1993. The act also required local agencies to adopt a local ordinance by September 1, 1993, or to allow the model ordinance to take effect.

Per Capita Disposal Measurement System (SB 1016)

Senate Bill (SB) 1016 was passed into law in late 2008 and is intended to make the process of goal measurement as established by the Integrated Waste Management Act of 1989 (AB 939) simpler, timelier, and more accurate. SB 1016 builds on AB 939 compliance requirements by implementing a simplified measure of jurisdictions' performance. SB 1016 accomplishes this by changing to a disposal-based indicator — the per capita disposal rate — which uses only two factors: a jurisdiction's population (or in some cases employment) and its disposal as reported by disposal facilities. SB 1016 shifts from the historical emphasis on using calculated generation and estimated diversion to using annual disposal as a factor when evaluating jurisdictions' program implementation (CIWMB, 2008b).

Local

Contra Costa County General Plan

The Contra Costa County General Plan is used as the “blueprint” to guide future development in unincorporated portions of the county, including sections of the GPU Planning Area that are outside the Pinole city limits. The Contra Costa County public facilities policies applicable to the Planning Area outside the existing city limits are Policies 7-87 through 7-100. These policies address considering solid waste disposal capacities in county and city land use planning and permitting activities; coordination with solid waste management facilities in adjoining counties; encouragement of solid waste recovery to extend the life of landfills; locations of future landfills for lands designated landfill; the restriction of access to landfills; and the requirement for all applications for solid waste facilities to apply for a General Plan amendment.

Contra Costa County Construction and Demolition Ordinance

The County's construction and demolition ordinance became effective July 8, 2004, and applies to all construction, renovation, or demolition projects that are 5,000 square feet in size or greater. Covered projects are required to reuse, recycle, or otherwise divert at least 50 percent of the construction and demolition debris generated on the job site. Permit applicants must submit a Debris Recovery Plan prior to receiving a construction or demolition permit and they must submit a Debris Recovery Report prior to receiving a final inspection. If the project fails to meet the diversion requirement or the applicant fails to make a good faith effort to meet the diversion requirement, the applicant may be subject to fines and civil penalties (CIWMB, 2008a).

City of Pinole Municipal Code

Chapter 8.08 of the City of Pinole Municipal Code contains rules and regulations regarding the storage, disposal, collection, and handling of solid waste within the city.

4.12 PUBLIC SERVICES AND UTILITIES

4.12.7.3 IMPACTS AND MITIGATION MEASURES

Standards of Significance

An impact on solid waste services is considered significant if implementation of the proposed project would result in any of the following:

- 1) Be served by a landfill without sufficient permitted capacity to accommodate the project's solid waste disposal needs.
- 2) Fail to comply with federal, state, and local statutes and regulations related to solid waste.

Methodology

Evaluation of potential solid waste service impacts was based primarily on information from the California Integrated Waste Management Board. This material was compared to the proposed General Plan Update's specific solid waste service-related impacts. The impact analysis below focuses on whether those impacts would have a significant effect on the physical environment.

Impacts and Mitigation Measures

Increased Solid Waste Generation (Standards of Significance 1 and 2)

Impact 4.12.7.1 Implementation of the proposed project (General Plan Update, Three Corridor Specific Plan, and Zoning Code Update) would increase solid waste generation and the demand for related services. This is considered a **less than significant** impact.

General Plan Update

Implementation of the proposed General Plan Update is projected to result in population growth within the Planning Area, resulting in the generation of more solid waste and potentially requiring increased solid waste collection and disposal services. The city's population is projected to increase from the present population of about 20,100 (2010) to an ultimate General Plan buildout population of 23,875 (2030), an increase of about 3,775 people. The area's 2007 per capita waste disposal rate is 4.8 pounds per person per day. Given the estimated disposal rate, an increase of 3,775 people would generate an additional 3,307 tons of solid waste per year.

According to the WCCIWMA, it is anticipated that current service levels and facility capacities would be adequate to serve the city's projected 2030 buildout population and no decline in services would result. Therefore this impact is considered **less than significant**.

Three Corridors Specific Plan

Implementation of the proposed Three Corridors Specific Plan would consist of the revitalization of the San Pablo Avenue, Pinole Valley Road, and Appian Way corridors, which could include new development and/or redevelopment of various urban uses. Due to the city's small supply of developable land, the Three Corridors Specific Plan directs the majority of the city's future growth to opportunity sites for infill mixed-use development along the city's commercial corridors in close proximity to transit and other services.

The Specific Plan area contains approximately 300 acres of predominantly developed land. In order to accommodate the projected demand for development and invite further capital investment in the city, the Specific Plan would change land uses in order to replace single-use commercial zoning with various mixed-use zones, eliminate commercial floor area ratio (FAR) as a development constraint, increase opportunities for residential development, and increase residential density. If all of the residential properties within the Specific Plan area were to develop according to the proposed provisions of the land use and development standards contained in the Specific Plan, the city would be expected to experience increased residential development of up to 1,076 residential units by 2030. Based on ABAG's 2007 estimate of 2.89 persons per household, the Specific Plan could result in an additional 3,110 persons by 2030 (1,076 housing units x 2.89 persons per household). As mentioned above, according to the WCCIWMA, it is anticipated that current service levels and facility capacities would be adequate to serve the city's projected 2030 buildout population and no decline in services would result. This impact is considered **less than significant**.

