

SECTION 4.13

Utilities

4.13.1 Wastewater and Drainage

This section of the EIR describes existing public utilities available in the vicinity of the RSP Area, and evaluates the effects of project development on those services. The services evaluated in this section are wastewater and drainage, water supply, and solid waste. Site characteristics such as regional and local wastewater and drainage and water supply are described.

Letters received in response to the NOP included a request that sewer studies be completed to assess the impacts of any component of the project that has potential to increase flow demands, and to include analysis of the onsite and offsite impacts associated with constructing sanitary sewer facilities to provide service to the Railyards site.

The analysis included in this section was developed based on the Specific Plan, the Railyards Drainage Report, Railyards Water Master Plan, Railyards Sewer Master Plan, project-specific construction and operational features, data provided in the City of Sacramento 2035 General Plan, City of Sacramento 2035 General Plan Master Environmental Impact Report, 2010 Urban Water Management Plan, utility maps and diagrams provided by the City of Sacramento, and other published technical reports, as indicated in the footnoted references.

Issues Addressed in the 2007 RSP EIR

Issues that were discussed in the 2007 RSP EIR included the potential for project-generated storm drainage and wastewater flows to exceed the capacity of the Combined Sewer System (CSS). The 2007 RSP proposed a storm drainage system that would convey drainage from the majority of the RSP Area to a cistern in the northwest corner of the RSP Area, with high flows being pumped to a new stormwater outfall on the Sacramento River. Further planning resulted in the abandonment of the cistern concept and called for a new pump station and outfall structure in the northwest corner of the RSP Area. Because the proposed projects include a different and larger storm drainage outfall to the Sacramento River that was not evaluated in the 2007 RSP EIR wastewater flows and drainage from the RSPU is addressed in this section.

Environmental Setting

The environmental setting for wastewater and drainage is described on pages 6.11-1 through 6.11-6 of the 2007 RSP Draft EIR. The information presented for the project site remains

relatively unchanged since certification of the 2007 RSP EIR. The description of the City's CSS and Sacramento Regional County Sanitation District (RegionalSan) treatment plant has been updated. The following discussion is based on the 2007 RSP EIR setting, updated as appropriate.

Sacramento Regional Wastewater Treatment Plant

The Sacramento Regional Wastewater Treatment Plant (SRWWTP) is located in Elk Grove, and is owned and managed by the Sacramento Regional County Sanitation District (RegionalSan). RegionalSan provides regional wastewater conveyance and treatment services to commercial, residential, and industrial end users within the City of Sacramento, several other areas including Sacramento County and the cities of Citrus Heights, Elk Grove, Folsom, Rancho Cordova, and West Sacramento, as well as the communities of Courtland and Walnut Grove. RegionalSan maintains 177 miles of interceptor pipelines. The existing SRWWTP currently maintains a maximum average dry weather treatment capacity of 181 million gallons per day (mgd). As of 2014, actual average dry weather flow for the facility was approximately 106 mgd, substantially lower than the facility's capacity.¹ Treated effluent is discharged into the Sacramento River.

In 2010, the Central Valley Water Quality Control Board (CVRWQCB) released a draft permit for the SRWWTP that targeted ammonia reductions from the existing SRWWTP facility. The SRWWTP currently maintains secondary-level treatment processes. In order to meet the target requirements, as well as other anticipated future discharge requirements, RegionalSan is upgrading the SRWWTP. The proposed upgrade includes deployment of new treatment technologies and facilities, and would increase the quality of effluent discharged into the Sacramento River. The proposed upgrade would not, however, result in a net increase in permitted capacity of the SRWWTP.

Sewer and Drainage

The RSP Area is located in an area of Sacramento served by the CSS, a collection and conveyance system designed to convey domestic sewage, commercial and industrial wastewater, and surface stormwater runoff in a single pipeline for treatment at a regional wastewater treatment facility. The CSS is a legacy system that was designed to provide both stormwater and sanitary sewer service (combined in a single pipeline system) within this area.

Combined sewer systems were constructed in the City until 1946. Because the system was designed to carry both stormwater and sanitary flows, the system is considerably oversized for managing sanitary flows generated within the applicable service area. However, it is insufficiently sized to meet the City's current design standard for drainage, which is to convey flows consistent with a 10-year storm event (i.e., a storm event of sufficient size that it has a 10% chance of annual

¹ MacKay & Soms Civil Engineers, 2015. *RegionalSan Capacity Analysis - Sutter Pointe Wastewater Conveyance Project*. p. 19.

occurrence). Because the system does not meet City standards for stormwater conveyance capacity, it is subject to outflow and, infrequently, overflow during major storm events.²

Under normal conditions, stormwater plus sanitary flows are routed in a westerly direction to Sump 1/1A and Sump 2, which are located near the Sacramento River. In order to provide secondary treatment, the City has entered into a contract with the SRWWTP to convey up to a total capacity of 108.5 mgd of wastewater combined from Sumps 2, 2A, 21, 55, and 119. These flows would be routed along RegionalSan's Interceptor pipeline for conveyance to RegionalSan's treatment facility, and ultimate treatment. This volume of capacity is sufficient for dry weather flows, with some additional capacity.³

During heavy storms when this capacity is exceeded, excess flows in the CSS are routed to the Combined Wastewater Treatment Plant, located along South Land Park Drive and 35th Avenue. This facility provides only primary treatment of up to an additional 130 mgd. If flows exceed this volume, additional water, up to a capacity of 350 mgd, is routed to the Pioneer Reservoir storage and treatment facility. When this facility too has reached capacity, excess flows are discharged from Sump 2 directly into the Sacramento River, without treatment. If the pipeline capacity is exceeded beyond this point, excess flows could flood local streets in the downtown area through manholes and catch basins. Please see Section 4.9, Hydrology and Water Quality, for a discussion of localized flooding.

The area served by the CSS is currently operated under Cease and Desist Order No. 85-342 (C&DO), promulgated by the CVRWQCB. The order, which includes amendments, mandates that the City implement certain operational improvements in order to reduce system overflows, with the ultimate goal of providing 10-year capacity for the combined sewer system.

In order to address the requirements of the C&DO, the City has developed several strategies to reduce or avoid outflow and overflow events. Key improvements, in various stages of completion, are funded by fees imposed on new development to fund long-term improvements to the CSS. These include:

- Rehabilitation and expansion of Sumps 1/1A and 2;
- Rehabilitating and converting Pioneer Reservoir into a treatment facility;
- Rehabilitating and up-sizing of sewer mains in the combined system; and
- Rehabilitating the Combined Wastewater Treatment Plant.

Adjacent to the RSP Area, the CSS is composed of pipes that range from approximately 8 inches to 36 inches in diameter. Water flows within the system from the north in the River District to the

² Outflow is defined as the discharge of water to City streets; overflow, which occurs rarely, is defined as discharges that spill untreated wastewater/stormwater from the combined system directly into the Sacramento River.

³ Nolte, 2011. *Downtown Infrastructure Study*. September 2011. pp. IV-1 – IV-11.

south. Pipeline composition reflects historic installations as well as upgrades, and includes brick, polyvinyl chloride (PVC), reinforced concrete pipe (RCP), and vitrified clay pipe (VCP).

