

chapter 8

Utilities





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8.1 Chapter Overview

This chapter summarizes the utility systems needed to support new development as envisioned by this Specific Plan.

8.2 Utilities Goals and Policies

The following goals and policies support the provision of utility services to meet the projected demands generated by new development in the Specific Plan Area.

Utilities Goals and Policies	
Goal U-1	<i>As development occurs, each project will be responsible for contributing its fair share of required utility improvements, based on current City standards.</i>
Policy	U-1.1: Provide the required sewer system facility improvements to serve new project development in accordance with current City standards.
Policy	U-1.2: Construct necessary improvements to provide adequate water and fire flow capacity to serve new project development in accordance with current City standards.
Policy	U-1.3: Ensure utilities are in place before project development.
Policy	U-1.4: Prioritize the undergrounding of electric utilities in conjunction with project and/or streetscape improvements.
Policy	U-1.5: Where buildings are set back more than 12 feet from the property line, new development should dedicate a public utility easement to provide additional space for utilities.

8.3 Wastewater and Storm Drainage

The West Broadway area is served by the City of Sacramento for sanitary sewer and storm drainage. The majority of the Specific Plan Area is served by the Combined Sewer System (CSS) with the exception of Miller Regional Park and the Sacramento Marina. The park and marina are served by the CSS for sanitary sewer; however, storm drainage is discharged directly into the Sacramento River. The CSS is the legacy storm drain and sanitary sewer system that conveys both stormwater and sanitary sewer flows. The City discontinued constructing combined sewer and storm systems in 1946, but continued connections to the existing CSS are allowed.

8.3.1 Combined Sewer System

The CSS is a collection system of pipes that convey both sanitary sewage and stormwater in a single pipeline. The piping system is greatly oversized for the sanitary sewer component but inadequate for the City's current storm drainage design standard of 10-year capacity. This system generally works well except during heavy rainfall storm events.

The CSS has issues with combined sewer outflows and overflows, during which flows to the CSS exceed the system capacity. Outflows occur when surcharges to the CSS flow onto the streets. Overflows are defined as the rare instances when untreated flows discharge to the Sacramento River. Outflows and the rare overflow usually occur only during heavy rainfall storm events. The City has developed an improvement program to reduce combined sewer outflow events in the overall systems, including rehabilitating and expanding Sumps 1/1A and 2, two pumping stations located on the Sacramento River; rehabilitating Pioneer Reservoir and converting it into a treatment facility; rehabilitating and upsizing the sewer mains in the CSS; and rehabilitating the Combined Wastewater Treatment Plant (CWTP). These and other projects identified in the program have been completed.

Current flows into the CSS are conveyed westerly to Sumps 1/1A and 2. For secondary treatment and disinfection of the flow, the City has entered into an agreement with the Sacramento Regional Wastewater Treatment Plant (SRWTP) to convey 60 million gallons per day (mgd). This treatment capacity is currently sufficient for dry-weather flows.

During heavy storms when the capacity is exceeded, the CWTP, located at South Land Park Drive and 35th Avenue, is used to provide primary treatment of an additional 130 mgd. Excess flows from the SRWTP and CWTP are diverted to the Pioneer Reservoir storage and treatment facility, which has a capacity of 350 mgd. When all three treatment facilities (SRWTP, CWTP, and Pioneer facility) have reached capacity, excess flows are directly discharged into the Sacramento River without treatment from Sump 2. Sump 1/1A also has the ability to discharge flows directly to the river. When the pipeline system and treatment plant capacities are surpassed, the excess flows flood local streets in the Downtown area through maintenance holes and catch basins.

The City prepared a Combined Sewer System Improvement Plan (CSSIP) Update Report in 2014. The CSSIP is an ongoing, multi-year project intended to evaluate and provide recommendations for projects to alleviate flooding in the CSS area during a 10-year event and to prevent structure flooding during the 100-year event. The CSSIP Update Report analysis of the system improvements includes an allowance of increased sewer flows from future development.

Recommendations for specific project improvements that provide localized or systemwide flood reductions have been identified. The projects are prioritized based on considerations such as flood-reduction benefits, cost-effectiveness, ensuring no increase in untreated discharges, sewer condition/age, cost-sharing opportunities, and City/community interests. The project does not identify any projects in the Specific Plan Area. However, it does identify three projects along Riverside Avenue just east of the Specific Plan Area:

- ▲ WA3-5: Beverly Way In-Line Storage,
- ▲ WA3-7: Target Parking Storage, and
- ▲ WA6-2: Riverside Boulevard Upsizing.

8.3.2 Existing Conditions

The CSS, which conveys sanitary sewage and stormwater from the Specific Plan Area (Figure 8-1), consists of pipes ranging in size from 6 inches to 120 inches in diameter. The largest pipe in the CSS is the 120-inch Pioneer Interceptor (force main), which conveys flows from Sump 2 to the Pioneer Reservoir. Piping material includes brick, polyvinyl chloride, reinforced concrete pipe, and vitrified clay pipe. Flows for the system are generally from the north to the south through the Specific Plan Area.

East of I-5, the collection system connects with a 60-inch CSS pipeline located in 5th Street that carries flows through the Specific Plan Area from north to south. Sanitary sewage and stormwater from the easterly portion of the Specific Plan Area, including the Alder Grove public housing community, are collected into a 30-inch CSS main that carries flows toward Riverside Boulevard. The 120-inch CSS Pioneer Interceptor follows Front Street and runs along the western edge of I-5 to a point west of Leataata Floyd Elementary School, where it crosses under the freeway and then runs along the eastern edge of I-5.