Zoning Code Update

Updates to the Zoning Code are intended to further clarify the types and forms of uses permitted under particular land use designations, but would not result in any development activities beyond that analyzed for the proposed General Plan Update. Therefore, the Zoning Code Update would have an impact similar to that for the General Plan Update as discussed above.

Proposed General Plan Policies and Actions that Address Increased Solid Waste Generation

Implementation of the following General Plan policies and actions would further reduce impacts associated with solid waste generation.

- | | |
|-----------------|--|
| Policy CS.8.1 | The City will continue to encourage efforts to reduce, recycle and compost as many materials as possible to minimize demand for future waste disposal facilities. |
| Action CS.8.1.1 | Continue to meet or exceed the waste diversion requirements of 50 percent, and develop and implement a program to reduce waste entering the landfill by attaining a 75 percent diversion rate by January 2020. |
| Action CS.8.1.2 | Encourage Pinole residents, businesses and industries to reduce the use of non-biodegradable and non-recyclable materials, including reduced use of packaging and use of reusable, rather than disposable, products. |
| Action CS.8.1.3 | Construction sites shall provide for the salvage, reuse or recycling of construction and demolition materials. |
| Action CS.8.1.4 | Public buildings will incorporate on-site storage facilities for recycled materials. |
| Policy CS.8.2 | Educate the public and provide opportunities to utilize waste reduction techniques. |
| Action CS.8.2.1 | Distribute public education materials on solid waste source reduction, recycling and composting, and the proper handling of household hazardous waste. |

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- Action CS.8.2.2 Increase opportunities for safe disposal or recycling of electronic waste (e-waste) and hazardous waste by residents and businesses in Pinole.
- Action CS.8.2.3 Continue community-wide efforts, such as the regular area swap meets, to minimize waste.
- Policy SE.5.1 Continue and expand programs to reduce solid waste generated from all sectors of the city. Programs may include recycling, reuse, source reduction and composting.
- Action SE.5.1.1 Continue the City's e-waste recycling program.
- Action SE.5.1.2 Improve and expand curbside recycling and other residential recycling services.
- Action SE.5.1.3 Continue to improve internal City and County waste prevention practices.
- Action SE.5.1.4 Expand City recycling of asphalt and other street material.
- Action SE.5.1.5 Encourage continued commercial food-waste collection program.
- Action SE.5.1.6 Develop an ordinance reducing construction-generated waste.
- Action SE.5.1.7 Develop and implement a plan for City communications and facilities to eventually become primarily paperless.
- Policy SE.5.2 Support public awareness and participation in household waste management, control and recycling.
- Action SE.5.2.1 Promote and expand recycling programs, purchasing policies, and employee education to reduce the amount of waste produced.
- Policy SE.5.4 Reduce waste from construction activities.
- Action SE.5.4.1 Pinole will adopt a Construction and Demolition Waste Recovery Ordinance, requiring building projects to recycle or reuse a minimum percentage of unused or leftover building materials.
- Action SE.5.4.2 Require all new development and major rehabilitation projects to recycle or salvage a majority of the non-hazardous construction and demolition debris.
- Action SE.5.4.3 Establish clear and consistent guidelines for how and when used construction materials can be used in new or remodel construction.

In addition, Chapter 9.0, *Infrastructure and Public Facilities*, of the Three Corridors Specific Plan provides further discussion of solid waste and confirms that if new development proposed within the Specific Plan Area causes an increased demand on the solid waste collection system, the developer will have to coordinate with the City and service providers in order to meet the increased demand. Further, Chapter 7.0, *Private Realm Standards and Design Guidelines*, of the Specific Plan requires the provision of recycling containers in all proposed trash enclosures and

Chapter 8.0, *Public Realm Standards and Design Guidelines*, requires the provision of recycling containers in public spaces.

As previously mentioned, the WCCIWMA anticipates that current service levels and facility capacities would be adequate to serve the city's projected 2030 buildout population and no decline in services will result. This impact is considered to be **less than significant**.

Mitigation Measures

None required.

4.12.7.4 CUMULATIVE IMPACT ANALYSIS

Cumulative Setting

The cumulative setting for solid waste includes the service area boundaries of the West Contra Costa Integrated Waste Management Authority. The authority is responsible for maintaining solid waste management systems for residents and businesses in the communities of El Cerrito, Hercules, Pinole, Richmond, and San Pablo as well as unincorporated areas of El Sobrante, Tara Hills, Bayview/Montalvin, East Richmond Heights, Rollingwood, and North Richmond.

The cumulative setting includes all existing, planned, proposed, approved, and reasonably foreseeable development within the West Contra Costa Integrated Waste Management Authority service area that currently places demand on the Keller Canyon Landfill.