Railyards Specific Plan Area

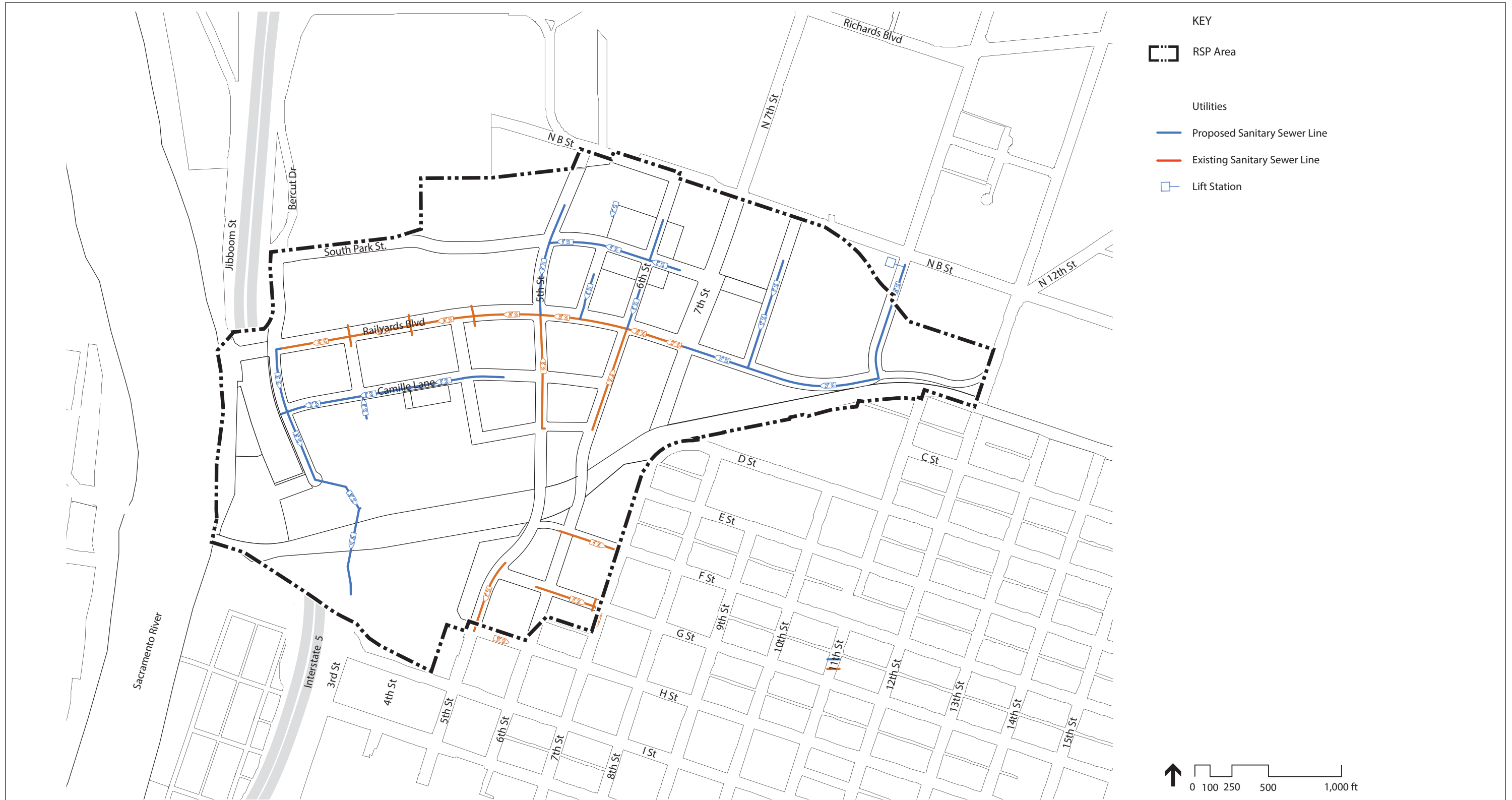
Existing Wastewater and Storm Drainage System

Most of the RSP Area currently consists of undeveloped and/or raw land with little existing occupied facilities. Wastewater and storm drainage currently flow directly to the CSS. Some stormwater runoff across the RSP Area is captured in onsite depressions, and a retention basin constructed south of Railyards Boulevard captures runoff from the paved streets (see **Figure 4.13-1**). The Central Shops area discharges to the CSS. Total discharge (drainage and/or wastewater) from the RSP Area to the CSS may not exceed 2.24 cubic feet per second (cfs). Within the RSP Area, sanitary sewer and stormwater pipelines were installed within Railyards Boulevard (36-inch diameter sewer and 42-inch to 72-inch diameter stormwater) and portions of 5th and 6th streets (8-inch diameter) to serve wastewater generation and stormwater runoff (18-inch diameter pipe) for development of the 2007 RSP. Existing storm drainage and sanitary sewer pipelines that are in use in the RSP Area are limited to those that are located in the historic Central Shops area and those located south of the main railroad lines. The pipelines in the Central Shops area are limited to conveyance of treated discharge from the groundwater remediation program, while those located south of the main railroad line convey both storm drainage and sanitary flows south to the CSS. These pipelines currently convey small volumes of stormwater and sanitary sewer flows to trunk lines in 7th Street and 3rd Street.⁴

Sewer services for the Central Shops and areas to the south have historically drained to the 7th Street CSS. These services were removed as part of the track relocation efforts and ongoing development at the site. Sewer service for the western-most shops buildings is now provided by a sewer line at the southwest corner of the shops area. This line drains under the relocated UPRR tracks and flows to the CSS in 3rd Street. This point of service will remain until the City's new 3rd Street Relief Sewer pipeline is constructed.

In addition, soil and groundwater remediation is ongoing within the Central Shops footprint, where extracted and treated groundwater from beneath the shops is anticipated to continue for 15 to 20 years. Discharge from this groundwater remediation system is governed by the SRCSD, the City of Sacramento Department of Utilities, and California Department of Toxic Substances Control (DTSC). A float-activated switch has been installed in a City manhole located at the intersection of 7th and P streets. When flow levels in the CSS rise during high flow periods, the float switch is activated preventing the Central Shops groundwater remediation system from discharging into the CSS.

⁴ Kimley-Horn and Associates, Inc., 2016. The Railyards Sanitary Sewer Master Plan. May 2016.



Subsequent to the 2007 RSP, a 36-inch diameter sewer main was installed when Railyards Boulevard was constructed. This line will collect sanitary sewer flows from the entire RSP Area north of the UPRR tracks, and provide conveyance of offsite flows from the River District, located to the north of RSP Area to CSS at 3rd Street. A separate City project is underway to construct a 3rd Street relief sewer pipeline to convey flows from the RSP and River District south to connect with an interceptor pipeline at T Street to avoid using the existing and constrained CSS system. A separate City project is planned to construct an offsite lift station near the intersection of 10th and North B streets to bring those offsite flows to the RSP Area.

Regulatory Setting

The regulatory setting for wastewater and drainage is described on pages 6.11-6 through 6.11-8 of the 2007 RSP Draft EIR. The information presented for the project site remains relatively unchanged since certification of the 2007 RSP EIR. The following federal, State and local regulations and plans are applicable to the proposed project. The following discussion is based on the 2007 RSP EIR regulatory setting, and updated as appropriate.

Federal

Environmental Protection Agency's National CSO Control Policy

The U.S. Environmental Protection Agency (EPA) initiated its Combined Sewer Overflow (CSO) Control Policy (40 CFR 122) in April, 1994. The CSO Policy provides a national level framework for the control and management of CSOs. The CSO Policy provides guidance regarding how to achieve Clean Water Act goals and requirements when faced with management of a CSO. Key components of the CSO Policy that are relevant to the Proposed Project include a requirement for Nine Minimum Controls (NMCs), which apply to every CSS in the nation. The NMCs are minimum technology-based actions or measures that are designed to reduce CSOs and their effects on receiving water quality. The intent of the NMCs is to be implementable without extensive engineering studies or major construction. The policy requires that at least 85% of the average annual CSS storm flow must be captured and routed to at least primary treatment with disinfection prior to discharge.

State

Office of Statewide Health Planning and Development (OSHPD)

The OSHPD is a department of the California Health and Human Services Agency. It serves as the building agency for hospitals and nursing homes in California, monitors the design and construction of inpatient facilities and assures code compliance in facility maintenance. OSHPD's primary goal in this regard is to ensure that patients in these facilities are safe in the event of an earthquake or other disaster, and that the facilities remain functional after such an event in order to meet the needs of the community affected by the disaster. OSHPD has no current regulations relative to sanitary sewer wastes. However starting in 2030, providing 72-hour service for both domestic water and sanitary sewer will be required for medical facilities under its purview.

Local

City of Sacramento 2035 General Plan

The following goal and policies are applicable to utility services within the City.

- Goal U 1.1 High-Quality Infrastructure and Services. Provide and maintain efficient, high quality public infrastructure facilities and services throughout the city.**

Policies

- U 1.1.1 Provision of Adequate Utilities.** The City shall continue to provide and maintain adequate water, wastewater, and stormwater drainage utility services to areas in the city currently receiving these services from the City, and shall provide and maintain adequate water, wastewater, and stormwater drainage utility services to areas in the city that do not currently receive these City services upon funding and construction of necessary infrastructure.
- U 1.1.5 Growth and Level of Service.** The City shall require new development to provide adequate facilities or pay its fair share of the cost for facilities needed to provide services to accommodate growth without adversely impacting current service levels.

