4.2 PUBLIC UTILITIES

This section describes existing and proposed utilities systems associated with the proposed project: water, wastewater, stormwater conveyance, solid waste disposal, electricity, and natural gas. The potential impacts of the proposed project on these utilities are described, and environmental impacts of necessary on-site and potential off-site infrastructure improvements are evaluated. Impacts are evaluated for development at full build-out of the project area in accordance with the Specific Plan.

4.2.1 EXISTING CONDITIONS

WATER SUPPLY AND INFRASTRUCTURE

Surface Water

The City currently serves as the water supplier for the Plan area. Water supply for the City includes surface water from Folsom Lake, groundwater, and recycled water. Surface water is delivered from Folsom Lake via United States Bureau of Reclamation (USBR) facilities through parallel 48-inch and 60-inch transmission mains to the City's water treatment plant on Barton Road which has capacity of 100 million gallons per day (mgd).

The City of Roseville's water source has historically been from surface sources of which Folsom Lake has been the primary source since the Roseville water treatment plant came on-line in 1971. Through this intake Roseville receives raw water from the USBR and Placer County Water Agency (PCWA) through USBR facilities. Groundwater is occasionally used as a short term, back-up supply. It should be noted however that during the last year the City of Roseville has conducted a pilot program which was comprised of limited testing of the City's aquifer storage and recovery (ASR) facility on the west side of the City. Otherwise, the last instance of groundwater use was in drought conditions experienced in 1991. Intertie water from adjacent agencies typically occurs due to treatment plant disruptions experienced during plant construction projects or other maintenance operations that require plant shutdown. A few interties are used for equal trading of water supplies in two different service areas due to local operational needs.

The City's current annual surface water supply of 66,000 acre-feet (af) is American River water diverted from Folsom Lake. The City maintains a contract entitlement with the USBR for 32,000 af for Central Valley Project (CVP) supplies. A contract entitlement with PCWA for 10,000 af, with options for 20,000 af more, serves Middle Fork Project water through Folsom Lake. The City has a current contract with San Juan Water District (SJWD) for 4,000 af. The SJWD supply is a wet year supply only and is served from part of SJWD's contract with PCWA for 25,000 af of Middle Fork Project water, also served from Folsom Lake (City of Roseville 2006).

The City participated in the Water Forum, which was comprised of regional stakeholders concerned with the protection of the Lower American River and reliable water supplies. The Water Forum resulted in the development of several purveyor specific agreements that outline how purveyors will meet commitments agreed too as a part of the Water Forum efforts in providing a safe and reliable water supply through the year 2030 and for protecting resources associated with the Lower American River. Roseville's agreement included a limitation of diversion from the American River in both wet and driest years. In wet years the City will limit diversions from its USBR and PCWA American River supply contracts to no more then 54,900 AFY and to no less then 39,800 AFY in driest years. Water supply contracts and Water Forum limitations are further described within the City's 2005 Urban Water Management Plan prepared by Brown and Caldwell and dated March 2006. Through an agreement with the San Juan Water District (SJWD) the City increased its wet year water supplies an additional 4,000 AFY for a total supply of 58,900 AFY.

Water treatment for the City of Roseville is provided at the 100 million gallon per day (MGD) Barton Road WTP. The City is also part of a group of agencies that are studying the construction of a new water treatment facility on the Sacramento River, led by PCWA. The new treatment plant would allow access to USBR water without

impacting the Lower American River, which is consistent with the Water Forum Agreement. Roseville plans to receive 10 mgd of capacity from this new plant when it is constructed (City of Roseville 2006).

The City's existing maximum-day demand during a normal year for potable water is approximately 33,545 acre-feet per year (AFY) or 30 mgd. The estimated future maximum-day demand for water under existing General Plan conditions during a normal year is 56,465 AFY or 50.4 mgd (average day) at buildout of the city in the year 2030. The City's current water supply allocation of approximately 66,000 AFY (limited to 58,900 AFY from the American River in accord with the City's Water Forum Agreement) is sufficient to meet the estimated future demands; however, the City plans to optimize the use of recycled water to increase future available water supplies (City of Roseville 2006).

The City's water distribution system includes pipes, storage facilities, booster pumping stations, and pressure stations. The City has five storage tanks for a total of 28 million gallons of storage.

Groundwater

The City maintains groundwater wells for backup supply and dry year supply. The City is also investigating using its wells for aquifer storage and recovery (ASR) purposes to store potable water in the aquifer when available for use during other times (City of Roseville 2006). Over the past several years the City has been working with the State Regional Water Quality Control Board and other state agencies in piloting its ASR program. This has included the injection of potable water taken from the City's distribution system into the aquifer and subsequent extraction and delivery to City water customers. The City's current groundwater well facilities are capable of delivering approximately 10,200 AFY of water supply.

Recycled Water

Recycled water is available from Roseville's two wastewater treatment plants (WWTP) – Dry Creek WWTP and Pleasant Grove WWTP. Both plants produce a Title 22 quality effluent that is available for recycled water applications. The system currently serves over 2,000 AFY of recycled water to customers within and outside of the City limits through a distribution network to parks, streetscapes, and golf courses. Of this amount, approximately 1,480 AFY are for customers located within the City of Roseville. System expansion is planned for more intensive the use of recycled water in the western portion of the City as new development is built (City of Roseville 2006). Recycled water demands within the City are expected to increase by approximately 2,345 AFY for a total recycled water demand of 3,825 AFY at buildout of the City's existing General Plan (RMC TM 5a, updated February 11, 2008).

Project Area

The existing water distribution system includes pipelines ranging from 4 to 24 inches in diameter extending along multiple roadways and alleyways in the Plan area. Details specific to each waterline identified by the street or alleyway in which they are located are described below.

Historic Old Town

- Church Street – contains a 12-inch pipe extending from Lincoln Street to off the project site
- Lincoln Street – contains a 12-inch pipe extending from Church Street to off the project site and a 4-inch pipe extending from Church Street to an alley between Grove and Pleasant Streets
- Elefa Street – contains a 8-inch pipe extending from Lincoln Street to off the project site
- Washington Boulevard – contains a 24-inch pipe extending from Downtown Roseville to Main Street and a 8-inch pipe extending from All America City Boulevard to Elefa Street

- Alley between Grove and Pleasant Streets – contains a 6-inch pipe extending from Lincoln Street to off the project site
- Alley between Main and Grove Streets – contains a 6-inch pipe extending from Lincoln Street to off the project site
- Alley between Elefa and Pleasant Streets – contains a 4-inch pipe extending from Lincoln Street to off the project site

Downtown Roseville

- Douglas Boulevard – contains a 8-inch pipe extending across the entire Plan area except for a short gap in the line at Dry Creek
- Taylor Street – contains a 6-inch pipe extending from Royer Street to its northwest terminus
- Royer Street – contains a 4-inch and a 12-inch pipe extending from Douglas Boulevard to Taylor Street
- Judah Street – contains a 4-inch pipe extending from Douglas Boulevard to Royer Street
- Vernon Street – contains a 8-inch pipe extending from Washington Street to Jefferson Street and a 24-inch pipe extending from Washington Street to Grant Street
- Grant Street – contains a 24-inch pipe extending from Vernon Street to Oak Street
- Oak Street – contains a 6-inch pipe extending from Taylor Street to Grant Street and a 24-inch pipe extending from Grant Street to Washington Street
- Washington Street – contains a 24-inch pipe extending from Vernon Street into Historic Old Town
- Stella Alley – contains a 4-inch pipe extending from Douglas Boulevard to near Grant Street
- Republican Alley – contains a 6-inch pipe extending from Douglas Boulevard to Taylor Street
- Alley between Vernon Street and UPRR – contains a 6-inch pipe extending from Bulen Street to Grant Street