Cumulative Impacts and Mitigation Measures

Cumulative Solid Waste Impacts

Impact 4.12.7.2 Implementation of the proposed project (General Plan Update, Three Corridor Specific Plan, and Zoning Code Update), along with other existing, planned, proposed, approved, and reasonably foreseeable development within the West Contra Costa Integrated Waste Management Authority service area, would result in cumulative solid waste impacts. This is considered a **less than cumulatively considerable** impact.

Richmond Sanitation Service collects the city's solid waste and ultimately disposes of it at the Keller Canyon Landfill. The West Contra Costa Integrated Waste Management Authority has indicated that the implementation of the proposed project in combination with other proposed projects and projected growth would result in a cumulative increase in waste generation; however, the increase could be accommodated. The West Contra Costa Integrated Waste Management Authority, which includes the City of Pinole, is currently meeting the source reduction requirements of AB 939 and will continue to implement the Source Reduction and Recycling Element (SRRE), which would ensure continued compliance with AB 939 under the proposed General Plan Update.

Proposed General Plan Policies and Actions that Address Cumulative Solid Waste Impacts

Implementation of the following General Plan policies and actions would further reduce impacts associated with solid waste (see Impact 4.12.7.1 for full policy language). Since these policies and action items have been described in detail in prior impact discussions for this section, the following is limited to only listing the policy and action item numbers.

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Community Services and Facilities Element

Policy CS.8.1, Action CS.8.1.1, Action CS.8.1.2, Action CS.8.1.3, Action CS.8.1.4, Policy CS.8.2, Action CS.8.2.1, Action CS.8.2.2, Action CS.8.2.3

Sustainability Element

Policy SE.5.1, Action SE.5.1.1, Action SE.5.1.2, Action SE.5.1.3, Action SE.5.1.4, Action SE.5.1.5, Action SE.5.1.6, Action SE.5.1.7, Policy SE.5.2, Action SE.5.2.1, Policy SE.5.4, Action SE.5.4.1, Action SE.5.4.2, Action SE.5.4.3

In addition, Chapter 9.0, *Infrastructure and Public Facilities*, of the Three Corridors Specific Plan provides further discussion of solid waste and confirms that if new development proposed within the Specific Plan Area causes an increased demand on the solid waste collection system, the developer will have to coordinate with the City and service providers in order to meet the increased demand. Further, Chapter 7.0, *Private Realm Standards and Design Guidelines*, of the Specific Plan requires the provision of recycling containers in all proposed trash enclosures and Chapter 8.0, *Public Realm Standards and Design Guidelines*, requires the provision of recycling containers in public spaces.

Implementation of the above policy provisions and Specific Plan standards and guidelines would reduce any potential cumulative solid waste impacts to a **less than cumulatively considerable** level.

Mitigation Measures

None required.

4.12.8 ENERGY AND COMMUNICATION SERVICES

4.12.8.1 EXISTING SETTING

Electric Services

Pacific Gas and Electric (PG&E) provides electricity to the City of Pinole and the GPU Planning Area. The PG&E service area covers nearly 70,000 square miles in northern and central California and serves approximately 15 million people (PG&E, 2010). The existing electric facilities in the PG&E service area include 123,054 circuit miles of electric distribution lines and 18,610 circuit miles of interconnected transmission lines.

Within the GPU Planning Area, the majority of energy that PG&E provides is renewable (57 percent), and the remaining energy sources are gas (42 percent) and coal (1 percent). All construction and maintenance activities for electric facilities are the responsibility of PG&E. **Table 4.12.8-1** below shows electricity consumption by land use for PG&E's service area from 1997 to 2007 expressed in millions of kWh.

TABLE 4.12.8-1
ELECTRICITY CONSUMPTION FOR PGE’S SERVICE AREA
(IN MILLIONS OF KWH)
1997–2007

Year	Ag & Water Pump	Commercial Building	Commercial Other	Industry	Mining & Construction	Residential	Street Light	Total Usage
1997	5,975	31,203	4,897	21,750	2,716	28,599	559	95,699
1998	5,000	31,156	4,841	21,117	2,563	29,596	572	94,845
1999	6,005	33,176	5,165	20,572	2,585	30,521	509	98,534
2000	6,004	34,503	5,279	20,748	2,599	31,646	552	101,331
2001	6,350	33,329	4,857	18,893	2,397	29,657	509	95,993
2002	6,439	34,220	4,944	18,143	2,283	30,537	503	97,070
2003	6,324	35,243	4,682	17,954	2,477	31,976	516	99,171
2004	6,778	35,741	4,987	18,352	2,642	32,708	532	101,740
2005	5,402	35,819	5,113	18,619	2,863	33,106	537	101,460
2006	6,010	36,943	5,407	18,561	2,912	34,345	542	104,719
2007	7,864	37,731	5,851	18,317	3,068	34,608	549	107,988

Source: ECDMS, 2010

Natural Gas Services

PG&E provides natural gas services to the city of Pinole and the GPU Planning Area. As stated above, the PG&E service area covers nearly 70,000 square miles in northern and central California and serves approximately 15 million people (PG&E, 2010). The existing natural gas facilities in the Planning Area consist of 4½-inch to 16-inch pipelines delivering service to all customers that are not served by private propane tanks. All construction and maintenance activities for natural gas facilities are the responsibility of PG&E. **Table 4.12.8-2** below shows natural consumption by land use for PG&E’s service area from 1997 to 2007 expressed in millions of therms.