- Goal U 3.1 Adequate and Reliable Sewer and Wastewater Facilities. Provide adequate and reliable sewer and wastewater facilities that collect, treat, and safely dispose of wastewater.**

Policies

- U.3.1 Sufficient Service.** The City shall provide sufficient wastewater conveyance, storage, and pumping capacity for peak sanitary sewer flows and infiltration.
- U 3.1.4 Combined Sewer System Rehabilitation and Improvements.** In keeping with its Combined Sewer System (CSS) Long Term Control Plan (LTCP), the City shall continue to rehabilitate the CSS to decrease flooding, CSS outflows and Combined System overflow (CS)). Through these improvements and new development requirements the City shall also insure that development in the CSS does not result in increased flooding, CSS outflows or CSOs.

- Goal U 4.1 Adequate Stormwater Drainage. Provide adequate stormwater drainage facilities and services that are environmentally-sensitive, accommodate growth, and protect residents and property.**

Policies

- U 4.1.1 Adequate Drainage Facilities.** The City shall ensure that all new drainage facilities are adequately sized and constructed to accommodate stormwater runoff in urbanized areas.
- U 4.1.4 Watershed Drainage Plans.** The City shall require developers to prepare watershed drainage plans for proposed developments that define needed drainage improvements per City standards, estimate construction costs for these improvements, and comply with the City's National Pollutant Discharge Elimination System (NPDES) permit.
- U 4.1.6 New Development.** The City shall require proponents of new development to submit drainage studies that adhere to City stormwater design requirements and incorporate measures, including "green infrastructure" and Low Impact Development (LID) techniques, to prevent on- or off-site flooding.

General Plan Consistency Analysis

Policies U 1.1.1 and U 1.1.6 address the commitment of the City to ensure that adequate water, wastewater and drainage facilities are provided for development within the City. The proposed projects would contribute toward these efforts through payment of applicable fees and by constructing adequate sewer and drainage facilities. With respect to Goal U 4.1 and associated

policies, the Railyards site would manage increases in stormwater flow on site by temporarily retaining stormwater (see impact analysis below), as warranted, until the new Stormwater Outfall is constructed in order to ensure that the City's stormwater/combined sewer system would not be further stressed. Applicable plans, permit compliance, and drainage studies would be completed prior to construction. Please also refer to the impact analysis discussion below.

Combined System Development Fee

Sacramento Combined Sewer Development Fee

In order to support ongoing maintenance and upgrade efforts within the combined sewer system area, the City has adopted the Combined Sewer Development Fee.⁵ This fee is designed to be an impact mitigation fee that requires mitigation of any significant increase in wastewater flows over the baseline/present level. To the extent that a proposed development project or other project could have a significant impact on the combined sewer system, the City requires an acceptable mitigation plan. The mitigation plan generally requires payment of fees in order to mitigate that project's impacts to the sewer system. Alternatively, a developer may mitigate impacts on the combined sewer system by getting City approval on a Mitigation Plan. Such a plan would be required to include on-site storage, retention, sewer main up-sizing, stormwater best management practices (BMPs), diversion of flows, rerouting of pipelines, replacement of pipelines, connection to separated areas, or other upgrades as warranted.

Facility Impact Fee

In addition to the City's Combined Sewer Development Fee, the SRCSD levies a fee for planning, designing, construction, and other costs related to wastewater conveyance, treatment, and disposal using SRCSD's facilities. Fee amounts are determined in coordination with SRCSD, the project applicant, and Sacramento County.

Analysis, Impacts, and Mitigation

Significance Criteria

For the purposes of this SEIR, impacts on water resources are considered significant if the proposed project would:

- Result in the determination by the wastewater treatment provider that adequate capacity is not available to serve the project's demand in addition to existing commitments; or
- Require or result in either the construction of new utilities or the expansion of existing utilities, the construction of which could cause significant environmental effects.

The 2007 RSP EIR used the same standards of significance.

⁵ City of Sacramento Code 13.08.490.

Methodology and Assumptions

This section assesses the potential for the proposed projects to affect wastewater conveyance and treatment capacity within the CSS and RegionalSan treatment plant. This section uses information provided in *The Railyards Sanitary Sewer Master Plan (2016)* and *Memorandum: Railyards Water & Sewer Master Plans (2016)* by Kimley-Horn and to analyze the proposed projects' impact on conveyance and treatment capacity. *The Railyards Sanitary Sewer Master Plan* used City design standards based on land use types to derive wastewater generation within the project site. Because stormwater on the project site would be collected and conveyed in a separate system, including the Stormwater Outfall, stormwater volumes are not part of the wastewater generation rates presented below.

The sanitary sewer flows for RSP Area in the Kimley-Horn study were based on the City of Sacramento improvement standards and proposed land use. **Table 4.13-1** below presents the equivalent single-family dwelling units (ESD) by land use type. Sewage generation rates for each land use type are determined by multiplying the appropriate ESD by the average dry weather flow (ADWF) rate of 310 gpd. All residential units within the RSPU are classified as medium to high density.

**TABLE 4.13-1.
LAND USE TYPE ESDS**

Land Use	Equivalent Single-Family Unit (ESD)
Multi-Family Residential	0.75 per residence
Commercial – Retail	0.25 per 1,000 square foot (sf) of gross floor area
Commercial – Office	0.5 per 1,000 sf of gross floor area
Hospital – Surgical	1.25 per bed
Central Shops Area/Museum	0.5 per 1,000 sf of gross floor space
Medical Office	0.75 per 1,000 sf of gross floor area
Hotel	0.3 per room
Institutional	0.5 per 1,000 sf of gross floor space
MLS Stadium	1 ESD per 100 seats

SOURCE: Kimley-Horn and Associates, Inc., 2016 *The Railyards Sanitary Sewer Master Plan*. May 2016;
Kimley-Horn and Associates, Inc., 2016. *Memorandum to ESA, Subject Railyards Water & Sewer Master Plans*. May 20, 2016.

Based on the land use designations and ESD design criteria from Kimley-Horn study, the RSPU is estimated to generate an average dry weather sanitary sewer flow (ADWF) between 2.66 and 3.67 mgd, with the greater amount based on additional 4,000 residential units that could be developed. According to the Kimley-Horn study, the City of Sacramento provided the offsite flow rate for the River District that would flow through the RSP Area to the City's new 3rd Street relief sewer main with a peak wet weather flow (PWWF) of 4.72 mgd to use in sizing the conveyance capacity of the pipes within the RSP Area. In addition to the sanitary sewer flows, groundwater discharge from the Central Shops remediation effort adds an additional 317,000 gpd.

The remediation system is designed to operate continuously at an average flow of 165 gallons per minute (gpm) with a maximum rate of 220 gpm. In addition to these rates, City design criteria were used to calculate the peak dry weather flow (PDWF), infiltration and inflow (I&I), and PWWF to estimate total flows as shown in **Table 4.13-2**. The study assumed that the City would design and construct a 3rd Street relief main prior to construction of the RSPU, and that wastewater flows from the RSPU would discharge through this main to an interceptor in T Street.

In addition, the Kimley-Horn report calculated the area served by the 7th Street sewer main south of the UPRR tracks because it is separated from the areas served by the 3rd Street connection for wastewater conveyance. As described previously, the pipelines are under construction and will be finished in 2016, and, therefore, are considered existing infrastructure. Future wastewater flows to this system of pipelines would occur under development in the future under the RSPU, as shown in **Table 4.13-3**.

TABLE 4.13-2.
RSPU 3RD STREET CONNECTION SANITARY SEWER FLOW RANGES BETWEEN PROJECT AND PROJECT VARIANT^a

Element	Flow (gpd)
RSPU ADWF	2,411,000 to 3,171,000
RSPU PDWF ^b	3,902,000 to 5,053,000
I&I ^c	196,000
RSPU PWWF ^d	4,099,000 to 5,250,000
River District Flows	4,720,000
Central Shops Groundwater Remediation	317,000
Total PWWF	9,136,000 to 10,287,000

NOTES:

^a The range is based on 6,000 to 10,000 multi-family residential units

^b PDWF was calculated using City design criteria.

^c I&I was calculated using the City's criteria of 1,600 gpd/acre.