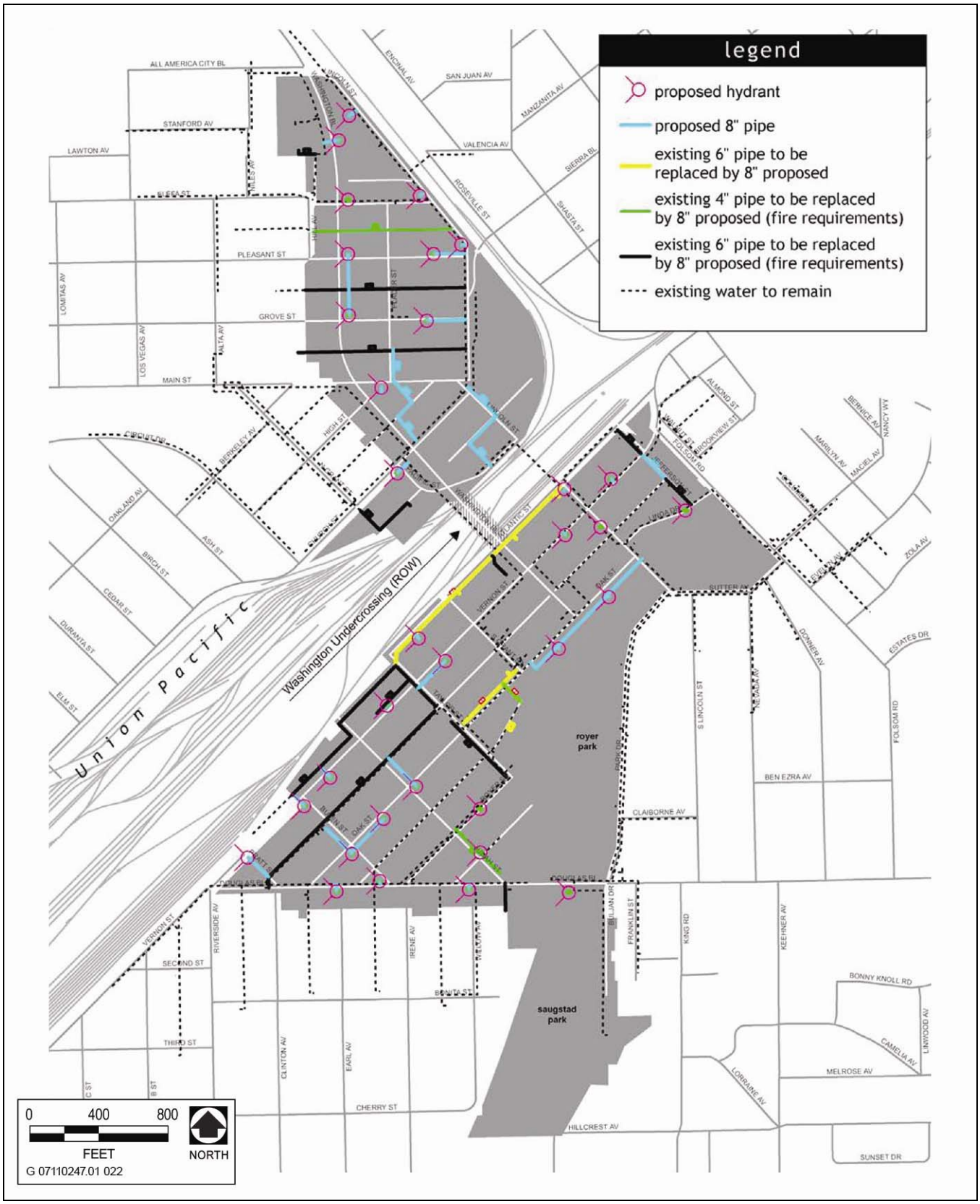
The City has determined that several pipes for the water distribution system in the Plan area will need to be upsized in the future, with or without implementation of the proposed project, due to greater water demand and the need for better fire protection in the Downtown Roseville area (please refer to discussion under Impact 4.2-1). Exhibits 4.2-1 and 4.2-2 show existing and proposed water and fire flow facilities in the Plan area.

WASTEWATER TREATMENT AND COLLECTION SYSTEM

Wastewater Treatment

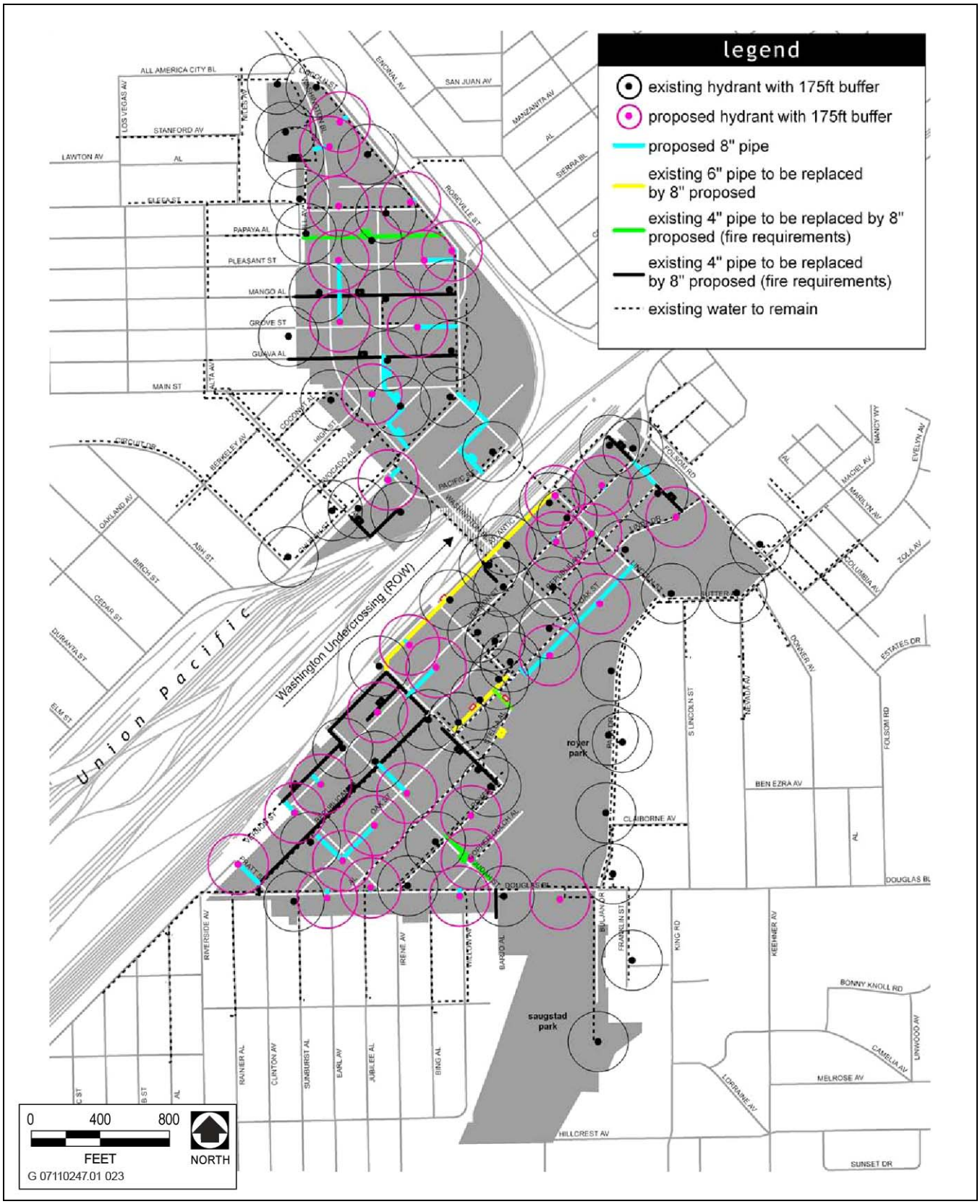
The City of Roseville, along with the South Placer Municipal Utility District and Placer County are partners within the South Placer Wastewater Authority (SPWA). The SPWA was created in 2000 to oversee policy for funding regional wastewater infrastructure. The City of Roseville owns and operates two regional wastewater treatment facilities on behalf of the partners. These treatment facilities include the Dry Creek wastewater treatment plant (DCWWTP) and the Pleasant Grove wastewater treatment plant (PGWWTP).