The drainage and sanitary sewage are typically collected in 6-inch to 12-inch piping systems located in alleyways and streets. The collection system in the Specific Plan Area has collector pipelines ranging in size from 16 to 30 inches in diameter. Development in the Specific Plan Area will require upsizing smaller drain lines and inlet leads to a minimum of 12 to 15 inches in diameter.

Miller Regional Park and Sacramento Marina

The sanitary sewer system for Miller Regional Park and the Sacramento Marina area consists of four sewer pump stations: Sumps 3, 123, 124, and 125. These small pump stations collect the sewer flows from the area and discharge it to the CSS through a 6-inch force main located in Front Street. Sumps 123, 124, and 125 are all small duplex (two) pump stations with a firm capacity of 0.2 mgd that feed into the larger Sump 3 duplex pump station, which has a firm capacity of 0.3 mgd. The storm drainage is collected in an 8-inch to 10-inch gravity system at three main points, two of which discharge into the water area of the marina docks. The third discharges directly to the Sacramento River.

8.3.3 Standards and Guidelines

The CSS area is regulated by the Central Valley Regional Water Quality Control Board per Cease and Desist Order No. 85-342 (Order). The Order, including its amendments, requires the City to make operational improvements to reduce combined sewer and runoff overflows and to ultimately provide 10-year capacity for the CSS.

8.3.4 Wastewater and Stormwater Drainage

Anticipated future development in the Specific Plan Area will add 3,787 residential units, ranging in density from 18 to 250 units per acre; a relatively small amount of public/park/recreational building area, ranging from 27,500 to 42,500 square feet, based on the two scenarios for Miller Regional Park; and a small reduction in commercial uses of between 10,775 and 50,776 square feet with development to replace industrial uses, based on scenarios described in this Specific Plan. The increase in residential dwelling units is expected to increase sanitary sewer flows. However, the increased flows are anticipated to be relatively small compared to the stormwater component of the CSS design flows.

Wastewater Demand

The City of Sacramento Design and Procedures Manual (Section 9, “Sanitary Sewer Design Standards”) contains the standards for sewer generation rates, which identify average daily flow rates and factors for residential and non-residential uses. The recently adopted standard for sewer generation is 310 gallons per day (gpd) per Equivalent Single-Family Dwelling (ESD). A factor of 0.75 ESD per residential unit was selected based on the multi-family nature of the residential uses in the Specific Plan Area. This factor when multiplied by 310 gpd per ESD yields a sewer generation rate of 232.5 gpd per residential unit.

Based on the anticipated development of 3,787 dwelling units, the anticipated increase in the residential average dry weather flow is 0.88 mgd ($=3,787 \text{ units} \times 0.75 \text{ ESD} \times 310 \text{ gpd/ESD}$).

Developers will be responsible for funding and installing the infrastructure required for their projects. To mitigate the increased sewer flows, the City will also consider one of the following approaches:

1. Project development pays the established Combined Sewer Development fee, which is an impact mitigation fee that requires mitigation of any significant increase in wastewater flows over the present level. If a proposed development project is determined to have a significant impact on the CSS, payment of the fees is acceptable to mitigate the project's sewer impacts.
2. At the City's discretion, the project developer can participate in a City-sponsored project that improves the system in the area and can be upsized to incorporate mitigation of the project. A separate cost sharing agreement shall be executed for this option.

Stormwater Drainage

Since most of the sites in the Specific Plan Area are previously developed with highly impervious surfaces (e.g., rooftops, parking lots, sidewalks), the stormwater runoff flows from the projects are not anticipated to increase with new development. On the other hand, the Alder Grove and Marina Vista public housing communities currently consist of a significant amount of open space areas. Development of these sites with increased densities could increase the amount of impervious surface areas, which would lead to increased stormwater runoff. The stormwater runoff characteristics of the current and proposed land uses are similar. As a result, the peak stormwater flow rate and volume of rainfall runoff is not expected to significantly change when the land use changes.

The City requires the developer to mitigate the increased drainage flows. The City will consider one of the following approaches to mitigate project impacts:

1. Project developer directly mitigates the impacts using low-impact development best management practices per Section 9.4.12 of the City's Design and Procedure Manual.
2. Project developer directly mitigates the impacts via public and/or private storage and other measures in accordance with Section 11 of the Design and Procedures Manual and the On-site Design Manual. The set-up of hydraulic models shall be in accordance with the CSS model user guide. Prior to hydraulic modeling, the designer shall schedule a meeting with the Department of Utilities to review the project, review the modeling parameters, and discuss possible drainage solutions.

3. At the City's discretion, project developer can share in a City-sponsored project that improves the system in the area and can be upsized to incorporate mitigation of the project. A separate cost-sharing agreement shall be executed for this option.
4. According to the Draft Onsite Design Manual for on-site drainage storage within the CSS, the project developer provides a minimum of 7,600 cubic feet of on-site storage per acre of increased impervious area for the 100-year storage volume. The nominal capacity for discharges to the CSS is 0.18 cubic feet per second per acre. It should be noted that these requirements are contained in a draft of the On-Site Design Manual (as of September 2019) and may therefore be subject to change).
5. Alternatively, a project development may enter into a mitigation agreement with the city's Department of Utilities (DOU) and pay a CSS drainage impact fee. The fee would be based on the square footage increase of impervious surface. The agreement and exact fee are subject to approval by DOU.