^d PWWF = PDWF + I&I

SOURCE: Kimley-Horn and Associates, Inc., 2016. The Railyards Sanitary Sewer Master Plan. May 2016;

Kimley-Horn and Associates, Inc., 2016. Memorandum to ESA, Subject Railyards Water & Sewer Master Plans. May 20, 2016.

TABLE 4.13-3.
RSPU 7TH STREET SANITARY SEWER FLOWS

Element	Flow (gpd)
ADWF	286,000
PDWF	522,000
I&I	21,000
PWWF	540,000

SOURCE: Kimley-Horn and Associates, Inc., 2016. The Railyards Sanitary Sewer Master Plan. May 2016;

Kimley-Horn and Associates, Inc., 2016. Memorandum to ESA, Subject Railyards Water & Sewer Master Plans. May 20, 2016.

The Kimley-Horn study modeled the sewer network within the RSP Area Flow capacities within the sewer network were derived from modeling with the flows and City design criteria.⁶

Impacts and Mitigation Measures

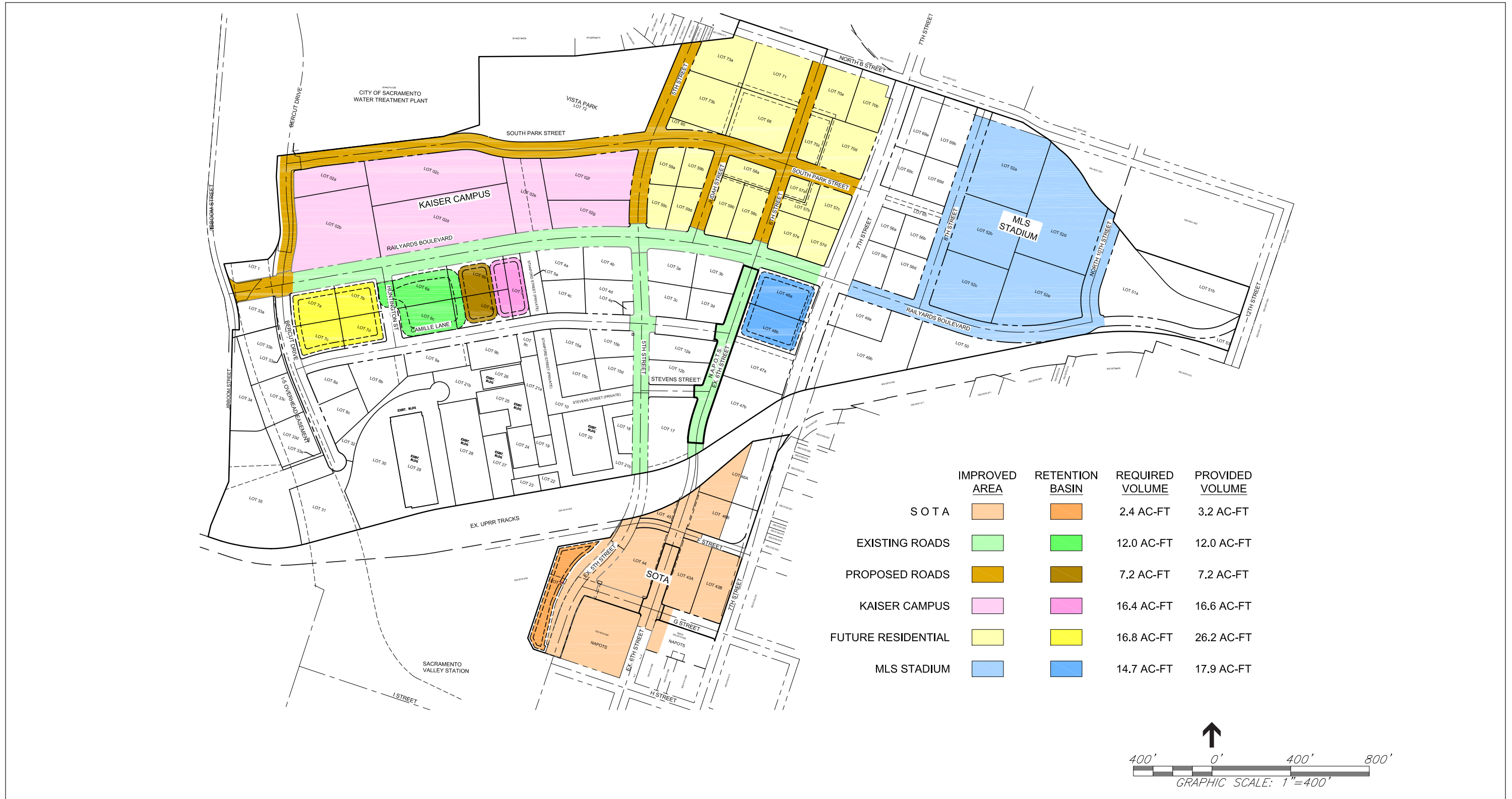
Impact 4.13-1: The proposed projects would increase demand for wastewater treatment.

The 2007 RSP EIR discussed impacts with respect to wastewater treatment and capacity in Impact 6.11-1 on pages 6.11-10 to 6.11-11, and found that the RSP would increase the amount of developed land uses and population in the City and result in the generation and discharge of additional wastewater and stormwater runoff requiring treatment at the SRWWTP. The RSP EIR found that the increase of wastewater flows would not exceed the dry or wet weather treatment capacity at the SRWWTP. Storm volumes in excess of the wet weather treatment capacity at the SRWWTP would be diverted to the second chamber of the cistern for peak flow attenuation prior to pumping directly into the Sacramento River. However, the 2007 EIR did not define the timing for building the cistern and outfall, and stated that if those were not constructed before buildout of the project, then excess stormwater flows and volumes conveyed along with wastewater to the SRWTP would exceed the existing capacity of the wastewater treatment system, resulting in a potentially significant impact. The RSP EIR mitigated this potentially significant impact to less-than-significant levels by limiting development in the RSP so that combined wastewater and stormwater flows would not exceed the project's peak flow sewage generation rate of 9.43 mgd.

Railyards Specific Plan Update

Peak wastewater flows from the RSPU would be approximately 4.09 to 5.25 mgd, approximately 41% to 54% less than the 2007 RSP due to a reduction in dwelling units and other changes to the land use plan. Further, unlike the 2007 RSP, all stormwater flows for the RSPU would be collected by a separate stormwater collection system and discharged through the proposed Stormwater Outfall into the Sacramento River, so they would not be conveyed to the SRWWTP. During development of the RSPU, there is a possibility that some development could occur before the Stormwater Outfall system is completed. If this should occur, the existing on-site retention basin south of Railyards Boulevard would be expanded and/or additional basins may be constructed to accept stormwater runoff from new development (see **Figure 4.13-2**). The retention basins would be designed to contain stormwater runoff volumes according to the City's design criteria. In addition, the retention basins would be outfitted with temporary discharge pumps and pipelines to the 3rd Street CSS. The pumps would discharge at a combined maximum rate of 1 cfs to slowly empty the retention basins. The discharge rate could be increased, if needed, during storm events larger than the design criteria by stopping the discharge from the Central Shops groundwater remediation operation, allowing for a total discharge rate of 2.24 cfs. In addition, this rate could be increased up to the maximum planned wastewater capacity for the RSPU in the 3rd Street Relief Sewer equivalent to those areas that would not already be developed. Wastewater generation from the RSPU would result in up to 5.25 mgd of flow

⁶ Kimley-Horn and Associates, Inc., 2016. The Railyards Sanitary Sewer Master Plan. May 2016, p. 18.



through the 3rd Street relief main connection and up to 0.546 mgd of flow through the 7th Street main connection, resulting in a total of up to 5.79 mgd of new wastewater flow to the RegionalSan wastewater treatment plant. This amount of wastewater would not exceed the current excess capacity of approximately 75 mgd at the SRWWTP. Therefore, the RSPU would result in a **less-than-significant** impact.

Railyards Specific Plan Update Land Use Variant

Wastewater generation for the Land Use Variant would be up to 4.18 mgd, which is less than the RSPU because of the elimination of land uses specific to the KP Medical Center and MLS Stadium. This amount would not exceed the current excess capacity at the SRWWTP. Therefore, the wastewater generation of the Land Use Variant would be **less than significant**.

KP Medical Center

The KP Medical Center would generate approximately 281,480 gpd of wastewater, which could be accommodated within existing SRWWTP capacity. Therefore, the increase in wastewater from the KP Medical Center would be **less than significant**.