The City has prepared the South Placer Regional Wastewater and Recycled Water Systems Evaluation (Systems Evaluation, June 2007) which delineates the 2005 regional wastewater service area boundary (2005 Boundary)



Source: City of Roseville 2008

Water **Exhibit 4.2-1**



Source: City of Roseville 2008

Hydrants **Exhibit 4.2-2**

and provides baseline and projected characterizations of its regional wastewater and recycled water systems. The 2005 Boundary includes areas within Roseville, Rocklin, Loomis, and portions of Granite Bay and unincorporated Placer County. This document is also the long-term planning tool to project wastewater treatment needs, and to identify necessary capital improvement projects to accommodate urban growth within the 2005 Boundary. The Systems Evaluation document addressed system conditions as of June 2004 and anticipated buildout conditions within the 2005 Boundary; including scenarios assuming intensified growth within redevelopment areas in Roseville and Rocklin. Build out of the 2005 Boundary, including intensification scenarios within the Roseville and SPMUD service areas would result in 16.34 mgd ADWF at the DCWWTP and 16.15 mgd ADWF at the PGWWTP (RMC TM 2b, Update January 24, 2008) totaling 32.49 mgd ADWF in the Service Area.

Wastewater Collection

The existing wastewater collection system serving the Vernon Street portion of the Plan area consists of a mixture of 4-inch, 6-inch, and 10-inch pipelines (see Exhibit 4.2-3). The existing wastewater collection system serving the Historic Old Town portion of the Plan area consists of 6-inch and 10-inch pipelines (see Exhibit 4.2-3). In addition, a 63-inch pipeline extends through the Vernon Street portion of the Plan area and is located adjacent to Dry Creek (see Exhibit 4.2-3). However, this 63-inch pipeline is a trunk line and does not serve the Plan area.

STORMWATER DRAINAGE SYSTEM

Stormwater and drainage service for the Plan area is provided by the City of Roseville and managed by the Public Works Department. Within the Plan area, all stormwater and surface water is collected and conveyed into a closed system that is maintained by the City.

The existing stormwater drainage system serving the Plan area is primarily located in Douglas Boulevard, Taylor Street, Grant Street, Washington Street, Lincoln Street, Walnut Street, Church Street, Pacific Street, Grove, Street, and Placer Street. Investigations by City maintenance staff revealed that the storm pipelines, drain inlets, and manholes located in or along Douglas Boulevard and Taylor Street need to be replaced (City of Roseville 2008) (please refer to discussion under Impact 4.2-3). Exhibit 4.2-4 shows existing and proposed storm drain facilities in and near the Plan area.

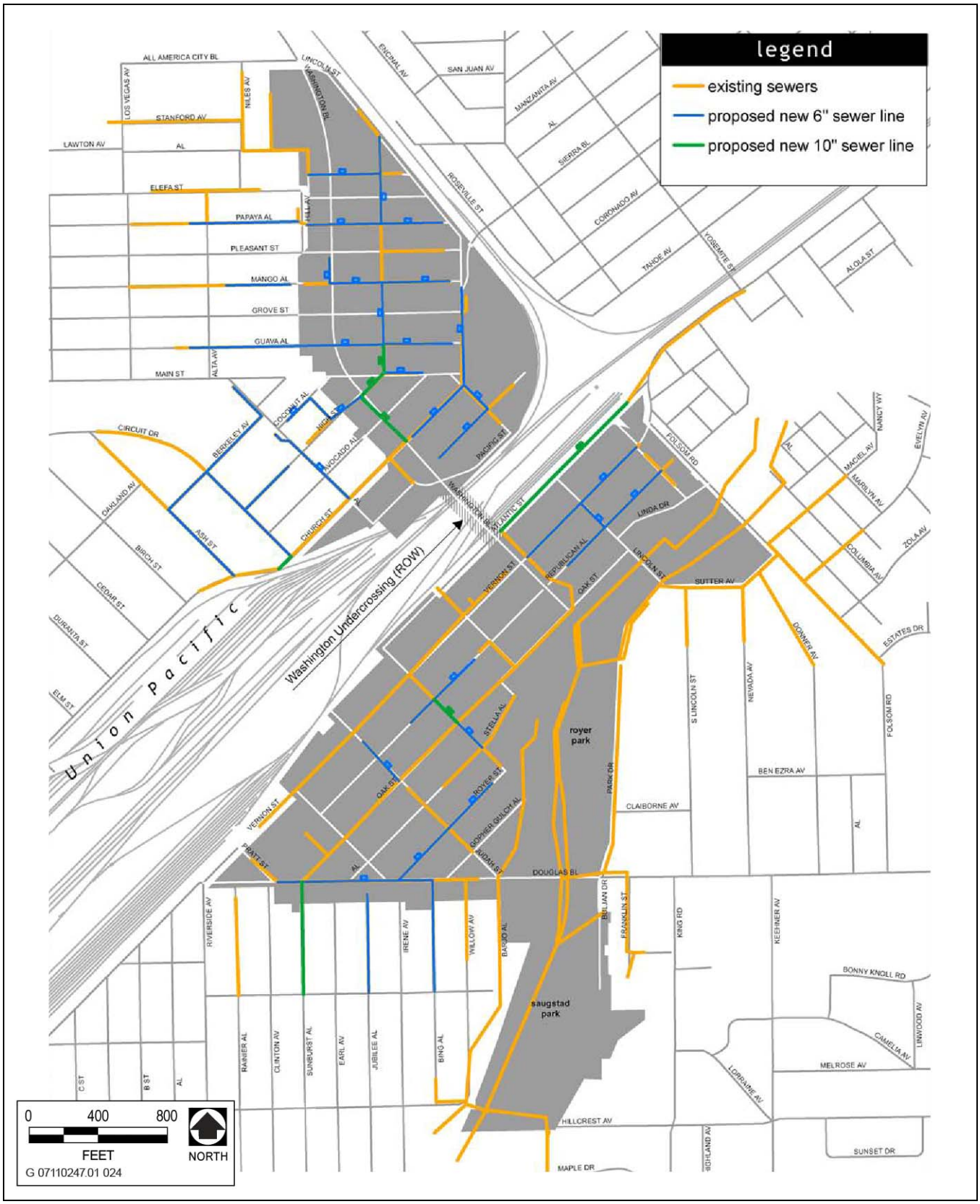
ELECTRICITY AND NATURAL GAS

Roseville Electric, the municipally owned provider for the City of Roseville, provides electrical service in the Plan area which is conveyed predominantly via aerial lines in the alleys or adjacent to roadways (see Exhibit 4.2-5). There are exceptions to this mode of service, but they are mainly limited to the Historic Old Town or where new development has occurred (e.g., Civic Center, Civic Plaza project). In these areas Roseville Electric or the development has paid to underground the services.

Pacific Gas and Electric Company (PG&E) provides natural gas service to the Plan area via gas mains generally located in the alleys that run parallel to the grid street pattern (see Exhibit 4.2-6). The majority of the Plan area is serviced with a mix of gas lines ranging in size from ¾ of an inch to six inches.