8.3.5 Recommended System Improvements

The Specific Plan Area is well served by the existing CSS collection system. The existing large-diameter CSS trunk collection mains within the Specific Plan Area are adequate to serve the anticipated increase in sewer flows from denser development of the area, with proper mitigation and contributions to improve the greater CSS.

Most of the Specific Plan subareas consist of large single-landowner properties. These include the Alder Grove, Marina Vista, The Mill at Broadway Phase 5, and Miller Regional Park areas. These projects and other properties in the Specific Plan Area will provide utility infrastructure to serve their specific project area needs and will be required to mitigate any impacts on the CSS. There are no identified regional improvements that would benefit all of the potential development properties within the Specific Plan Area.

Figure 8-1: Existing Wastewater and Storm Drainage System



Source: West Broadway Specific Plan Utility Infrastructure Analysis, NV5, 2019

8.4 Water Supply

Domestic water to the Specific Plan Area is provided by the City of Sacramento. The City uses both surface water and groundwater to meet these water demands. It treats surface water diverted from the Sacramento River and American River through the Sacramento River Water Treatment Plant (SWTP) and the E. A. Fairbairn Water Treatment Plant (FWTP), respectively. Additionally, the City extracts groundwater from both the North Sacramento and Central Sacramento basins. Generally, the City has sufficient water supply for development consistent with the growth assumptions envisioned by the City's General Plan.

8.4.1 Water Supply System

Treatment Plants

The SWTP treats water diverted from the Sacramento River approximately one-half mile downstream of the confluence with the American River. Expansions and modifications to the treatment plant have been completed to increase the treatment plant design capacity, including one in 2016 that replaced many of the older facilities at the SWTP, to maintain the facility's 160-mgd capacity.

The current reliable water production capacity is approximately 160 mgd at the SWTP and 130 mgd at the FWTP when the Hodge Flow Criteria are not triggered. The Hodge Flow Criteria restrict diversions from the FWTP under certain low river flow conditions. During the time of peak demand, most often in June, July, or August, the Hodge Flow Criteria could limit the diversion rate at the FWTP to 100 mgd.

Groundwater Wells

The City currently operates 27 municipal groundwater supply wells. Twenty-five wells are located in the northern portion of the city, north of the American River, and the remaining two are located south of the American River. The total pumping capacity of the City's municipal supply wells is approximately 20 mgd, assuming 90 percent of the production capacity is available. The City has recently completed a well rehabilitation program that improved capacity at a number of wells. Overall, the groundwater facilities operated by the City are known to be at or near the end of their useful life, and the City is currently preparing a groundwater master plan to help determine the direction and anticipated

future capacity of the collective groundwater facilities. The City is nearing completion on two new wells in the southern portion of the system, at Shasta Park. The projects are anticipated to supply potable water by 2019–2020. The City anticipates the groundwater pumping capacity to increase to approximately 25 mgd after the activation of the rehabilitated wells and completion of the new groundwater wells.

Distributed Storage

The City maintains 11 enclosed distributed water storage reservoirs together with a total capacity of 45 million gallons (MG). This water is used to meet the water demand for fire flows, emergencies, and peak hours when demand exceeds the maximum day supply rates. A new 4-MG distribution storage tank at the Shasta Park site in the southern portion of the city is anticipated to be completed in 2019–2020, which will increase the total storage to 49 MG. In addition to the reservoirs, the SWTP and FWTP together maintain a combined on-site storage of over 44 MG.

Water Transmission and Distribution Mains

The City differentiates the water mains into two distinct categories: water distribution mains and water transmission mains. Water distribution mains are smaller pipelines located in the streets and alleys used for water services. Water transmission mains are larger pipelines used to convey water to the distribution mains.

It is City policy to use the water distribution mains only for water services, fire services, and fire hydrants. These pipes are typically 4 inches to 12 inches in diameter. These pipes may be tapped only with the approval of the City Department of Utilities. Considering each service tap is a potential weakening of the water main, the City currently has the policy to restrict the installation of service taps until after a project has been reviewed and approved by the City. This is to restrict the number of taps to the mains to those that are in the ultimate location per an approved development plan.

Transmission mains are 14 inches and larger in diameter. They are used to convey large volumes of water from the treatment plants to selected points throughout the distribution system. They are also used to transfer water to and from the storage reservoirs to meet fluctuating daily and seasonal demands. These mains cannot be tapped for water services, fire services, or fire hydrants.

8.4.2 Existing Conditions

The Specific Plan Area is generally served by an extensive system of service mains ranging in size from 6 inches to 12 inches in diameter (Figure 8-2). These mains are typically older steel pipelines. The development of the Northwest Land Park Planned Unit Development will provide a network of new water mains in The Mill at Broadway subarea. Strategic replacement of the smaller 6-inch and 8-inch pipelines is envisioned to serve the remaining potential infill development areas in the Specific Plan Area.

A major transmission main serving the greater Downtown Sacramento area from the SWTP enters the area at the northwest corner of the Specific Plan Area at Front Street. This 42-inch pipeline continues easterly through the Specific Plan Area along Broadway and then turns south along 5th Street to the southerly end of the Specific Plan Area. A 24-inch transmission main continues easterly along Broadway from the intersection at Broadway and 5th Street and then turns south, following Muir Way along the easterly edge of the Specific Plan Area boundary.