MLS Stadium

The MLS Stadium would generate approximately 77,500 gpd of wastewater, which could be accommodated within existing SRWWTP capacity. Therefore, the effects of the MLS Stadium would be **less than significant**.

Stormwater Outfall

The Stormwater Outfall would not generate wastewater or otherwise discharge into the CSS. Therefore, there would be **no impact** to wastewater treatment capacity.

Summary

The proposed RSPU, the RSPU Land Use Variant, KP Medical Center, and MLS Stadium would generate additional wastewater, but within the existing capacity of the SRWWTP, so the impact would be **less than significant**. The Stormwater Outfall would have **no impact**.

The significance of this impact is the same as that described in Impact 6.6-1 in the 2007 RSP EIR.

Mitigation Measure

None required.

Impact 4.13-2: The proposed projects would increase flows to the City's combined sewer system.

The 2007 RSP EIR discussed impacts with respect to the construction of new utilities or the expansion of existing utilities in Impact 6.11-2 on pages 6.11-11 to 6.11-12, and found that new

development would increase the amount of impervious surfaces, resulting in an increase in the amount of stormwater runoff compared to existing baseline conditions. Additionally, the EIR found that development of the 2007 RSP would increase the amount of wastewater produced and collected at the site, resulting in an expected increase in the flows received by the City's CSS, which has physical and contractual capacity limitations.

At the time, the City was planning improvements to the CSS, including a relief sewer in 5th Street from U to P streets, Curtis Park Regional Storage, a series of relief sewer lines in P Street from 5th to 7th streets, and a relief sewer in S Street from 7th to 14th streets. Compliance with the City's Combined System Development Fee ordinance was anticipated to reduce the RSP's wastewater flow impacts by providing funding for construction and operation of future improvements to the CSS, additional capacity in the City's system to reduce potential for flooding and CSS overflows, and requiring storage of project flows to ensure that the RSP would not contribute to flooding and overflows. The 2007 RSP EIR found that because a substantial portion of RSP development would precede construction of the cistern and outfall, excess stormwater flows and volumes would be conveyed along with project wastewater into the CSS system, increasing the possibility of exceeding capacity of the CSS system and resulting in a potentially significant impact.

The 2007 RSP EIR outlined a mitigation measure to reduce the impact to less-than-significant levels by requiring the City to limit development of the RSP so that combined wastewater and stormwater flows would not exceed a flow rate of 5 cfs, until the cistern and outfall for stormwater flows were constructed, or planned CSS improvements for wastewater flows were implemented.

Railyards Specific Plan Update

The RSPU would have less impact than those described in the 2007 RSP EIR because less wastewater would be generated and the RSPU would construct a separate stormwater system that would convey stormwater flows through the Stormwater Outfall for discharge into the Sacramento River, thereby resulting in lower flows into the CSS than the 2007 RSP. Because the existing 3rd Street CSS does not possess adequate capacity at present to convey wastewater flows from the RSPU or the River District, the 3rd Street Relief Sewer, as designed by the City of Sacramento, would be constructed prior to development of the RSPU and replace the existing 3rd Street CSS line. The proposed Bercut Street sewer main would connect to the 3rd Street Relief Sewer within the Sacramento Valley Station parking lot. Once the downstream connections are completed, the City of Sacramento would divert flows from the River District into the RSPU trunk sewer main by means of a lift station that would be located at the intersection of 10th and North B streets.

During development of the RSPU, there is a possibility that some development could occur before the Stormwater Outfall system is completed. If this should occur, the existing on-site retention basin south of Railyards Boulevard would be expanded and/or additional basins may be constructed to accept stormwater runoff from new development (see Figure 4.13-2). The retention

basins would be designed to contain stormwater runoff volumes according to the City's design criteria. In addition, the retention basins would be outfitted with temporary discharge pumps and pipelines to the 3rd Street CSS. The pumps would discharge at a combined maximum rate of 1 cfs to slowly empty the retention basins. The discharge rate could be increased, if needed, during storm events larger than the design criteria by stopping the discharge from the Central Shops groundwater remediation operation, allowing for a total discharge rate of 2.24 cfs. In addition, this rate could be increased up to the maximum planned wastewater capacity for the RSPU in the 3rd Street Relief Sewer equivalent to those areas that would not already be developed. Because the RSPU would not result in a permanent discharge of stormwater to the CSS, the interim retention basins would be constructed to City standards for a 10-day, 100-year storm, and because the new 3rd Street Relief Sewer would be constructed before occupation of the RSP Area, the impact on the CSS would be **less than significant**. The impact would be less than the effects of the 2007 RSP.

Railyards Specific Plan Update Land Use Variant

Impacts for the Land Use Variant would be the similar to the RSPU, but would be incrementally less because there would be slightly less wastewater flows. As stated above, the RSPU would not result in a permanent discharge of stormwater to the CSS, and interim retention basins would be designed to City standards. In addition, the new 3rd Street Relief Sewer would be constructed before occupation of the RSP Area. For these reasons, the impact on the CSS would be **less than significant**. The impact would be less than the effects of the 2007 RSP.

KP Medical Center

The KP Medical Center would generate wastewater flows of 132,060 gpd, and result in an increase in stormwater runoff from the site. If the Stormwater Outfall were not in operation prior to construction of the KP Medical Center, a retention basin south of Railyards Boulevard would be constructed to store stormwater runoff from the KP Medical Center site for controlled low-flow discharge into the CSS until the 3rd Street Relief Sewer or Stormwater Outfall is in operation. Because the KP Medical Center would not result in a permanent discharge of stormwater to the CSS, interim retention basins would be constructed to City standards, and because the new 3rd Street Relief Sewer would be constructed before occupation of the RSP Area, the impact to the CSS would be **less than significant**.

MLS Stadium

The MLS Stadium would result in wastewater flows of 110,050 gpd, and an increase in stormwater runoff from the site. If the Stormwater Outfall was not in operation prior to the construction of the MLS Stadium, a new retention basin to the west of 7th Street would be constructed to store stormwater runoff from the MLS Stadium site for controlled low-flow discharge into the CSS until the 3rd Street Relief Sewer or Stormwater Outfall is in operation. Because the MLS Stadium would not result in a permanent discharge of stormwater to the CSS, the interim retention basins would meet City standards, and because the new 3rd Street Relief

Sewer would be constructed before occupation of the RSP Area, the impact on the CSS would be **less than significant**.

Stormwater Outfall

The Stormwater Outfall would not generate wastewater or otherwise discharge stormwater into the CSS. Stormwater would be discharged into the Sacramento River, and there would be **no impact** on the capacity of the CSS.

Summary

The proposed RSPU, Land Use Variant, KP Medical Center, and MLS Stadium would generate additional wastewater discharges to the CSS. The proposed projects would comply with the City design requirements and flow limitations within the CSS. In addition, all future stormwater runoff would be discharge through the Stormwater Outfall into the Sacramento River, not into the CSS. Further, if development precedes completion of the Stormwater Outfall, stormwater would be collected in temporary retention basins and discharged in controlled rates to either the existing 3rd Street sewer main or the 3rd Street Relief Sewer main. Therefore impacts from capacity limitations of interim stormwater retention basins would be **less than significant**.

This impact would be less than Impact 6.6-1 in the 2007 RSP EIR because no stormwater would be discharged permanently to the CSS.

Mitigation Measure

None required.

Cumulative Impacts

Cumulative impacts to the SRWWTP are based on consideration of planned future growth within the service area of the SRWWTP. Cumulative impacts to the CSS require examination of all development within the CSS service area.

Impact 4.13-3: The proposed projects would contribute to cumulative increases in flows within the CSS.

Anticipated cumulative development in the City of Sacramento, Citrus Heights, Folsom, Rancho Cordova, Elk Grove, West Sacramento, and applicable unincorporated areas of Sacramento County would result in a net increase in wastewater conveyed to the SRWWTP. Conveyance capacity needed for wastewater flows from Citrus Heights, Folsom, Rancho Cordova, and most of Elk Grove would be separate from the interceptor that serves the RSP Area. Increasing demand for conveyance and treatment capacity from development within the City could put additional demands on the existing interceptor pipeline resulting in a cumulative impact. As stated previously in this section, the proposed RSPU would connect to a new 3rd Street relief sewer line designed by the City to convey flows from the RSP Area and the River District directly to the T Street interceptor for conveyance south to the SRWTP. This new relief sewer will not contribute

significantly to the conveyance capacity that currently serves the downtown area of the City in the CSS. Further, the proposed RSPU would not discharge stormwater runoff into the CSS, and the impact would be less than significant on conveyance capacity within the CSS.