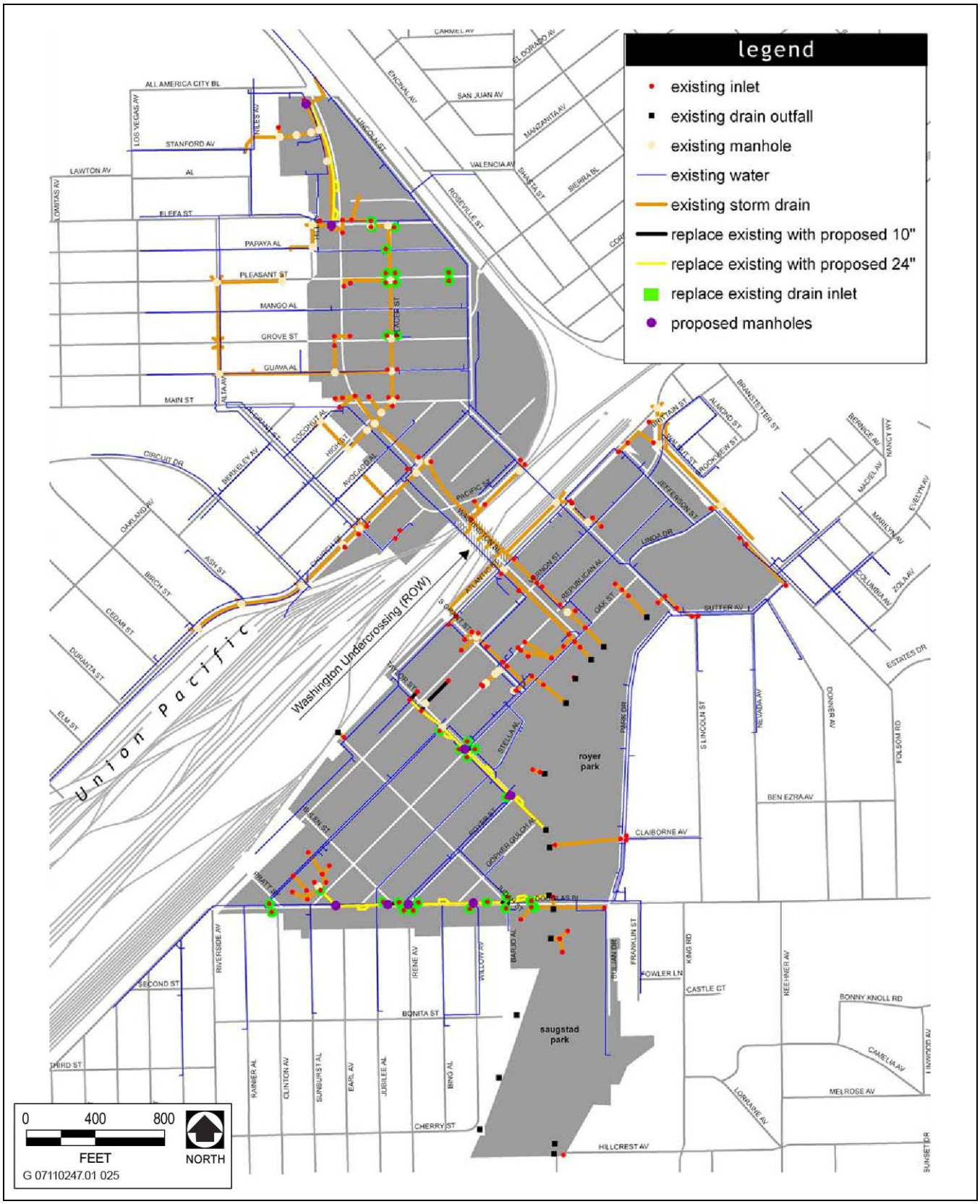
SOLID WASTE COLLECTION AND DISPOSAL, SOURCE REDUCTION & RECYCLING

Roseville, along with the City of Lincoln, City of Rocklin, and Placer County, formed the Western Placer Waste Management Authority (Authority) to provide solid waste management. The Authority is assigned the lead role in cooperative policy making with respect to solid waste issues. Placer County oversees the operation of one regional landfill, the Western Regional Sanitary Landfill (WRSL) which is located at the southwest corner of Athens Road and Fiddyment Road and serves the western portion of the County, including Roseville. The WRSL is specified as a Class III non-hazardous site and a private firm under contract with the Authority manages its



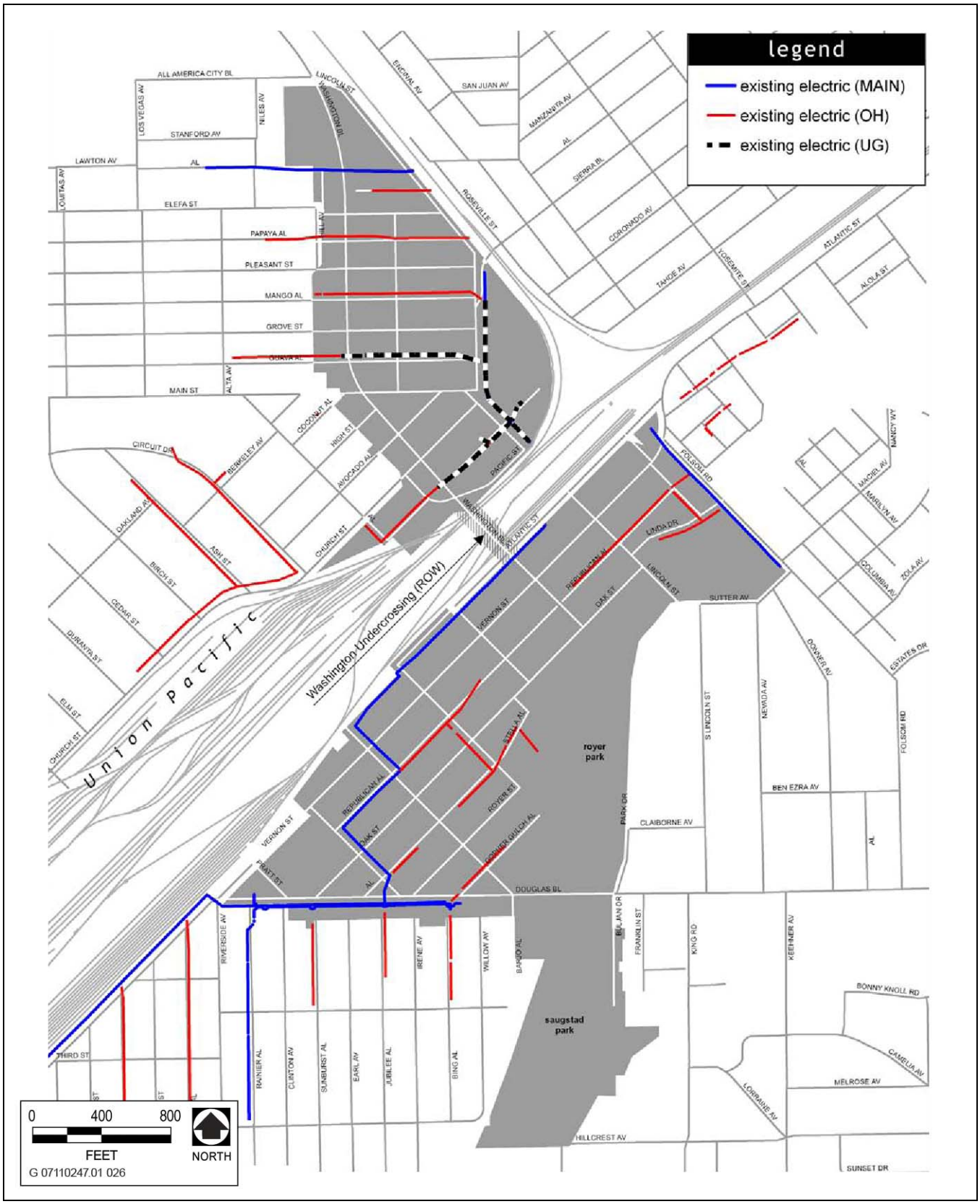
Source: City of Roseville 2008

Sewers **Exhibit 4.2-3**



Source: City of Roseville 2008

Storm Drains **Exhibit 4.2-4**



Source: City of Roseville 2008

Utilities **Exhibit 4.2-5**

Source: City of Roseville 2008

Gas Facilities **Exhibit 4.2-6**

operation. Hazardous materials are transported to Class I landfills outside the County. Collection of solid waste within the City is operated and managed by Roseville's Environmental Utilities Department, Solid Waste Utility.