There are no active wells or reservoirs within the limits of the Specific Plan Area; however, there is an inactive irrigation well (Well #8), located near the end of Front Street, north of the entrance to Miller Regional Park and Marina. The nearest reservoir outside of the SWTP is the Riverside Reservoir, located south of the Specific Plan Area on the west side of Riverside Boulevard between 10th and 11th Avenues. This reservoir and the SWTP are identified by the City as critical infrastructure items.

8.4.3 Standards and Guidelines

City Standards

The City Department of Utilities has an active Capital Improvement Program for maintaining and upgrading the water supply system. The implementation of the water improvements necessary to serve a specific project site is typically the responsibility of future developers. City policy is to require the developer to construct any infrastructure necessary to support the project without compromising service or water quality to the project area. To determine whether water needs for a project can be met, a water supply test is performed on the existing system. If the existing water system is sufficient to meet the needs, no infrastructure upgrades are necessary. If the existing infrastructure is found to be

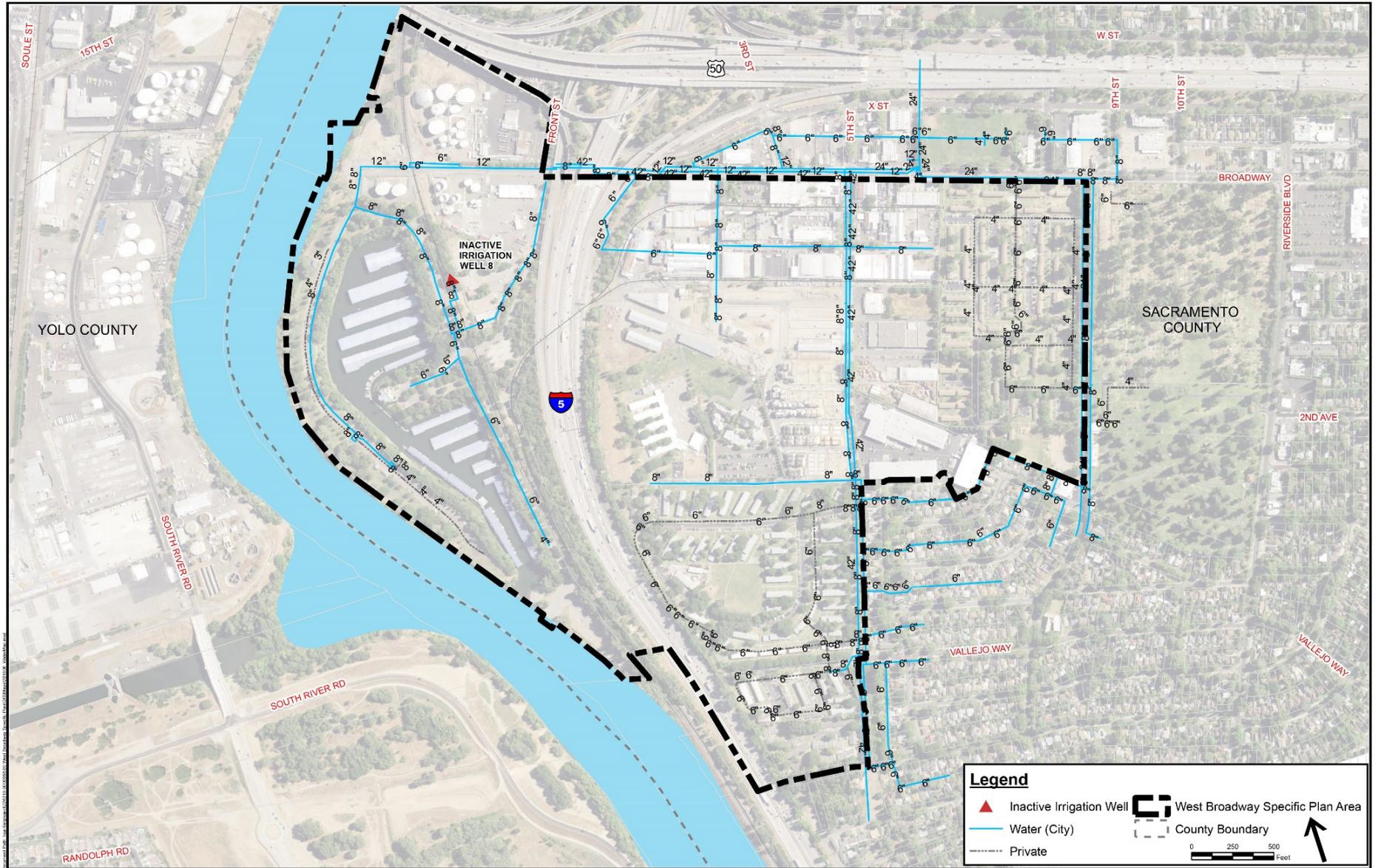
insufficient for the project's needs, the developer is required to construct necessary infrastructure improvements.

A water study project may be required of new development to determine whether there is sufficient water to support the project. If the existing water system is sufficient to meet the needs, no infrastructure upgrades are necessary. If the existing infrastructure is found to be insufficient for the project's needs, the developer is required to construct necessary infrastructure improvements. The infrastructure improvements required for all new development will need to meet current City standards. Looped water main systems are typically required due to the unreliability of dead-end mains and the potential for water quality problems as a result of stagnant water. Any project with new streets requires two points of connection. Additional water main installation may also be required depending on the existing system layout. All new domestic water and irrigation services are required to be metered. The City Design Standards for water (Section 13, "Water Distribution System Design Standards," dated 7/24/18) contains the planning and design criteria for water systems.