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TABLE 4.12.8-2
NATURAL GAS CONSUMPTION FOR PG&E'S SERVICE AREA
(IN MILLIONS OF THERMS)
1997–2007

Year	Ag & Water Pump	Commercial Building	Commercial Other	Industry	Mining & Construction	Residential	Total Usage
1997	56	707	67	1,942	14	1,963	4,749
1998	59	765	67	1,726	26	2,264	4,907
1999	68	808	64	1,734	20	2,404	5,098
2000	78	777	55	1,817	27	2,148	4,902
2001	50	631	44	1,618	20	2,016	4,379
2002	59	806	35	1,536	23	2,075	4,534
2003	84	872	49	1,461	13	2,034	4,513
2004	64	799	68	1,531	29	2,009	4,500
2005	41	768	78	1,552	37	1,933	4,409
2006	48	907	104	1,513	45	2,005	4,622
2007	46	859	50	1,513	37	2,023	4,528

Source: ECDMS, 2010

Telephone and Telecommunication Services

AT&T and Comcast

AT&T (formerly known as SBC Communications) provides local telephone service to the city, while cable television service is provided through Comcast. Both providers have the ability to maintain these services to meet the need of city residents and businesses in the future.

Both the city and the county have experienced a dramatic increase in demand for telecommunications products and services in the last decade as this industry has emerged to provide a new form of customer phone and related services. The City of Pinole requires all wireless communication facilities to have a use permit. Use permit applicants are required to submit a master plan for all related facilities, a computer enhanced photo image of the site, a mock-up of an antenna, if proposed, a preliminary report based on the current Federal Communications Commission (FCC) rules, regulations and standards, and alternative site analysis. The use permit requires Planning Commission approval before wireless communication facilities can be installed.

The State Public Utilities Commission, which maintains that local jurisdictions cannot prohibit or otherwise unduly restrict utilities such as cellular phone installations, regulates telecommunications.

Telephone and Internet facilities in the GPU Planning Area include both aerial and underground fiber and copper lines transmission lines. The majority of new telephone facilities are collocated underground with other utilities on poles or in underground trenches and are constructed in public and roadway rights-of-way to reduce visual and aesthetic impacts and potential safety

hazards. The environmental review of providing telephone and cable services is typically handled on a case-by-case basis in conjunction with individual development projects.

4.12.8.2 REGULATORY FRAMEWORK

State

California Public Utilities Commission

The California Public Utilities Commission (CPUC) is the state agency that regulates privately owned electric, natural gas, telecommunications, water, railroad, rail transit, and passenger transportation companies, in addition to authorizing video franchises. The CPUC grants operating authority, regulates service standards, sets rates, and monitors utility operations for safety, environmental stewardship, and public interest.

Traditionally, general rate cases have been the major form of regulatory proceeding for the CPUC. General rate case applications may be filed every three years and take about a year to complete. The utility bases its revenue request on its estimated operating costs and revenue needs for a particular future year. Customer rates will be based on the CPUC's determination of how much revenue the utility reasonably requires to operate.

California Building Energy Efficiency Standards

Title 24, Part 6 of the California Code of Regulations, known as the Building Energy Efficiency Standards, was established in 1978 in response to a legislative mandate to reduce California's energy consumption. The standards are updated periodically to allow consideration and possible incorporation of new energy efficiency technologies and methods. The Energy Commission adopted the 2008 Standards on April 23, 2008, and the Building Standards Commission approved them for publication on September 11, 2008. The new standards will go in to effect on July 1, 2009 (CEC, 2008).

CEQA Appendix F

In order to assure that energy implications are considered in project decisions, the California Environmental Quality Act (CEQA) requires that Environmental Impact Reports (EIRs) include a discussion of the potential energy impacts of proposed projects, with particular emphasis on avoiding or reducing inefficient, wasteful and unnecessary consumption of energy. Appendix F of the CEQA Guidelines, which is designed to assist in the preparation of an EIR, lists energy impact possibilities and potential conservation measures.

Local

Contra Costa County General Plan

The Contra Costa County General Plan is used as the "blueprint" to guide future development in unincorporated portions of the county, including sections of the GPU Planning Area that are outside the Pinole city limits. The Contra Costa County General Plan does not have any specific policies regarding electrical, natural gas, and telephone service; however, the housing element contains discussion about energy conservation measures and programs for energy assistance in which PG&E participates.

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City of Pinole Municipal Code

Title 17, Section 33.060 of the City of Pinole Municipal Code states that applicants for wireless telecommunication facilities shall provide site plans showing provisions for undergrounding of all utilities.