For these reasons, the cumulative impact on conveyance and treatment capacities is considered **less than significant**.

Mitigation Measure

None required.

Impact 4.13-4: The proposed projects would contribute to cumulative increases in wastewater requiring treatment at the SRWWTP.

As development occurs throughout the region, wastewater flows requiring treatment at the SRWWTP will increase. The SRWWTP currently has an excess capacity of 76 mgd, which would be available for a substantial portion of growth in the region. The RegionalSan's 2020 Master Plan identifies improvements needed to expand to 207 mgd, in order to accommodate growth in its service area through 2020 based on SACOG projections. Additionally, the RegionalSan is considering upgrades to enable compliance with revised and anticipated Regional Board effluent requirements.

The project's contributions to cumulative scenario significant impacts would be approximately two percent of the SRWWTP's total capacity. The RSPU would increase wastewater requiring treatment by 3.65 mgd (ADWF) and the RSPU would fit within the growth projections used to prepare the 2020 Master Plan. Therefore, the project contribution would not be considerable, and the resulting impact would be **less than significant**.

Mitigation Measure

None required.

4.13.2 Water Supply

The Water Supply section of this EIR describes the water supply that would serve the RSPU in relation to overall water supplies provided by the City of Sacramento (City). In doing so, this section assesses the expected water demand resulting from the RSPU, evaluates the effects of the RSPU on existing and future water infrastructure, and recommends mitigation measures where appropriate. Information in this section is based on the Railyards Water Master Plan, the City of Sacramento General Plan Technical Background Report, the City of Sacramento 2010 Urban Water Management Plan (UMWP), and information from City staff.

No comment letters regarding water supply were received in response to the NOP.

Issues Addressed in the 2007 RSP EIR

Issues that were discussed in the 2007 RSP EIR included whether the City would have sufficient water supply under its water rights and entitlements to serve the RSP Area, and if the City would have adequate conveyance systems and sufficient treatment capacity to serve the RSP Area. These issues are still applicable and will be addressed in this section.

Environmental Setting

The environmental setting for water supply is described on pages 6.11-14 through 6.11-23 of the 2007 RSP Draft EIR. The information in the 2007 RSP Draft EIR was based primarily on the 2005 Urban Water Management Plan. Since the RSP EIR was certified, the City has adopted the 2010 Urban Water Management Plan, which is the basis of the following information on supply and demand.

Existing Water Sources and Supplies

The City obtains the majority of its water supply from two surface water sources, the Sacramento River and the American River. Groundwater makes up the balance of supply.

Surface Water

Most of the City's water supply comes from surface water that the City diverts pursuant to the City's surface water rights and entitlements. These consist of water rights established before 1914, water rights established after 1914 and a settlement contract the City has with the United States Bureau of Reclamation (USBR). Each of these is discussed briefly below.

The City has pre-1914 appropriative rights, which entitle the City to water from the Sacramento River. The City's right is based on use of Sacramento River water since 1854; this pre-1914 appropriative right allows for direct diversion of 75 cfs from the Sacramento River.

The City's post-1914 Sacramento River rights are reflected in five water rights permits issued by the State Water Resources Control Board or its predecessor, the State Water Rights Board. Permit 992 authorizes the City to take water from the Sacramento River by direct diversion, and has a priority date of March 30, 1920. Permit 992 authorizes the City to divert up to 81,800 acre-feet per year (afy) with a maximum diversion of 225 cfs. This permit allows the City to use diverted Sacramento River water within the city limits, as this area changes from time to time through annexations.

The City has four additional water right permits authorizing diversions of American River water. Permits 11358 and 11361 authorize the City to divert water from the American River by direct diversion, and have priority dates of October 29, 1947, and September 22, 1954, respectively. These permits allow for diversions at the City's E.A. Fairbairn Water Treatment Plant (FWTP), and specify a combined maximum allowable rate of diversion of 675 cfs. The authorized place of use (POU) for both permits is 79,500 acres within and adjacent to the City.

The final two permits (Permits 11359 and 11360) authorize re-diversion for consumptive uses of American River tributary water previously diverted by the Sacramento Municipal Utility District's (SMUD) Upper American River Project (UARP). Permits 11359 and 11360 have priority dates of February 13, 1948, and July 29, 1948, respectively, and the POU for both permits is 96,000 acres within and adjacent to the City. These permits allow for diversions at the FWTP, and at the City's Sacramento River Water Treatment Plant (SRWTP). The combined maximum allowable diversion under these permits includes re-diversion of up to 1,510 cfs of UARP direct diversion water and up to 589,000 afy of UARP stored water.

The City also has a water rights settlement contract entered into in 1957 by the City and the USBR. The essence of the City/USBR settlement contract is that the City agreed (1) to limit its combined rate of diversion under its American River water rights permits to a maximum of 675 cfs, up to a maximum amount of 245,000 afy in the year 2030, and (2) to limit its rate of diversion under its Sacramento River water rights permit to a maximum of 225 cfs and a maximum amount of 81,800 afy. This limits the City's total diversions of Sacramento River and American River water to 326,800 afy in the year 2030 as shown in **Table 4.13-4**. The contract also specifies an annual build-up schedule to this maximum amount, as shown in **Table 4.13-5**; the maximum diversion specified for 2005 is 205,000 afy.

**TABLE 4.13-4.
SUMMARY OF CITY'S POST-1914 WATER RIGHTS**

Application or License Number	Priority Date	River Source	Maximum Amount Specified ¹		Purpose of Use	Season of Diversion and Re- Diversion	Place of Use	Deadline to Perfect Full Use
			(cfs)	(afy)				
A. 1743 P. 992	3/30/1920	Sacramento	225	81,800	Municipal	Jan 1 to Dec 31	City of Sacramento	12/31/2030
A. 12140 P. 11358	10/29/1947	American	675	245,000	Municipal	Nov 1 to Aug 1	79,500 acres within and adjacent to the City	12/1/2030
A. 12321 P. 11359	2/13/1948	Tributaries of the American			Municipal	Nov 1 to Aug 1	79,500 acres within and adjacent to the City	12/31/2030
A. 12622 P. 11360	7/29/1948	Tributaries of the American			Municipal	Nov 1 to Aug 1	79,500 acres within and adjacent to the City	12/31/2030
A. 16060 P. 11361	9/22/1954	American			Municipal	Nov 1 to Aug 1	79,500 acres within and adjacent to the City	12/1/2030
Maximum Diversion Amount			900	326,800				

Note:

1. Amounts shown reflect the settlement agreement, as discussed in text.

SOURCE: City of Sacramento Department of Utilities, 2011. *2010 Urban Water Management Plan*. October 2011, Carollo Engineers.

**TABLE 4.13-5.
SETTLEMENT CONTRACT MAXIMUM DIVERSION SCHEDULE (ACRE-FEET PER YEAR)**

Source	2010	2015	2020	2025	2030	2035
American River	145,700	170,200	196,200	222,200	245,000	245,000
Sacramento River	81,800	81,800	81,800	81,800	81,800	81,800
Total	227,500	252,000	278,000	304,000	326,800	326,800

Source: City of Sacramento, 2008. *Docks Area Specific Plan Draft EIR, Section 5.10 - Utilities*. August 2008. pp. 5.10-12 - 5.10-13.

In return, the contract requires USBR to make available at all times enough water in the rivers to enable the agreed-upon diversions by the City. The City agreed to make an annual payment to USBR for Folsom Reservoir storage capacity used to meet the USBR's obligations under the contract, beginning with payment for 8,000 acre feet of storage capacity in 1963 and building up, more or less linearly, to payment for the use of 90,000 acre feet of storage capacity in 2030. The settlement contract is permanent and not subject to deficiencies. The USBR contract, in conjunction with the City's water rights, provides the City with a very reliable and secure water supply.