Water Conservation Standards

The adoption by the State of California of SB7—"20 x 2020" Water Conservation Standards requires a 20-percent reduction in urban water usage by the year 2020, and the CALGreen Code will require reductions in overall water usage through stricter indoor and outdoor usage.

Figure 8-2: Existing Water Mains



Source: West Broadway Specific Plan Utility Infrastructure Analysis, NV5, 2019

8.4.4 Water Demand

Projects within the Specific Plan Area are generally anticipated to have smaller residential units (700–1000 square feet) with a smaller per capita occupancy rate per unit than traditional single-family or multi-family units in suburban areas. The domestic water demand for these smaller residential units is anticipated to be substantially reduced compared to the City's typical single-family or multi-family water use criteria. Fire flow demand for the Specific Plan Area is assumed to be 2,500 gallons per minute. Ultimately, the minimum fire flow for a specific building is designated by the City Fire Department during plan review. These requirements mandating water conservation through Senate Bill 7 and the California Green Building Standards Code (CALGreen Code) further justify the use of reduced water rates for future development.

The City Water Study Design Manual dated January 2018 contains the Water Distribution System Criteria (WDS Criteria), which is a summary of the recommended potable water system performance and operational criteria. The WDS Criteria provide a table of gross unit water use factors for various land uses. The demands are broken into two categories of water use factors: residential and non-residential. The residential factors are based on the acre-feet per year per dwelling unit (afy/du), and the non-residential is based on acre-feet per year per employee (afy/employee). For the Specific Plan Area, all of the anticipated dwelling units are anticipated to be in the Residential High category, which has a residential factor of 0.12 afy/du. The Commercial/Office land use has a factor of 0.09 afy/employee.

Given the anticipated development of 3,787 dwelling units in the Specific Plan Area, the anticipated increase in the residential average water demand is 454 afy ($= 3,787 \text{ DUs} \times 0.12 \text{ afy/du}$). The small increase of public/park/recreation building uses is offset by the anticipated reduction in commercial/industrial uses and is considered negligible compared to the increase in residential uses for this report.

8.4.5 Recommended System Improvements

The subareas of the Specific Plan are well served by the existing water transmission and distribution system. The existing water transmission and distribution system is adequate to serve any anticipated increase in demand associated with development of the Specific Plan Area.

Most of the subareas in the Specific Plan Area are large single-landowner properties. These include Alder Grove, Marina Vista, Mill at Broadway Phase 5, and Miller Regional Park areas. These projects and the other properties are anticipated to provide utility infrastructure to serve their specific project areas. As development occurs in these areas, the developers will be required to upgrade the pipelines. There are no identified regional improvements that would benefit all of the potential development properties in the Specific Plan Area.

8.5 Electricity

Sacramento Municipal Utility District (SMUD) provides electrical service to customers located in the Specific Plan Area. Power is transmitted to the Specific Plan Area, as shown in Figure 8-3, by a 21-kilovolt (kV) distribution system off Station D, located at 8th and R Streets. There are two electrical distribution feeders from the substation in the Specific Plan Area: 2301 and 2303. Station D substation steps down the 115 kV to 21 kV to serve the overall Specific Plan Area. The existing feeders will likely be used to serve new development in the Specific Plan Area.

8.5.1 Existing Conditions

The entirety of the Specific Plan Area is served by the 21-kV distribution system, consisting of mainly overhead facilities. Station D's two feeders total approximately 20 megavolt amperes of load carrying capacity (based on Station D's bank limit). Recently developed properties, such as the newly developing Northwest Land Park Planned Unit Development, have placed the aerial facilities underground, generally in a joint trench with other dry utilities along the street frontage or in an alley.

8.5.2 Planned Improvements

The two feeder circuits do not have sufficient capacity to service the entire Specific Plan Area at build-out based on the land use plans for Scenarios A and B. Additional 21-kV distribution feeders will likely be extended into the Specific Plan Area along Front Street, 3rd Street, and Riverside Boulevard, to meet overall demand requirements. Extension of facilities will be based on where development occurs and the phasing of development.

Figure 8-3: Existing Electrical System



Source: West Broadway Specific Plan Utility Infrastructure Analysis, NV5, 2019

Furthermore, as the area develops, SMUD will likely extend 21-kV infrastructure and facilities adjacent to and potentially within developed lots. This extension, depending on the requirements of each development, may be overhead or underground. In both cases, dedicated easements and/or space sufficient to house and operate the necessary infrastructure, facilities, and equipment will be required. Typical easement requirements are 12.5 feet wide but can vary based on specific needs and requirements.

8.6 Natural Gas

Natural gas service in the Specific Plan Area is provided by Pacific Gas and Electric Company (PG&E). PG&E has high- and low-pressure distribution systems. The high-pressure system pipelines are generally 4 inches in diameter or larger and carry gas at approximately 40 pounds per square inch (psi). Low-pressure system pipelines are generally 2 inches in diameter and carry gas at a pressure of about 0.25 psi. Service is generally provided from the low-pressure system unless use exceeds about 3,000 cubic feet per hour. PG&E has a high-pressure system in the Specific Plan Area. Regulators are used to reduce high pressure to low pressure.

8.6.1 Existing Conditions

A major 24-inch gas transmission line (main line 108) runs through the Specific Plan Area. The line enters the Specific Plan Area from the north on 3rd Street. At the intersection at Broadway, the line runs easterly on Broadway to Muir Way, where it turns southerly along Muir Way and exits the southern boundary of the Specific Plan Area. This facility is identified by PG&E as a critical infrastructure facility. There is also a 20-inch high-pressure distribution main located in Broadway from the easterly edge of I-5 and extends east beyond the Specific Plan Area boundary.