4.12.8.3 IMPACTS AND MITIGATION MEASURES

Standards of Significance

A public services or utilities impact is considered significant if implementation of the project would result in any of the following:

- 1) The need for new systems or supplies, or a substantial expansion or alteration to power or natural gas facilities or infrastructure that results in a physical impact on the environment.
- 2) The wasteful, inefficient and unnecessary consumption of energy during project construction, operation, maintenance and/or removal.

Methodology

Evaluation of potential electricity, natural gas, or telecommunication impacts was based on information from the California Energy Commission and the California Public Utilities Commission and consultation with the service providers. This material was then compared to the proposed General Plan Update's specific electricity, natural gas, or telecommunication impacts. The impact analysis below focuses on whether or not the physical environment would be significantly affected.

Evaluation of potential impacts on electrical, natural gas, and telephone services resulting from the proposed project was based on consultation with the service providers, review of California Energy Commission provisions, state standards, the Contra Costa County General Plan, and the proposed City of Pinole General Plan.

Impacts and Mitigation Measures

Increased Demand for Electrical, Natural Gas, and Telecommunication Services (Standards of Significance 1 and 2)

Impact 4.12.8.1 Implementation of the proposed project (General Plan Update, three Corridors Specific Plan, and Zoning Code Update) would require additional electric and natural gas supplies, along with conveyance facilities for these and telephone and cable television services. This is considered a **less than significant** impact.

PG&E provides electrical service to the city and would likely serve subsequent development projects. PG&E would need to increase their power supplies to serve development under the proposed project. It is not certain how PG&E would need to increase its power supplies. PG&E provides power generated by a variety of sources, including hydrological, wind, fossil fuel, and nuclear. As growth in the area occurs, it is anticipated that PG&E would need to construct new substations to provide adequate electrical service under project conditions. Additional transmission lines would be necessary to deliver electrical service. All electrical distribution lines,

substations, transmission, delivery facilities, and easements required to serve the Planning Area are subject to CEQA review. Potential environmental effects of obtaining more power through the development of power plants include, but are not limited to, air quality, biological resources, cultural resources (depending on location), hazardous materials, land use, noise and vibration, traffic, visual resources, waste management, water and soil resources, and health hazards. Potential environmental effects for the construction of transmission lines include, but are not limited to, air quality (during construction), biological resources (depending on location), cultural resources (depending on location), hazardous materials, land use, noise and vibration (during construction), traffic, visual resources, and health hazards.

PG&E also provides natural gas service to the city. PG&E would need to extend its natural gas infrastructure to serve new development. Potential environmental effects for the construction of gas lines include, but are not limited to, air quality (during construction), biological resources (depending on location), cultural resources (depending on location), hazardous materials, land use, noise and vibration (during construction), traffic, and health hazards.

Development under the proposed project would be required to comply with the changes to Title 24 of the California Code of Regulations regarding energy efficiency. These new energy efficiency standards were developed in response to the state's energy crisis as well as AB 970 (Building Energy Efficiency Standards) and SB 5X (Outdoor Lighting Standards) requirements to avoid the wasteful, inefficient and unnecessary consumption of energy and to improve residential and nonresidential building energy efficiency, minimize impacts to peak energy usage periods, and reduce impacts on overall state energy needs.

AT&T and Comcast provide cable, Internet, and telephone service to the city. While implementation of the proposed project would result in growth in the city and require the expansion of these services, most of the underground and aerial telephone, cable, and Internet transmission lines are generally collocated with other utilities on poles or in underground trenches and are constructed in public and roadway rights-of-way to reduce visual and aesthetic impacts and potential safety hazards.

While the environmental effects of necessary infrastructure to serve development accommodated by the proposed project are addressed programmatically in this DEIR, the environmental review of providing electrical, natural gas, telephone, and cable services is typically handled on a case-by-case basis in conjunction with individual development projects. A project-level CEQA document would analyze the potential environmental impacts of a project involving additional infrastructure at a more specific level and would identify mitigation measures more specific to those impacts. Since specific infrastructure projects have not been identified at this time, potential impacts are addressed at a programmatic level only. This impact is considered **less than significant**.

Three Corridors Specific Plan

Implementation of the proposed Specific Plan would consist of the revitalization of the San Pablo Avenue, Pinole Valley Road, and Appian Way corridors, which could include new development and/or redevelopment of various urban uses. Such development would not be expected to result in substantial population growth beyond that projected as part of the proposed General Plan Update. Therefore, no significant increase in electrical, natural gas, or telephone services beyond those addressed in the proposed General Plan would be expected to result. This impact is considered to be **less than significant**.

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Zoning Code Update

Updates to the Zoning Code are intended to further clarify the types and forms of uses permitted under particular land use designations, but would not result in any development activities beyond that analyzed for the proposed General Plan Update. Therefore, the Zoning Code Update would have an impact similar to that for the General Plan Update as discussed above.