The WRSL has disposal acreage of 231 acres and is expected to cease operation in 2042. Currently, the WRSL has a maximum permitted throughput of 1,900 tons per day and a remaining capacity of approximately 29,100,000 cubic yards which equals 80% of its permitted capacity (California Integrated Waste Management Board (CIWMB) 2008a).

4.2.2 REGULATORY BACKGROUND

The *City of Roseville General Plan 2020* (City of Roseville 2004) identifies goals and policies associated with providing water, wastewater, solid waste disposal, electricity, and natural gas to new development. These goals and policies provide guidance on the provision of utility services and on eliminating deficiencies and obstacles to the expansion of utility services to adequately serve existing and future development. In addition, state legislation ties proposed development to the availability of adequate long-term water supplies to serve development projects. These City and state requirements, as they apply to each utility element, are summarized below.

WATER SUPPLY

The City does not require special permits for water distribution. However, building permits are required before water service can be provided. The following goals and policies of the *City of Roseville General Plan 2020* apply to water supply.

Water System Goal 1: Maintain a water system that adequately serves the existing community and planned growth levels, ensuring the ability to meet projected water demand and to provide needed improvements, repairs, and replacements in a timely manner.

Water System Goal 2: Provide water services to all existing and future Roseville water utility customers. The provision of services by another provider may be considered where it is determined that such service is beneficial to the City and its utility customers or the provisions of City services is not feasible.

Water System Goal 3: Ensure that safe drinking water standards are met and maintained in accordance with State Department of Health Services and U.S. Environmental Protection Agency (EPA) regulations.

Water System Goal 4: Actively pursue water conservation measures.

Water System Goal 5: Actively pursue supplemental water supplies.

- **Water System Policy 1:** Secure sufficient sources of water to meet the needs of the existing community and planned growth.
- **Water System Policy 2:** Provide sufficient water treatment capacity and infrastructure to meet projected water demand.
- **Water System Policy 3:** Initiate, upon 75% of treatment plant capacity, expansion studies to determine necessary improvements to meet projected water demand.
- **Water System Policy 4:** Establish a process for monitoring growth trends to anticipate water consumption needs.
- **Water System Policy 5:** Ensure all development provides for and pays a fair share of the cost for adequate water distribution, including line extensions, easements, and plant expansions.

- **Water System Policy 6:** Design the City's water system to maintain a minimum water pressure of 50 pounds per square inch (PSI) while providing adequate water to meet fire demands in the system.

- **Water System Policy 7:** Provide an emergency back-up system to add sufficient reliability to the system as determined by the Environmental Utilities Department.

- **Water System Policy 8:** Develop and pursue alternatives to continue delivery of PCWA and SJWD water to Roseville.

- **Water System Policy 9:** Monitor water quality regularly and take necessary measures to prevent contamination.

- **Water System Policy 10:** Develop and implement water conservation standards and measures as necessary elements of the water system.

- **Water System Policy 11:** Develop and implement an aquifer storage and recovery program.

WASTEWATER

The City does not require special permits for wastewater collection. However, building permits are required before sewer service can be provided. The following goals and policies of the *City of Roseville General Plan 2020* apply to wastewater service and treatment.

Wastewater and Recycled Water Systems Goal 1: Participate in a cooperative regional approach to wastewater treatment and discharge in order to maintain a system that adequately services planned growth within the City.

Wastewater and Recycled Water Systems Goal 2: Provide wastewater services to all existing and future Roseville development through the City's wastewater utility. The provision of services by another provider may be considered when it is determined that such service is beneficial to the City and its utility customers or the provision of City services is not feasible.

Wastewater and Recycled Water Systems Goal 3: Actively pursue the use of recycled water where appropriate and expand recycled water distribution system to deliver and meet estimated demands of 4,500 acre-feet/year.

Wastewater and Recycled Water Systems Goal 4: Meet State of California and EPA water quality standards for the discharge of treated wastewater, as well as meet State of California quality standards for the production of recycled water.

- **Wastewater and Recycled Water Systems Policy 1:** Expand recycled water distribution system to deliver and meet estimated demands of 4,500 acre feet/year.

- **Wastewater and Recycled Water Systems Policy 2:** Ensure adequate storm surge capacity at the wastewater treatment plants (WWTP).

- **Wastewater and Recycled Water Systems Policy 3:** Initiate upon 75 percent utilization of treatment plant capacity, expansion studies to determine necessary improvements to meet projected wastewater treatment demands.

- **Wastewater and Recycled Water Systems Policy 4:** Ensure that wastewater treatment capacity is available and that wastewater generation is minimized.

- **Wastewater and Recycled Water Systems Policy 5:** Explore potential alternatives to treatment and discharge.

- **Wastewater and Recycled Water Systems Policy 6:** Develop, plan, and provide incentives for use of recycled water by the public and private sectors.

- **Wastewater and Recycled Water Systems Policy 7:** Prevent hazardous materials from entering the wastewater system.

STORMWATER DRAINAGE

The City has developed several flood mitigation programs and maintains several flood control projects designed to protect development within its jurisdiction and to lessen the potential for flooding within neighboring communities. *The City of Roseville General Plan 2020* contains the following flood control management goals and policies that are applicable to the project.

Flood Protection Goal 1: Minimize the potential for loss of life and property due to flooding.

Flood Protection Goal 2: Pursue flood control solutions that are cost-effective and minimize environmental impacts.

- **Flood Protection Policy 1:** Continue to regulate, through land use, zoning, and other restrictions, all uses and development in areas subject to potential flooding.

- **Flood Protection Policy 2:** Monitor and regularly update City flood studies, modeling and associated land use, zoning, and other development regulations.

- **Flood Protection Policy 3:** Continue to pursue a regional approach to flood issues.

- **Flood Protection Policy 4:** Provide flood warning and forecasting information to community residents to reduce impacts to personal property.

- **Flood Protection Policy 5:** Minimize the potential for flood damage to public and emergency facilities, utilities, roadways, and other infrastructure.

- **Flood Protection Policy 6:** Require new developments to provide mitigation to insure that the cumulative rate of peak run-off is maintained at pre-development levels.

- **Flood Protection Policy 7:** Continue to implement the Storm Maintenance Program to keep creeks and storm drain systems free of debris.

- **Flood Protection Policy 8:** Establish flood control assessment districts or consider other funding mechanisms to mitigate flooding impacts.

- **Flood Protection Policy 9:** Where feasible, maintain natural stream courses and adjacent habitat and combine flood control, recreation, water quality, and open space functions.

SOLID WASTE

The City has developed several solid waste programs designed to ensure adequate solid waste disposal facilities are available to serve needs of the community. *The City of Roseville General Plan 2020* contains the following solid waste goals and policies that are applicable to the proposed project.

Solid Waste, Source Reduction & Recycling Goal 1: Provide a healthy, safe, and economical system for solid waste collection and disposal.