The high-pressure gas system is generally served by a grid system throughout the Specific Plan Area (Figure 8-4). The high-pressure system pipelines range in size from 2 to 6 inches in diameter. These mains are located in the streets except for those serving the Marina Vista and Alder Grove public housing developments and the William Land Woods affordable housing development, where the mains are sometimes located

in the private streets but mostly are located in the open space between the buildings.

8.6.2 Planned Improvements

PG&E has indicated that it is currently making improvements to its system in accordance with a number of projects and initiatives. These improvements may negate the need for future improvements in some areas where new developments are constructed. PG&E will service the new developments and infrastructure as they are constructed and require service. It would expand and upgrade the natural gas system to extend service to the new development on a case-by-case basis as additional information is received on the actual development square footage and maximum and minimum gas loads.

PG&E was unable to provide a draft of necessary system improvements and/or review of its gas system without specific information regarding gas loads at each potential development site together with an application for service.

If the user is a core (non-interruptible) customer in the service area and will accept service at a pressure of about 0.25 psi, the company is generally obligated by California Public Utilities Commission regulations to provide service without additional cost. Customers associated with projects in the Specific Plan Area are most likely to be core (non-interruptible) customers. If the user is a non-core (interruptible) customer or needs an elevated pressure service for large-volume use, there are charges for service according to PG&E's new business tariffs. Whether a project is a core (non-interruptible) user or a non-core (interruptible) user is dependent on the type of use for the facility or business.

8.7 Petroleum

8.7.1 Existing Conditions

Pipelines

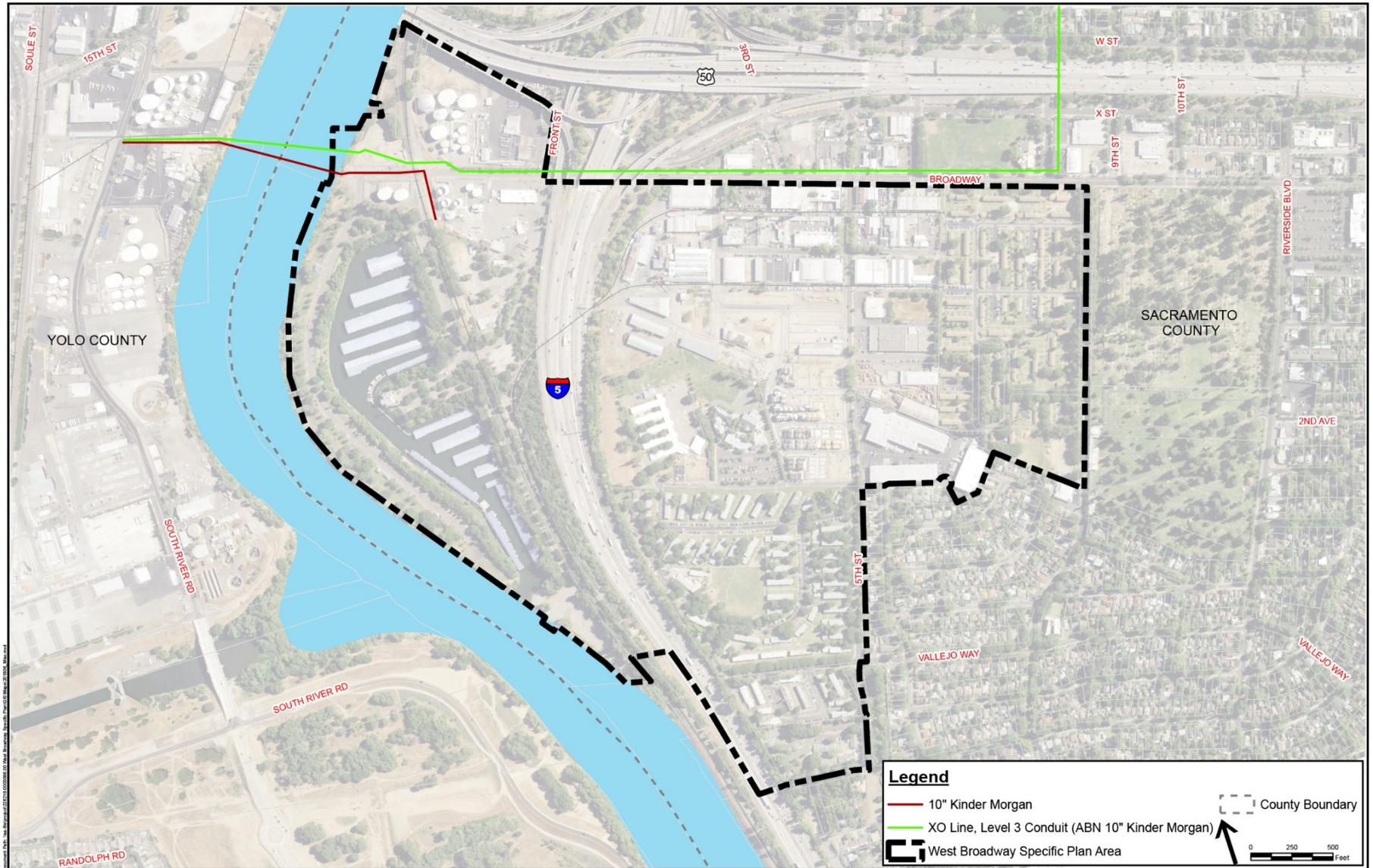
A Kinder Morgan 10-inch pipeline crosses the Sacramento River from West Sacramento at the westerly end of Broadway. The pipeline turns southward just east of the railroad tracks and terminates at the existing fuel storage facility south of Broadway (Figure 8-5).