Proposed General Plan Policies and Actions that Address Increased Demand for Electrical, Natural Gas, and Telecommunication Services

The following General Plan policies address effects related to the provision of electric, natural gas, and cable/television services in the Planning Area:

- | | |
|-----------------|---|
| Action CS.1.1.4 | The City shall increase the energy efficiency and hazard resistance of public buildings. |
| Policy CS.9.1 | The City will seek opportunities to improve the energy efficiency of facilities and operations. |
| Action CS.9.1.1 | Continue to encourage the use of solar energy, both active and passive, in the orientation and design of all new construction projects. |
| Action CS.9.1.2 | Continue efforts to convert public buildings to solar power wherever possible. |

In addition, Chapter 7.0, *Private Realm Standards and Design Guidelines*, of the Three Corridors Specific Plan encourages the incorporation of building siting and design techniques that increase energy efficiency including orienting buildings to maximize solar access and the use of solar power systems, green roofs, and green building practices. Chapter 8.0, *Public Realm Standards and Design Guidelines*, encourages energy efficiency in public facilities and public lighting. Furthermore, Chapter 17.94 of the Zoning Code Update allows for the use of wind energy conversion systems in all zoning districts with the issuance of a use permit and provides specific performance standards for such systems.

Implementation of the above policy and action items, coupled with adherence to state standards and regulations, would ensure that implementation of the proposed project would not result in the wasteful, inefficient and unnecessary consumption of energy. In addition, the above policy and action items and state standards and regulations would ensure electric, natural gas, telephone, cable, and Internet-related impacts of the project would be considered **less than significant**.

Mitigation Measures

None required.

CUMULATIVE IMPACT ANALYSIS

Cumulative Setting

The cumulative setting for electrical, natural gas, and cable services encompasses the service areas of the each particular service provider (e.g., PG&E, AT&T, and Comcast), under full development of the Planning Area, expected to occur in the year 2030 and beyond. The

cumulative setting for electric service and natural gas also includes Northern California, which is currently experiencing a great amount of growth and a subsequent cumulative demand for these services and related infrastructure.

The California electrical industry was deregulated in March 1998. Since the summer of 2000, the state has been experiencing a shortage of electrical generation. This shortage has been caused by several factors, including but not limited to substantial statewide population and industry growth, complications associated with deregulation, increases in power and natural gas costs, decreases in power generation capacity of the Pacific Northwest (Oregon and Washington), and inadequate power generation capacity within the state. Based on the current situation with the California Energy Commission, it is anticipated that power supplies will be available to serve California in the short term.

Cumulative Impacts and Mitigation Measures

Cumulative Electrical, Natural Gas, and Telephone Service Impacts

Impact 4.12.8.2 Implementation of the proposed project (General Plan Update, Three Corridors Specific Plan, and Zoning Code Update), as well as potential development in the surrounding areas, would result in an increase in cumulative utility service demands. The proposed project would have a **less than cumulatively considerable** impact on electrical, natural gas, telephone, and cable television services.

There are a number of development projects in the vicinity of the City of Pinole and Contra Costa County that would be served by PG&E and result in a cumulative demand for electric service. To serve the cumulative development conditions, PG&E's existing transmission lines may need to be reconstructed, substations may need to be upgraded or added, and additional distribution lines would need to be added. It is not expected that the proposed project would trigger the need for transmission upgrades. Detailed electrical demands for the proposed project are not available at this time but would add to the cumulative demand on electrical supplies.

Under cumulative conditions, individual development projects would continue to receive natural gas service from smaller gas lines that connect to the main transmission line. In order for future development areas to receive natural gas service, they would need to tap into the main transmission line and construct separate distribution gas lines that would extend into each development. Additional pressure reduction equipment and pressure regulators would also be required to provide adequate gas pressure to all future PG&E natural gas customers. The environmental effects of necessary improvements for natural gas infrastructure would be limited to temporary construction effects associated with air quality, noise, water quality, and temporary construction traffic control. Mitigation measures identified in Section 4.3, Air Quality and Climate Change, Section 4.5, Noise, and Section 4.9, Hydrology and Water Quality, would reduce these temporary impacts.

The provision of cable and cable services would not result in additional cumulative environmental impacts identified for electric or natural gas under Impact 4.12.8.1, as facilities are generally collocated and placed within public rights-of-way to reduce such impacts. The construction of new utility infrastructure is subject to CEQA review and compliance, and the physical effects of extending service and infrastructure will be analyzed on a project-by-project basis as new development proposals are received. Fee-based utilities and services, such as electric, natural gas, and cable/telephone, provide for additional development through capital

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improvements based on service fees and connection fees, which would ensure adequate funding mechanisms even for cumulative conditions. The proposed project's electric, natural gas, telephone, and cable television impacts are less than significant and less than cumulatively considerable.

Proposed General Plan Policies and Actions that Address Cumulative Electrical, Natural Gas, and Telephone Service Impacts

The proposed General Plan update contains several policies and actions that would assist in reducing this cumulative electric, natural gas, and telephone service impact. The following list contains those policies and action items that include specific, enforceable requirements and/or restrictions and corresponding performance standards that assist in reducing this impact. Since these policies and actions have been described in detail in prior impact discussions for this section, the following is limited to only listing the policy and action item numbers.