Solid Waste, Source Reduction & Recycling Goal 2: Provide solid waste collection and disposal services to all existing and future Roseville development through the City's Solid Waste Utility. The provision of services by another provider may be considered where it is determined that such service is beneficial to the City and its customers or the provision of City services is not feasible.

- **Solid Waste, Source Reduction & Recycling Policy 4:** Maintain a minimum 10-year reserve capacity at the landfill.

ELECTRICITY AND NATURAL GAS

Roseville Electric and electric rates are regulated by the City of Roseville City Council. The following goals and policies of the *City of Roseville General Plan 2020* also apply to electrical and natural gas service.

Electric Utility Goal 1: Within the regulatory guidance provided by the City Council and any State of California mandated actions, maintain a municipal electric utility that provides an efficient, economical, and reliable electric system.

Electric Utility Goal 2: Provide electric services to all existing and future Roseville development through the City's Electric Utility. The provision of services by another provider may be considered where it is determined that such service is beneficial to the City and its utility customers or the provision of City services is not feasible.

Electric Utility Goal 3: Maintain adequate resource reserves consistent with industry standards, sound utility planning, and applicable contracts.

Electric Utility Goal 4: Aggressively pursue cost-effective and environmentally safe alternative sources of energy and energy conservation measures.

- **Electric Utility Policy 1:** Secure new electric resources and transmission as necessary to meet projected demand levels.
- **Electric Utility Policy 2:** Provide improvements to the sub-transmission and distribution system, consistent with facility planning studies, to ensure a reliable source of electricity is maintained.
- **Electric Utility Policy 3:** Develop siting and land use compatibility standards for energy facilities.
- **Electric Utility Policy 4:** Extend existing resource contracts if found to be in the best interest of the City.
- **Electric Utility Policy 5:** Explore the feasibility of the development of and participation in renewable energy resources.
- **Electric Utility Policy 6:** Adopt a load/resource management plan, incorporating energy efficiency, conservation, load management, and reliability strategies, identifying program objectives and implementation and monitoring mechanisms.
- **Electric Utility Policy 7:** Pursue effective measures to enhance reliability of interconnection of electric utility system to region-wide grid.
- **Electric Utility Policy 8:** Pursue reasonable and cost-effective energy efficiency, conservation, and load management programs pertinent to the electric utility system.
- **Electric Utility Policy 9:** Continue to pursue emergency electric supplies.

- **Electric Utility Policy 10:** Require new development to pay a fair share of the cost of new sub-transmission and distribution needed to serve the development and to dedicate sites and easements needed for substations, transmission, sub-transmission, and distribution.

- **Electric Utility Policy 11:** Develop and implement public education programs designed to increase the public's awareness of energy issues, including conservation measures and practices.

- **Electric Utility Policy 12:** New construction and tenant improvements will be designed so as to exceed the applicable California Title 24 Standards, at levels as indicated in applicable electric utility programs.

Privately-Owned Utilities Goal 1: Work with privately-owned utility companies to ensure adequate service is provided in a timely manner for Roseville customers.

- **Privately-Owned Utilities Policy 1:** Provide for the review and comment of development proposals by non-City-owned utilities.

- **Privately-Owned Utilities Policy 2:** Require the installation of communication and electric lines underground except when infeasible or impractical.

- **Privately-Owned Utilities Policy 3:** Require the provision of necessary utility easements in all new developments.

- **Privately-Owned Utilities Policy 4:** Work with non-City-owned utility providers to insure that uses and equipment are planned and constructed in a manner consistent with adopted land use policies and design guidelines, to the extent feasible.

4.2.3 ENVIRONMENTAL IMPACTS

ANALYSIS METHODOLOGY

The Specific Plan includes descriptions and summaries of water, wastewater, drainage, and solid waste facilities and recommends upgrades based on previous studies prepared by the City Environmental Utilities Department (e.g., Urban Water Management Plan [2006]). Impacts on water, wastewater, stormwater conveyance, electricity, and natural gas services that would result from the project were identified based on these previous studies and comparing existing service capacity and facilities against anticipated future demand associated with new development in the project area.

THRESHOLDS OF SIGNIFICANCE

The proposed project would cause a significant impact on utilities if it would:

- create demand beyond available service capacity;

- create demand for wastewater treatment/disposal beyond available service;

- substantially increase the rate or amount of surface runoff in a manner that would exceed the capacity of existing/planned drainage facilities and/or result in flooding on-site or off-site;

- create demand for electrical or natural gas service that is substantial in relation to the existing demands;

- exceed wastewater treatment requirements of the regional water quality control board;

- require or result in the construction of new water or wastewater treatment facilities or expansion of existing facilities, the construction of which could cause significant environmental effects;
- require or result in the construction of new stormwater drainage facilities or expansion of existing facilities, the construction of which could cause significant environmental effects;
- have insufficient water supplies available to serve the proposed project from existing or permitted entitlements and resources, or require new or expanded entitlements;
- result in a determination by the wastewater treatment provider that serves or may serve the project area that it has inadequate capacity to serve the proposed project's projected demand in addition to the provider's existing commitments; or
- require the construction of new or expansion of solid waste facilities, the construction of which could cause significant environmental effects.

IMPACT ANALYSIS

IMPACT 4.2-1 Public Utilities – Potable Water Supply, Treatment, and Distribution. *The proposed Specific Plan would increase demand for potable water from existing City water supplies and production facilities. The City's water supply portfolio and treatment plant capacity are sufficient to serve the Specific Plan. With planned water system upgrades, the City's water system would have sufficient capacity to serve existing and new development envisioned in the Specific Plan. This impact is considered* ***less than significant****.*

Water Supply

Analysis for water supply must be evaluated for both wet year and dry year scenarios. The City's existing surface water supply contracts total 66,000 acre-fee per year (AFY). This includes 32,000 AFY from the USBR, 30,000 AFY from PCWA and 4,000 AFY from SJWD (wet year only supply). In accord with the City's Water Forum Agreement the City has agreed to limit diversion from its USBR and PCWA American River supply contracts to no more then 54,900 AFY in wet years and no less then 39,800 AFY in dry years. When considering the City's wet year supply from SJWD total American River diversions in wet years total 58,900 AFY.

Wet Years

Water demands at build-out of the City are estimated at 56,465 AFY and are projected to increase by 706 AFY (692 AFY plus 14 AFY for systems losses at two percent) with the Plan Area for a total water supply need of 57,171 AFY. The City relies on a water supply portfolio that includes surface water and the use of recycled water to irrigate many parks, golf courses and landscape corridors within the City. At build-out, recycled water is expected to supply demands of 3,825 AFY. This results in a total potable water demand at build-out of the City and the Plan area of 53,346 AFY. When compared to the City's wet year supply from the American River of 58,900 AF; sufficient water supplies are available during wet years.

Dry Years

During dry years, and in accord with the City's Water Forum Agreement, the City's American River water supply contract can be reduced. Per the Water Forum Agreement, City supply during dry years can range from full supply entitlement to no less then 39,800 AFY during critically dry years. The City relies on a water supply portfolio that includes surface water, recycled water and groundwater (in drier years only). The City also assumes reductions in water supply needs as a result of conservation efforts during years when supplies are cut back. Depending on the level of supply cut-backs the City can mandate various water conservation drought stages to ensure water demands are reduced. For purposes of this analysis, the City assumes a minimum 10% reduction in

potable water supply needs based on conservation efforts. This results in a water supply need during dry years of 51,764 AFY (57,151 AFY less 5,387 AF resulting from mandatory water conservation) with the Project. When surface water supplies are cut back to the maximum level per the Water Forum Agreement water demands would be met through the use of 39,800 AFY surface water supplies, 3,825 AFY recycled water supplies and 7,829 AFY groundwater supplies. As described previously, the City currently has groundwater facilities capable of supplying up to 10,200 AFY of groundwater. Therefore sufficient water supplies are available during dry years and water supply impacts are considered less than significant.