Figure 8-4: Existing Natural Gas Distribution and Transmission



Source: West Broadway Specific Plan Utility Infrastructure Analysis, NV5, 2019

Figure 8-5: Existing Petroleum and XO Communication Lines



Source: West Broadway Specific Plan Utility Infrastructure Analysis, NV5, 2019

Fuel Storage Facilities

There are existing fuel storage facilities operated by Chevron USA and Phillips 66, west of I-5, on Front Street, near Broadway. The following discussion of the status of the proposed relocation of these facilities is drawn from a memorandum titled “Summary Status of Joint City of West Sacramento and City of Sacramento Riverfront Transition Strategies and Action Plans That Relate to Local Geographies” dated March 30, 2017, prepared by the City of West Sacramento Department of Economic Development.

Through City Council Resolutions in 2007, the Cities of Sacramento and West Sacramento agreed to work jointly to facilitate the relocation of the oil terminals along the east and west banks of the Sacramento River to the Port of Sacramento in accordance with the *Sacramento Riverfront Master Plan*, the California Environmental Quality Act, and other applicable laws. The Cities worked together on the SacPort Terminal Relocation proposal in 2006–2008 with the City of West Sacramento as the project lead. Since 2008, the Cities have pursued relocation of their terminals separately. West Sacramento has been actively pursuing de-industrialization of these terminals since 2014.

8.7.2 Planned Improvements

Pipelines

It is anticipated that with the relocation of the existing fuel storage facilities described below, the existing Kinder Morgan 10-inch pipeline may be abandoned and/or repurposed for other utilities needing to cross the river.

Fuel Storage Facilities

The relocation of the existing fuel storage facilities will allow the West Broadway Gateway subarea within the Specific Plan Area to be developed as approximately 1,300 residential dwelling units, 132,670 square feet of commercial uses, and civic/recreation/community center/park activities uses.

8.8 Telecommunications

In the Specific Plan Area, the following providers for telephone and cable services are the primary telecommunication service providers:

- ▲ **AT&T** supplies local and long-distance telephone service. AT&T serves the Specific Plan Area with a combination of overhead and underground conduit systems. The main lines are located in the streets, except for those serving the Marina Vista and Alder Grove public housing developments and the William Land Woods affordable housing development, which are located throughout the developments.
- ▲ **Comcast/AT&T Broadband** provides cable television service to the Sacramento area, and AT&T Broadband leases conduit space and fiber optic cable capacity from Comcast in the Specific Plan Area. Comcast serves the Sacramento area with a combination of underground and overhead fiber optic and copper coaxial cable.
- ▲ **XO Communications and Level 3** provide network, internet, and telecommunication service in the Sacramento area. They have fiber optic lines located inside an abandoned underground Kinder Morgan pipeline crossing the Sacramento River. The pipeline crosses the river from West Sacramento at the westerly end of Broadway following Broadway to 8th Street, where it turns northward and exits the Specific Plan Area.
- ▲ The **City of Sacramento** currently owns an existing fiber network that provides municipal and smart city services. The network provides connections between various traffic signals, utility sumps, reservoirs, and City facilities spread throughout the city. The network consists of approximately 160 miles of underground fiber optic cables and conduits that transverse the main corridors of the city. The fiber network currently enables the City to run efficient operations and reduces operational costs, while expanding capabilities. The telecommunications system consists of single or multiple underground conduits, pull boxes, and utility vaults that are interconnected with the traffic signals, utility services, and various City facilities. Within the Specific Plan Area, this system is located along the Broadway corridor from Front Street eastward. The system is connected and looped though the Miller Regional Park and Marina area following the Front Street entrance.

The telecommunications providers have indicated that the existing system in the Specific Plan Area should be sufficient to serve future projects and opportunity sites with relatively minor additions. In general, service to each of the new sites will be coordinated with the main electrical service in a common joint trench. Typically, a few 2-inch conduits will be added to the joint utility trench for service to projects.

8.9 Solid Waste Collection

The City of Sacramento Recycling and Solid Waste Division provides solid waste, recycling, and yard waste collection, and street sweeping to its residential customers. Residential solid waste and yard waste is collected in the city on a weekly basis, and recycling is collected every other week. The City also offers neighborhood clean-up collection and one dump coupon a year to each household.

Solid waste refuse from the south region is transported to the Sacramento Recycling and Transfer Station (SRTS). Solid waste refuse collected in the north region and applicable to the Specific Plan Area is transported to the Sacramento County North Area Recovery Station. Refuse from both locations is then hauled to the Sacramento County Kiefer Landfill. Residential yard waste is delivered to the SRTS and the Elder Creek Transfer Station, while curbside recycling is brought to the SRTS.

Commercial solid waste is collected by private franchised haulers and disposed of at various facilities, including the SRTS, the Sacramento County Kiefer Landfill, the Yolo County Landfill, L and D Landfill, Florin Perkins Landfill, Elder Creek Transfer Station, and Sacramento County North Area Recovery Station.