Community Services and Facilities Element

Action CS.1.1.4, Policy CS.9.1, Action CS.9.1.1, Action CS.9.1.2

In addition, Chapter 7.0, *Private Realm Standards and Design Guidelines*, of the Three Corridors Specific Plan encourages the incorporation of building siting and design techniques that increase energy efficiency including orienting buildings to maximize solar access and the use of solar power systems, green roofs, and green building practices. Chapter 8.0, *Public Realm Standards and Design Guidelines*, encourages energy efficiency in public facilities and public lighting. Furthermore, Chapter 17.94 of the Zoning Code Update allows for the use of wind energy conversion systems in all zoning districts with the issuance of a use permit and provides specific performance standards for such systems.

The proposed General Plan policy and action items listed above would assist in addressing cumulative effects related to the provision of electric, natural gas, and cable/television services in the Planning Area.

Mitigation Measures

None required.

REFERENCES

- AECOM. 2010. Draft Environmental Impact Report, Pinole-Hercules Water Pollution Control Plant Improvement Project. Sacramento, California.
- Benjamin, Helen. 2008. Chancellor. Contra Costa Community College District. About the District: Backward Glance, Present Stance, and Future Chance.
- Bradley, Ron. 2008. Lieutenant, Contra Costa County Office of the Sheriff. Personal communication dated March 19.
- California Department of Education (CDE), School Facilities Planning Division. 2000. Guide to School Site Analysis and Development, 2000 Edition. Sacramento, California. Note: Reference in text as (CDE, 2008).
- California Department of Finance (DOF). 2009. E-5 Population and Housing Estimates for Cities, Counties and the State, 2001–2009, with 2000 Benchmark. Sacramento, California.
- California Department of Water Resources (DWR). 2010. <http://www.water.ca.gov/> (accessed February 17, 2010).
- California Energy Commission. 2008. <http://www.energy.ca.gov/>.
- California Energy Consumption Data Management System (ECDMS). 2010. <http://www.ecdms.energy.ca.gov/elecbyplan.aspx> (accessed February 11, 2010).
- California Environmental Protection Agency, San Francisco Bay Regional Water Quality Control Board (RWQCB). 2010. <http://www.swrcb.ca.gov/sanfranciscobay/index.shtml>. (accessed February 17, 2010).
- California Integrated Waste Management Board (CIWMB). 2008a. Local Government Summaries: Jurisdictions with Construction and Demolition (C&D) Ordinances: Contra Costa County. URL: <http://www.ciwmb.ca.gov/LGCentral/Summaries/07/JurisCnD.htm> (accessed April 1, 2009).
- California Integrated Waste Management Board (CIWMB). 2008b. Per Capita Disposal and Goal Measurement (2007 and Later). <http://www.ciwmb.ca.gov/LGCentral/Basics/PerCapitaDsp.htm> (accessed April 1, 2009).
- California Integrated Waste Management Board (CIWMB). 2009a. Active Landfills Profile for Keller Canyon Landfill (07-AA-0032). <http://www.ciwmb.ca.gov/Profiles/Facility/Landfill/LFProfile1.asp?COID=7&FACID=07-AA-0032> (accessed April 1, 2009).
- California Integrated Waste Management Board. 2009b. Jurisdictional Profile for West Contra Costa Integrated Waste Management Authority. <http://www.ciwmb.ca.gov/Profiles/Juris/JurProfile2.asp?RG=R&JURID=568&JUR=West+Contra+Costa+Integrated+Waste+Management+Authority> (accessed April 1, 2009).
- California State Water Resources Control Board, California Integrated Water Quality System Project (CIWQS). 2010. <https://ciwqs.waterboards.ca.gov/ciwqs/> (accessed February 20, 2010).

4.12 PUBLIC SERVICES AND UTILITIES

- California Urban Water Conservation Council (CUWCC). 2010. <http://www.cuwcc.org/> (accessed February 17, 2010).
- California's Water Recycling Task Force (CWRTF). 2003. Water Recycling 2030, Recommendations of California's Water Recycling Task Force.
- City-Data.com. 2010. Tara Hills. <http://www.city-data.com/city/Tara-Hills-California.html> (accessed February 8, 2010).
- Contra Costa Community College District (CCCCD). 2002. Office of District Research. Contra Costa Community College District Service Area Boundary Map.
- Contra Costa Community College District (CCCCD). 2007. Office of District Research. Contra Costa County Projections by College Service Area.
- Contra Costa Community College District (CCCCD). 2008. Contra Costa Community College Master Plan.
- Contra Costa Community College District (CCCCD). 2009. Contra Costa Community College District Official Website. <http://www.4cd.net/default.aspx#> (accessed August 24, 2009).
- Contra Costa County Fire Protection District (CCCFFPD). 2007. Investigation Report: Michele Drive Line of Duty Deaths. <http://www.firetactics.com/CONTRA%20COSTA%20LODD%20REPORT%207.17.08.pdf> (accessed February 8, 2010).
- Contra Costa County, Office of the Sheriff. 2009. Emergency Services. Crime Analysis, Intelligence and Terrorism. Median Response Time by Call Priority Beats 2 & 3 Bay Station Jan. 2008– Dec. 2008.
- Contra Costa LAFCo. 2009a. Municipal Service Review: Fire and Emergency Medical Service Providers. http://www.contracostalafco.org/municipal_service_reviews.htm (accessed February 8, 2010).
- Contra Costa LAFCo. 2009b. West County Sub-Regional Municipal Service Review. 2009. http://www.contracostalafco.org/municipal_service_reviews.htm (accessed February 8, 2010).
- Dudek. 2008. Final Water and Wastewater Services Municipal Services Review for West Contra Costa County. Riverside, California. (prepared for Contra Costa Local Agency Formation Commission)
- East Bay Municipal Utility District (EBMUD). 2005. Water Resources Planning Division. Urban Water Management Plan 2005.
- East Bay Municipal Utility District (EBMUD). 2009a. Water Supply Management Program 2040 Plan.
- East Bay Municipal Utility District (EBMUD). 2009b. Draft Program Environmental Impact Report Water Supply Management Program 2040. SCH# 2008052006.
- Education Data Partnership (EDP). 2009. Education Data Partnership, District Report: West Contra Costa Unified School District. <http://www.ed-data.k12.ca.us/welcome.asp> (accessed March 20, 2009).