Water Treatment

At buildout of the Plan, the water demand would be 706 AFY (1.3 mgd max day demand). The Barton Road WTP, which provides water treatment for the City, has an existing capacity of 100 mgd (City of Roseville 2006). The estimated future maximum day demand for potable water with the Project would increase from 95.3 mgd to 96.6 mgd which would be less than the capacity of the Barton Road WTP. Therefore, sufficient potable water treatment capacity and diversion capacity exist and would be available to serve the project and this impact is considered less than significant.

IMPACT 4.2-2 Public Utilities – Fire Flows. *Water conveyance infrastructure in the Plan area is currently undersized and does not provide sufficient fire flows in accordance with City standards. However, the Plan would implement specific recommendations made by the City Environmental Utilities Department and Fire Department to install larger pipelines, new domestic water and fire services, and additional fire hydrants. These recommendations would provide fire flows that meet City standards. This impact is considered* ***less than significant****.*

Water distribution system capacity for Roseville is designed to meet "maximum day plus fire flow" demand condition. The City of Roseville Water Model Update (WMU) dated July 2003 documents water system design criteria. The WMU states, "Fire flows are to be met concurrently with a maximum day demand condition, while maintaining a minimum residual pressure of 20 psi, as measured at the flowing hydrant." The WMU outlines the needs for new water facilities throughout the City based on water capacity.

The governing factor for water facility upgrades within the Plan area is the need to meet fire flow requirements. A capacity analysis of the project area under maximum-day demand and the fire flow scenario was prepared as part of the WMU. As described in the WMU, minimum fire flows must be met concurrently with a maximum-day demand condition and a residual system pressure of 20 psi. The analysis also assumed City and Uniform Fire Code standards, which require all new buildings greater than 3,600 square feet to be protected by an automatic sprinkler system. Using these requirements, the WMU simulated 4,000 gallons per minute (gpm) fire flow in the Plan area with a simultaneous 1,500 gpm fire flow at the opposite end of the City. Modeling results indicate the existing water distribution system in the Plan area is currently undersized to meet current maximum-day plus fire flow requirements. Therefore, the water distribution system in the project area would require improvements to address existing system deficiencies. These system deficiencies are further magnified by the proposed Specific Plan project.

The WMU identified specific water system recommendations to resolve current system capacity deficiencies within the plan area. The proposed Specific Plan would implement the recommended improvements to the water pipeline system along with minor modifications from City EU Department staff members. The recommendations in the WMU include replacing existing 4-inch and 6-inch water lines with 8-inch lines (see Exhibit 4.2-1). In addition, new fire hydrants would be installed throughout the Plan area to meet a requirement for 175-foot coverage and 350-foot maximum spacing (see Exhibit 4.2-2). Modeling results have shown that implementation of these water distribution facility upgrades would allow for the provision of the increased water demand from the Project; therefore this impact is considered less than significant.

IMPACT 4.2-3 Public Utilities – Wastewater Treatment and Collection. *The proposed Specific Plan would increase demand for wastewater treatment from the City's Dry Creek Wastewater Treatment Plant. The City's wastewater treatment and collection systems currently have sufficient capacity to serve new development in the Plan area. Wastewater conveyance infrastructure in the project area is currently in poor condition. However, as part of the Plan, pipelines within the wastewater conveyance system would be replaced or rehabilitated to increase system performance in the Plan area. Therefore, this impact is considered less than significant.*

Wastewater Treatment

All flow from the Plan area will be treated at the Dry Creek Wastewater Treatment Plant (DCWWTP), a regional wastewater treatment facility. The Systems Evaluation Report (June 2007) established estimated flows to the DCWWTP under several scenarios. These estimated flows are documented in several technical memoranda (TMs) which are appendices to the Systems Evaluation document, which is currently being updated. As a part of the update, several TMs have also been updated and the most recent information available is reflected in this analysis.

One of the scenarios considered is build-out of the 2005 Boundary (System Evaluation TM 2a dated October 21, 2005 and updated January 24, 2008) while another scenario considered anticipated redevelopment areas within the cities of Roseville and Rocklin (Systems Evaluation TM 9c dated May 31, 2006). The redevelopment areas considered in Roseville included flows from within the Plan area and is identified as the Historic District and Vernon Street Redevelopment Areas within TM 9c. Wastewater flows estimated within the Systems Evaluation were determined based on the land use of the parcels within the 2005 Boundary and unit flow factors developed as part of the study document. As documented in RMC TM 2b (updated) and TM 9c, intensification anticipated within the cities of Roseville and Rocklin would generate an additional 1.64 mgd (2.284 mgd – 0.642 mgd) increase in flow from existing land uses within the identified redevelopment areas. Of that 1.64 mgd increase, 0.71 mgd would be generated from redevelopment and intensification within the Downtown Specific Plan area (Historic District plus Vernon Street).

Based on these technical studies, the DCWWTP is planned to treat 16.34 mgd ADWF at build-out of the 2005 Boundary which includes intensified flows from future redevelopment, including the Plan area. The DCWWTP is permitted for 18 mgd ADWF. Therefore, implementation of the Plan would not increase the need for additional wastewater treatment beyond current permitted capacity. This impact is considered less then significant.

Wastewater System

During preparation of the Specific Plan, analysis of the condition of the existing wastewater (sewer) lines in the project area was conducted. The Wastewater Collection System Capitol Improvement Plan (CIP), based on an inspection of pipes greater than 75 years old, recommends specific improvements and provides information on pipe and manhole location, condition, and the need/plans for replacement. Sewer lines and manholes as part of the study were inspected by the City and assigned a ranking of 1 to 5 based on their condition with a 1 identifying a pipe in the best condition and a 5 identifying a pipe in very poor condition. As recommended by the City, any pipes with rankings of 3, 4, or 5 should be considered for replacement. This criterion was used to identify the pipes that should be replaced within the Plan area, as shown in Exhibit 4.2-3.

As part of the planning process, the potential capacity upgrades for the sewer facilities were also analyzed to identify potential effects from intensifying the existing wastewater system. The City's wastewater hydraulic capacity model used to evaluate increased sewer flows based on land uses identified in the Plan. The results of the study indicate existing sewer facilities are sufficiently sized to accommodate the increased flows from the Plan area. However, several new improvements are required to serve specific development projects in the Plan area (i.e., site-specific). The area adjacent to Oak Street between Washington Boulevard and Lincoln Street lacks existing sewer facilities to serve future development. An existing 63-inch sewer line extends through this area adjacent to Dry Creek; however, service connections cannot be made off of this trunk sewer facility. Therefore, a

new 6-inch sewer line would need to be constructed in Oak Street to serve future development in this area. Potential environmental impacts resulting from construction of this pipeline are covered in subsequent sections of this DEIR (e.g., air quality, water quality, traffic).

Because the existing wastewater system in the Plan area has been analyzed as part of the Plan and was determined to be sufficiently able to serve future land uses as identified in the Plan, this impact is considered less than significant.

IMPACT 4.2-4 Public Utilities – Stormwater Drainage System. *Development of land uses envisioned in the Plan would not substantially increase the amount of impervious surface in the Plan area, and thus would not significantly increase storm-water runoff. The storm-water drainage system in the plan area is currently undersized and exhibits structural failure. However, recommended improvements to the storm drainage system would be implemented as part of the Plan and would enable the storm drain system to meet City standards for a 10-year storm event. Therefore, this impact is considered* ***less than significant****.*

Land uses identified in the Plan would not affect the amount of stormwater flow contributed to the existing stormwater drainage system because the Plan area is currently developed with urban land uses and impervious surfaces. In addition, the Specific Plan identifies improvements specific to Dry Creek including, but not be limited to, bank stabilization treatments, scour protection, floodwall reconstruction, bank recontouring for flood conveyance or restoration, and construction of step pools or riffles for salmonid habitat enhancement (refer to Policy 8.4.2 of the proposed *Downtown Roseville Specific Plan*). These improvements to Dry Creek would not affect storm-water runoff in the Plan area because Dry Creek is the ultimate outfall for storm-water drainage in the Plan area. Please refer to Section 4.12, "Hydrology and Water Quality," of this DEIR for analysis of potential impacts related to hydrology of Dry Creek.