In 2017, the total reported amount of solid waste produced by the City of Sacramento was approximately 573,158 tons.¹ Approximately 50 percent of the waste is recycled, and the other 50 percent is disposed of

in a landfill.² The following facilities are among those that provide solid waste disposal services to the City of Sacramento:

- ▲ Kiefer Landfill, located in Sloughhouse, California, is operated by Sacramento County and maintains a permitted capacity of 10,815 tons per day. The landfill is estimated to have sufficient capacity to maintain operations until January 2064.
- ▲ L and D Landfill, located off Fruitridge Road in Sacramento, California, is operated by L and D Landfill, LP. The landfill has a maximum capacity of 4,125 tons per day, with a remaining capacity sufficient to provide service until January 2023. A large-volume transfer facility is also located on this site.
- ▲ Forward Landfill, located southeast of Stockton, California, is operated by Allied Waste North America. The landfill has a maximum daily throughput of over 8,668 tons per day and is estimated to have sufficient capacity to maintain operations through 2021.
- ▲ Yolo County Central Landfill, located north of Davis, California, is operated by the Yolo County Planning and Public Works Department. The facility maintains a maximum daily throughput of 1,800 tons per day. The facility is expected to have sufficient capacity to allow operations until January 2081.

Development within the Specific Plan Area is anticipated to include an additional 3,787 residential dwelling units, a reduction of approximately 10,775 square feet of commercial/industrial building area, and an increase of approximately 42,500 square feet of public/park/recreation building area. The proposed increase in dwelling units would generate amounts of solid waste above existing conditions, which will be partially offset by the reduction in commercial and industrial uses.

To provide a conservative analysis, based on the City's 2017 calculated disposal rate of 6.90 pounds per person per day,¹ implementation of the Specific Plan would generate approximately 62,000 pounds of additional

¹ California Department of Resources Recycling and Recovery. 2017. Jurisdiction Disposal by Facility. Website: <https://www2.calrecycle.ca.gov/LGCentral/DisposalReporting/Destination/DisposalByFacility>. Accessed April 25, 2019.

² City of Sacramento. 2015 (March 3). Sacramento 2035 General Plan Background Report. Website: <http://www.cityofsacramento.org/-/media/Corporate/Files/CDD/Planning/General-Plan/2035-GP/Chapter-4---Utilities.pdf?la=en>. Accessed April 24, 2019.

solid waste per day (based on a projected population increase of 8,959 persons). This would result in 11,280 additional tons per year.

Actual solid waste generation would be lower than this since the reduction in commercial/industrial uses was not considered. Additionally, approximately 50 percent of that waste would be diverted from landfills through recycling programs. The Specific Plan would comply with City waste diversion requirements and would require landfill capacity for approximately 31,000 additional pounds (15.5 tons) of waste per day. Based on the average daily throughput of landfills serving the Sacramento area, existing landfill facilities would be adequate to serve the Specific Plan Area, and no additional facilities or expansion of facilities is needed to serve the development of the Specific Plan Area.

Construction of new uses in the Specific Plan Area would generate construction waste, including scrap lumber, scrap finishing materials, various scrap metals, and other recyclable and non-recyclable construction-related wastes. Construction waste would be managed in accordance with ordinances set by the Sacramento Regional Solid Waste Authority (SWA). In particular, SWA requires that haulers achieve a 30-percent recycling rate. Recyclable construction materials, including concrete, metals, wood, and various other recyclable materials, would be diverted to recycling facilities. Project construction in the Specific Plan Area would also need to comply with City requirements to divert a minimum of 50 percent of construction wastes to a certified recycling processor.

8.10 Implementation

The implementation actions identified in Table 8-1 ensure the timely provision of necessary utility services—wastewater, storm drainage, water, electricity, natural gas, telecommunications, and solid waste—in coordination with new development, the City of Sacramento, and applicable service providers. The table identifies the strategy, implementation actions, location in this Specific Plan where additional information is available, timeframe, and parties responsible for implementing the action.

Table 8-1: Utilities Implementation Actions

Strategy & Action Number	Strategy / Implementation Action	Specific Plan Policies Addressed	Specific Plan Section Reference for Additional Detail	Timeframe	Responsibility
Note:	Timeframe: Short term = 0–5 years; Medium term = 5–10 years; Long term = 10+ years				
Utilities					
Strategy U-1:					
Plan and support proposed improvements to utility systems to provide the needed services for the Specific Plan Area.					
U-1.1	Wastewater and Storm Drainage. New development will coordinate with the City to mitigate for increases to sanitary sewer and/or stormwater flows to the CSS, to help support any necessary system improvements related to the project's impacts.	U-1.1, U-1.3	Chapter 8.3	On-going	Community Development; Utilities; Project Applicant
U-1.2	Water Service. New development will coordinate with the City to construct the underground distribution systems to serve future project development on-site with services for both domestic and fire suppression needs, in accordance with City standards.	U-1.2, U-1.3	Chapter 8.4	On-going	Community Development; Utilities; Project Applicant
U-1.3	Electrical Service. New development will work with SMUD to coordinate construction of utility and street improvements, including the undergrounding of utilities as development occurs.	U-1.3, U-1.4	Chapter 8.5	On-going	Community Development; SMUD; Project Applicant
U-1.4	Telecommunications Service. New development will work with SMUD and telecommunication providers to identify locations where future telecommunication facilities can be co-located in a common joint trench.	U-1.3	Chapter 8.8	On-going	Community Development; Utilities; SMUD; Telecommunication Provider; Project Applicant

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