- ESA. 2006. EBMUD Water Treatment and Transmission Improvements Program Draft Environmental Impact Report SCH # 2005092019. (prepared for East Bay Municipal Utility District)
- Gigliotti, Michael. 2009. Land Agent. Pacific Gas and Electric. Written correspondence dated March 13.
- Grace, Richard. 2009. Assistant Chief, Support Services Division, Contra Costa Fire Protection District (CCFPD). Written correspondence dated March 23.
- Holt, Brian W., AICP. 2009. Senior Planner, East Bay Regional Park District. Written correspondence dated April 27.
- Kirkpatrick, William. 2007. Manager of Water Distribution Planning, East Bay Municipal Utilities District. Personal communication (letter) dated January 2.
- Lehon, Chris. 2009. Executive Director, West Contra Costa Integrated Waste Management Authority. 2009. Written correspondence dated March 30.
- Loetscher, Scot. 2009. California Highway Patrol, Special Projects Division. Personal communication dated March 18.
- McPartland, Gail. 2009. Deputy County Librarian, Contra Costa County Library. 2009. Written correspondence dated March 27.
- National Fire Protection Association (NFPA). 2008. <http://www.nfpa.org/>.
- Pacific Gas & Electric (PG&E). 2010. <http://www.pge.com/about/company/profile/>.
- Pinole, City of. 2008. Weekly Activities Report. <http://www.ci.pinole.ca.us/about/docs/cmreport/20080307cmrpt.pdf> (accessed February 8, 2010).
- Pinole, City of. 2009a. City of Pinole General Plan Background Report. <http://www.ci.pinole.ca.us/planning/genplan07/documents.html#GeneralPlanBackgroundDocuments>.
- Pinole, City of. 2009b. Administrative Report. <http://www.ci.pinole.ca.us/about/docs/cmreport/20091113cmrpt.pdf> (accessed February 8, 2010).
- Pinole, City of. 2010. <http://www.ci.pinole.ca.us/> (accessed February 17, 2010).
- Pinole (City of) Police Department (PPD) 2008. 2008 Annual Report. <http://www.ci.pinole.ca.us/police/reports-stats.html> (accessed February 8, 2010).
- Pinole (City of) Recreation Department. 2007. City of Pinole Recreation Park and Facility Five-Year Master Plan for Fiscal Years 2006/2007 through 2010/2011.
- Pinole (City of) Recreation Department. 2009. City of Pinole Recreation Department. <http://www.ci.pinole.ca.us/recreation/index.html> (accessed August 24, 2009).
- Rehnstrom, David. 2009. Senior Civil Engineer, Water Service Planning, East Bay Municipal Utilities District. Personal communication (letter) dated February 25.

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South Bay Water Recycling. 2010. Regulation. <http://www.sanjoseca.gov/sbwr/regulation.htm> (accessed February 17, 2010).

State Water Resources Control Board (SWRCB). 2010. <http://www.waterboards.ca.gov/> (accessed February 17, 2010).

United States Department of Energy (DOE). 2010. Porter-Cologne Water Quality Control Act. <http://www.ete.energy.gov/Regulation/Porter-Cologne-Water-Quality-Control-Act.html> (accessed February 17, 2010).

United States Environmental Protection Agency (USEPA). 2010. <http://www.epa.gov/> (accessed February 17, 2010).

West Contra Costa Unified School District (WCCUSD). 2007. Facilities Master Plan.

West Contra Costa Unified School District (WCCUSD). 2009. School Consolidation/Closure Review. 2009.

West County Wastewater District (WCWD). 2009. Personal communication (letter).

West County Wastewater District (WCWD). 2010. <http://www.wc wd.org/index.htm> (accessed February 17, 2010).

Westrup, Laura. Planning Division, California Department of Parks and Recreation. May 28, 2002. Quimby Act 101 An Abbreviated Overview. Note: Reference in text as (Westrup, 2002).