The City's diversions of American River water at the FWTP are also subject during certain time periods to limitations specified in the Water Forum Agreement. The Water Forum was started in 1993 by a group of water managers, local governments, business leaders, agricultural leaders, environmentalists, and citizen groups with two "co-equal" goals: to provide a reliable and safe water supply through the year 2030, and to preserve the wildlife, fishery, recreational, and aesthetic values of the Lower American River. After six years of intense interest-based negotiations, the Water Forum participants approved the 2000 Water Forum Agreement (WFA).

As part of the WFA, each water purveyor signed a purveyor specific agreement (PSA) that specified that purveyor's Water Forum commitments. The City's PSA limits the quantity of water diverted from the American River at the FWTP during two hydrologic conditions: extremely dry years (i.e., "Conference Years") and periods when river flows are below the so-called "Hodge Flow Criteria."

The City's PSA defines extremely dry years (i.e., "Conference Years") as years in which the California Department of Water Resources (DWR) projects an annual unimpaired flow into Folsom Reservoir of 550,000 afy or less, or the projected March through November unimpaired flow into Folsom Reservoir is less than 400,000 afy. During Conference Years, the City has agreed to limit its diversions for water treated at the FWTP to 155 cfs and 50,000 afy. Conference Years have occurred on the American River only twice during the 72 year period of record historical hydrology.

In addition to Conference Years, the City's PSA specifies limitations on the City's diversion rate at the FWTP when American River flows bypassing the FWTP are less than the Hodge Flow

Criteria as follows: 2,000 cfs from October 15 through February; 3,000 cfs from March through June; and, 1,750 cfs from July through October 14.

Based on CALSIM II analysis of the 1922 to 1994 climate data, 59% of years will experience flows that are less than Hodge flow conditions at some time during the peak months of June through August. When flows passing the FWTP are greater than the Hodge Flow Criteria and Conference Year conditions do not exist, the PSA allows diversions of American River water up to the FWTP's current maximum rate of 310 cfs (200 mgd).

It is important to note that the WFA does not restrict diversion under the City's American River entitlements from a Sacramento River diversion point; therefore, during a Conference Year condition the City's annual surface water diversion amounts are limited only by the FWTP Conference Year condition and the diversion and treatment capacity at the SRWTP. Assuming a maximum treatment capacity of 50,000 afy at the Fairbairn WTP and 180,000 afy at the Sacramento WTP, the current drought limiting scenario allows a surface water production of 230,000 afy.

Sacramento River Regional Water Reliability Project (The RiverArc Project)

The City is participating as a partner in the Sacramento River Regional Water Reliability Project (known as the RiverArc Project), a multi-agency effort to enhance water supply diversity and reliability on a regional scale. While providing additional water supply options for its stakeholders, the RiverArc Project would also increase the sustainability of regional groundwater supplies and provide additional environmental protection in the American River watershed. The SRRWRP would divert water from the Sacramento River to offset water currently diverted from the American River, and deliver that water to a new regional water treatment plant. That water would then be distributed through existing and new pipelines to local water agencies, including the City of Sacramento.⁷ For the City of Sacramento, the RiverArc Project would enable the city to divert surface water when the Hodge flow restrictions are in place on the American River. A new water treatment plant could also be used to during peak periods, which would increase water supply reliability in the north Natomas area.⁸

To date, a Planning Phase 1 report has been prepared, which lays out a conceptual plan. A feasibility study is planned for 2016, with environmental review in 2016-2018. Construction would be complete in 2023.⁹

⁷ West Yost Associates, 2015. *Sacramento River Regional Water Reliability Project, Planning Phase 1*, August 2015, p. 1.

⁸ West Yost Associates, 2015. *Sacramento River Regional Water Reliability Project, Planning Phase 1*, August 2015, p. 7.

⁹ West Yost Associates, 2015. *Sacramento River Regional Water Reliability Project, Planning Phase 1*, August 2015, p. 18.

Groundwater

While the City obtains the majority of its water supply from surface water along the American and Sacramento rivers, groundwater makes up the balance of supply. Municipal Groundwater is extracted from the North Sacramento Groundwater Basin and the Central Sacramento Groundwater Basin. Groundwater is extracted from 29 municipal wells, most of which are located north of the American River. Of these, 14 groundwater wells provide non-potable water supply, while the remaining 13 provide potable water. Total capacity for the City's municipal groundwater wells is approximately 20.7 mgd.¹⁰⁻¹¹

The City pumps groundwater from both the North American Subbasin and the South American Subbasin of the Sacramento Valley Groundwater Basin. The City is one of many water purveyors that use groundwater from these two subbasins. While the City pumps from both subbasins, approximately 95% of the amount pumped by the City each year is pumped from the North American subbasin.¹² For example, the City pumped 17,772 AF of groundwater from the North American subbasin and 665 AF from the South American subbasin for potable water consumption in 2010.¹³

The North American and South American subbasins are located within the larger Sacramento Valley Groundwater Basin. The North American Subbasin is bound by Bear River to the north, Feather River to the west, the Sacramento and American rivers to the south, and a north-south line extending from the Bear River to Folsom Lake to the east. The South American Subbasin is bound by the Sierra Nevada to the east, the Sacramento River to the west, the American River to the north, and the Cosumnes and Mokelumne rivers to the south. For additional description of water bearing layers, groundwater quality, and other aquifer characteristics, as relevant to the proposed projects, please refer to Section 4.7, Hydrology and Water Quality.

The Sacramento Groundwater Authority (SGA) prepared a Groundwater Management Plan (GMP) in 2014, for the portion of the North American Subbasin that is located north of the American River to the Sacramento County line. Additionally, as a result of the Water Forum Successor Effort, the Central Sacramento County Groundwater Management Plan (CSCGMP) was prepared. These two plans identify measures to be taken to maintain a sustainable, high-quality groundwater resource. The Water Forum Agreement identified a sustainable yield for the North Basin of 131,000 afy.¹⁴ The SGA monitored groundwater extractions from the North Basin from

¹⁰ City of Sacramento Department of Utilities, 2011. *2010 Urban Water Management Plan*. October 2011, Carollo Engineers, p. 4-15.

¹¹ City of Sacramento, <https://www.cityofsacramento.org/Utilities/Your-Utilities-Your-Community/Your-Utilities>, accessed March 30, 2016.

¹² City of Sacramento Department of Utilities, 2011. *2010 Urban Water Management Plan*. October 2011, Carollo Engineers, p. 4-8.

¹³ City of Sacramento Department of Utilities, 2011. *2010 Urban Water Management Plan*. October 2011, Carollo Engineers, p. 4-8.

¹⁴ Sacramento Groundwater Authority, *Groundwater Management Plan, Sacramento County-North Basin*, December 2014, p. 59.

2000 to 2013, and estimated annual average extractions at 99,500 afy.¹⁵ The GMP also reports that groundwater use declined during this period, largely due to implementation of conjunctive use operations and water use efficiency measures.¹⁶ The GMP concludes that the North Basin is well within its sustainable yield indicator, and because the North Basin is largely developed, it was not expected that new water demands would cause the Basin to approach its average annual sustainable yield.¹⁷ The Water Forum estimated that the long-term average annual sustainable yield of the Central Basin was 273,000 afy, while extractions were estimated at 250,000 afy.¹⁸ The CSCGMP identifies measures to maintain pumping levels within the sustainable yield, including reducing demand, conjunctive use with groundwater banking and exchange opportunities, and aquifer storage and recovery projects.¹⁹

Total Available Water Supply

Accounting for the surface water rights and constraints on those rights discussed above, as well as groundwater availability and pumping capacity, **Table 4.13-6** provides a summary of total water supplies available for City use, including maximum wholesale and water wheeling requests anticipated through 2035.

**TABLE 4.13-6.
PROJECTED WATER SUPPLIES FOR CITY USE PLUS PROJECTED MAXIMUM WHOLESALE AND
WATER WHEELING REQUESTS FOR 2010 THROUGH 2035 (ACRE-FEET PER YEAR)**

Water Source	2010	2015	2020	2025	2030	2035
Total City Water Deliveries	108,276	146,300	138,300	149,200	160,100	171,100
Sales to Other Water Agencies	5,091	39,670	56,410	73,147	89,884	89,884
Total	113,367	185,970	194,710	222,347	249,984	260,984

SOURCE: City of Sacramento Department of Utilities, 2011. *2010 Urban Water Management Plan*. October 2011, Carollo Engineers.

Water Demand

Existing water demand within the City is primarily residential, but also includes commercial, institutional, and landscape irrigation.