City storm drain standards require all facilities be sized to accommodate a 10-year storm event. A detailed analysis of drainage capabilities in the Plan area could not be completed because of a lack of topographic and drainage information for the Plan area. However, based on layout of the existing drainage system reasonable assumptions were made by the City. The storm drain systems in Washington Boulevard and Lincoln Street use pipes greater than 30 inches and would be sufficient capacity to handle additional storm drainage generated by redevelopment activities in the plan area. The remaining trunk lines in the plan area consist primarily of 12- and 15-inch pipelines that would need to be upsized. Specifically, the storm drain line in Washington Boulevard extending from Lincoln Street to Elefa Street would need to be upsized to a 24-inch pipeline. The storm drain lines in Taylor Street and Douglas Boulevard would also need to be upsized to 24-inch pipelines.

Other improvements identified by the City as needed in the Plan area include upgrading existing drop inlets, storm drain laterals, and manholes. Drop inlets and manholes need to be upgraded to meet City standards and storm drain laterals need to be upsized to 12-inch pipes. Upgrades to the storm drain system specific to the Historic Old Town area have also been identified by the City.

The City determined that improvements to the storm drain system (i.e., trunk lines, drop inlets, storm drain laterals, manholes) would increase the capacity of the storm drain system to adequately handle future development projects in the Plan area. Future development projects may require additional improvements to the storm drain system depending on configuration of the new development. To assess site-specific storm drain needs, the City would require future development projects to prepare a site-specific drainage analysis that identifies how the proposed development would tie into trunk lines.

Because the City has determined that identified improvements to the storm drain system would provide sufficient capacity to serve envisioned development in the Plan area and because development projects in the Plan area would be required to prepare a site-specific drainage analysis, this impact is considered less than significant.

IMPACT 4.2-5 **Utilities – Increased Demand for Solid Waste Disposal.** *Implementation of the proposed Specific Plan would increase solid waste generation. The Western Regional Sanitary Landfill has sufficient solid waste disposal capacity available to serve increased residential and non-residential land uses in the Plan area. Therefore, this impact would be* ***less than significant****.*

The City of Roseville does not currently identify a solid waste generation factor based on land uses. Because the City of Roseville does not use a specific calculation to determine the volume of solid waste that would be generated by development projects, calculations from the California Integrated Waste Management Board (CIWMB) are used. The CIWMB provides an average per capita disposal rate for Placer County of 0.36 tons per year per residence (CIWMB 2008b). The Plan envisions development of 1,020 new residences which would result in the generation of approximately 459 tons of solid waste per year.

Related to commercial land uses, CIWMB lists the solid waste generation rate used in other CEQA documents prepared for projects throughout California. CIWMB identifies a solid waste generation rate ranging from 0.01 pounds per square foot per day (lbs/sq ft/day) for offices, to 0.046 lbs/sq ft/day for commercial retail, and to 0.013 lbs/sq ft/day for commercial land uses (CIWMB 2008c). Because the Plan envisions a mix of commercial-related land uses, an average of the three generation rates listed by the CIWMB (i.e., 0.01, 0.046, 0.013 lbs/sq ft/day) was used (i.e., 0.23 lbs/sq ft/day). The Plan envisions development of 3,227,045 square feet of new commercial land uses in the Plan area which would result in approximately 74,222 lbs/day of solid waste generated, or approximately 13,546 tons per year.

Combining residential and commercial land use solid waste generation, the overall solid waste generation for the Plan area would increase by approximately 14,005 tons per year. This rate would not be reached until full buildout of the Plan area. Redevelopment projects would occur over a 20-year period, and much lower generation rates would occur at project initiation, with gradual increases in the rate until full buildout.

The WRSL would continue to serve the Plan area and has a maximum permitted throughput of 1,900 tons per day (693,500 tons per year) and a remaining capacity of approximately 29,100,000 cubic yards which equals 80% of its permitted capacity (CIWMB 2008a). The total estimated solid waste generated by land uses identified in the Plan would account for approximately 2% of the total maximum permitted throughout the life of the WRSL. Because the increased solid waste generated from implementation of the Plan accounts for a relatively small portion of the total throughput of the WRSL, and would not lead to an excedance of the capacity of this facility, the project would not require construction of new or expansion of solid waste facilities. Therefore, this impact would be less than significant.

IMPACT 4.2-6 **Utilities – Increased Demand for Electrical Service.** *Implementation of the proposed Specific Plan would increase the demand for electrical service. Roseville Electric has sufficient electricity generation capacity available to serve the Plan area. In addition, Roseville Electric has identified improvement projects to accommodate the estimated increase in electrical capacity. Therefore, this impact would be* ***less than significant****.*

Roseville Electric has identified sufficient electric generation capacity available to serve increased residential and non-residential land use development in the Plan area. In addition, Roseville Electric has identified and is implementing numerous improvements to the electric infrastructure in the city including infrastructure necessary to provide electrical service to the Plan area. Improvement projects currently include:

- Undergrounding the existing overhead facilities in specific areas of the city;
- Upgrading the Vernon Street Substation, located at the corner of E Street and Vernon Street, to accommodate the estimated increase in capacity;

- Extending a mainline underground circuit that connects with the existing Vernon Street Substation, extends northeast along Vernon Street, extends along Douglas Boulevard between Vernon Street and Oak Street, extends along the entire length of Oak Street, extends between Lincoln Street and Linda Drive, and lastly ties into an exiting overhead mainline circuit. Pull boxes, switches, and transformers would be provided for as necessary at these locations. The extension of this circuit would occur at the same time as streetscape infrastructure is installed.

In addition to the above improvement projects, should additional electrical capacity be needed to serve future development projects in the Plan area, Roseville Electric would accomplish this by providing additional conduits during the process of undergrounding infrastructure.

Roseville Electric indicated that no new electric generation projects are planned. In addition, transmission infrastructure upgrades, if needed, are the responsibility of regional, state, and federal transmission authorities.

Roseville Electric expects adequate electric resources to be available for purchase from outside sources to serve the Plan area. Therefore, impacts to electric services are considered less than significant.

IMPACT 4.2-7 Utilities – Increased Demand for Natural Gas Service. *Implementation of the proposed Specific Plan would increase the demand for natural gas service. PG&E has indicated sufficient natural gas capacity is available to serve the Plan area. In addition, PG&E identified no facility upgrades would be needed to accommodate the estimated increase in natural gas demand. Therefore, this impact would be* ***less than significant****.*

PG&E was contacted regarding their existing facilities in the Plan area and PG&E did not identify the need for any natural gas facility upgrades (Shirhall, pers. comm., 2008). Potential site-specific needs for gas facilities to serve new development projects in the Plan area would not be known until detailed site plans are submitted to the City for review. However, substantial relocations of existing gas facilities are not anticipated to be needed to the serve increased residential and non-residential land use development in the Plan area. Therefore, impacts to natural gas services are considered less than significant.

4.2.4 MITIGATION MEASURES

No significant impacts related to utilities and service systems would occur under the proposed project; therefore, no mitigation measures are required.

4.2.5 RESIDUAL SIGNIFICANT IMPACTS

All impacts associated with utilities and service systems are considered less than significant. Therefore, there are no residual significant impacts.