Generally, water demand decreased from 2000 to 2010, due to a combination of factors, including increased conservation efforts, deployment of water conserving fixtures, replacement of leaky pipelines, increased public awareness over drought conditions, the City's meter retrofit program, and the effects of the recent recession. At present, approximately 56% of City water connections are

¹⁵ Sacramento Groundwater Authority, *Groundwater Management Plan, Sacramento County-North Basin*, December 2014, p. 59.

¹⁶ Sacramento Groundwater Authority, *Groundwater Management Plan, Sacramento County-North Basin*, December 2014, p. 59.

¹⁷ Sacramento Groundwater Authority, *Groundwater Management Plan, Sacramento County-North Basin*, December 2014, p. 59.

¹⁸ Water Forum and Sacramento County Water Agency, *Central Sacramento County Groundwater Management Plan*, February 2006, p. ES-5.

¹⁹ Water Forum and Sacramento County Water Agency, *Central Sacramento County Groundwater Management Plan*, February 2006, pp. 3-19 and 3-20.

on water meters.²⁰ The City also sells water to other regional agencies including Sacramento International Airport, Sacramento Suburban Water District, California American Water Company, and Sacramento County Water Agency. **Table 4.13-7** provides a projection of total water demand by the City for 2005 through 2035. **Table 4.13-8** presents a summary of water demands and available supply during multiple dry years. As discussed in the City's UWMP, the available water supply figures shown in Table 4.13-8 conform to the requirements of the Water Forum Agreement, including Hodge Flow requirements (discussed previously).

**TABLE 4.13-7.
CITY MAXIMUM TOTAL WATER DEMAND INCLUDING ALL WHEELING AND WHOLESALE
CUSTOMERS FOR 2010 THROUGH 2035 (ACRE-FEET PER YEAR)**

Water Use	2010	2015	2020	2025	2030	2035
Total Water Deliveries	108,276	146,300	138,300	149,200	160,100	171,100
Sales to Other Water Agencies	5,091	39,670	56,410	73,147	89,884	89,884
Total	113,367	185,970	194,710	222,347	249,984	260,984

SOURCE: City of Sacramento Department of Utilities, 2011. 2010 Urban Water Management Plan. October 2011. Carollo Engineers. pp. 3-18.

**TABLE 4.13-8.
CITY MULTIPLE DRY YEAR SUPPLY AND DEMAND COMPARISON, 2015 THROUGH 2035
(ACRE-FEET PER YEAR)**

Year Scenario	Water Supply or Demand	2015	2020	2025	2030	2035
1 st Year, Multiple Dry Year Scenario	Supply Total	290,800	310,300	329,800	346,800	346,800
	Demand Total	172,589	185,788	217,886	249,984	260,984
	Excess Supply	118,211	124,512	111,914	96,816	85,816
2 nd Year, Multiple Dry Year Scenario	Supply Total	290,800	310,300	329,800	346,800	346,800
	Demand Total	172,589	185,788	217,886	249,984	260,984
	Excess Supply	118,211	124,512	111,914	96,816	85,816
3 rd Year, Multiple Dry Year Scenario	Supply Total	290,800	310,300	329,800	346,800	346,800
	Demand Total	172,589	185,788	217,886	249,984	260,984
	Excess Supply	118,211	124,512	111,914	96,816	85,816

SOURCE: City of Sacramento Department of Utilities, 2011. 2010 Urban Water Management Plan. October 2011. Carollo Engineers. p. 5-21.

It should be noted that the City is currently updating the UWMP. The estimated demand for 2035 is expected to be lower than in the 2010 UWMP, because water use rates have changed in recent years. For example, in 2006, the maximum daily amount treated at both WTP combined was approximately 220 mgd, while in 2015 a combined maximum daily amount of only 120 mgd

²⁰ City of Sacramento Department of Utilities, 2015. Wastewater Fact Sheet. Available: <http://www.cityofsacramento.org/~media/Corporate/Files/DOU/YUYC/Wastewater-Fact-Sheet.pdf>.

were treated.²¹ In addition, the growth projections for the City have changed. The 2030 City General Plan assumed a population of 685,000 in 2035,²² while the more recent 2035 General Plan estimates that the City's population in 2035 will be 640,000.²³ Therefore, the information presented in this section regarding water demand is very conservative.

Water Treatment, Storage, and Distribution

Annually, the City of Sacramento provides more than 45 billion gallons of water for drinking, household use, fire suppression, landscaping, and commercial and industrial use. The distribution system is a pipeline network, where surface water and groundwater is mixed within the system.²⁴ The Department of Utilities operates and maintains the City's two water treatment plants, eight pump stations, 10 storage reservoirs, 32 municipal wells, thousands of hydrants, and nearly 1,500 hundred miles of pipeline to convey water to homes and businesses throughout the City.²⁵ The City's service area spans north to Elkhorn Boulevard in North Natomas, east to Watt Avenue and Highway 50, west to the Sacramento River and south to Sheldon Road.

Water Treatment

The City owns and operates two water diversion and treatment facilities: the Sacramento River Water Treatment Plant (SRWTP) and the E.A. Fairbairn WTP on the American River. The WTPs operate as demands dictate; treatment is directly related to consumer demands. The Sacramento WTP is located on the Sacramento River just downstream of the confluence with the American River, west of I-5 and south of Richards Boulevard. The SRWTP has a design of 160 mgd, but has not been able to operate at that level. Rehabilitation of the plant, which began in 2013 and will be completed in 2016, will allow the plant to operate at 160 mgd.²⁶ The Fairbairn WTP, located on the south bank of the lower American River, has a capacity of 160 mgd, with a peak hydraulic flow of 200 mgd. As discussed above, there are restrictions on how much water can be diverted at the Fairbairn WTP under certain conditions. Under ordinary conditions, the City's total maximum water treatment capacity is 295 mgd, and will be 320 mgd when the SRWTP improvements are completed. On average, in 2011-2012, the City treated 42 mgd of water and the SRWTP treated approximately 64 mgd for a total average treatment of 106 mgd.²⁷ In 2015, the average daily demand for treatment was 77 mgd, and the maximum day demand was 120 mgd.²⁸

²¹ Ewart, Brett, Senior Engineer, City of Sacramento Department of Utilities, personal communication, April 4, 2016.

²² City of Sacramento, 2009. *City of Sacramento 2030 General Plan*. Adopted March 3, 2009. Table 3, p. 2-8.

²³ City of Sacramento, *City of Sacramento 2035 General Plan Master Environmental Impact Report*, Certified March 3, 2015, Table 4.14-2.

²⁴ City of Sacramento, *Urban Water Management Plan*, 2010, p. 2-7.

²⁵ City of Sacramento Utilities Department, *Annual Report, Operational Statistics Fiscal Year 2005/2006*.

²⁶ Ewart, Brett, Senior Engineer, City of Sacramento Department of Utilities, personal communication, April 13, 2016.

²⁷ City of Sacramento, *City of Sacramento 2035 General Plan Master Environmental Impact Report Background Report*, adopted March 3, 2015, p. 4-21.

²⁸ Ewart, Brett, Senior Engineer, City of Sacramento Department of Utilities, personal communication, April 13, 2016.

Water Storage

Water storage is used to meet water demand for periods when peak hour demand exceeds maximum daily supply rates. These high demand periods usually occur for four to six hours during hot summer days and for potentially longer periods during large fire events. The City of Sacramento has ten above-ground storage reservoirs; each with a capacity of three million gallons (mg) and one underground reservoir with a capacity of 15 mg. The reservoirs are at different locations throughout the City's water distribution system. In addition, 44 mg of on-site storage exists at the water treatment plants. Therefore, the total water storage capacity in the City is 92 mg.²⁹

Water Transmission

The City conveys water using its system of larger transmission pipelines, which are at least 18 inches in diameter, and smaller distribution mains, which range in diameter from 4 to 16 inches in diameter. Transmission pipelines are used solely for the conveyance of large volumes of water; they are generally not tapped for water or fire services.³⁰ In total, the City manages approximately 1,600 miles of water pipelines.³¹

The Sacramento downtown area in general is supplied by several transmission lines that range up to 42 inches in diameter, and by distribution mains that range in size from 6 inches to 12 inches in diameter. These transmission lines branch into a network of distribution mains that extend throughout the downtown. These mains provide a relatively high level of service. However, some existing water mains are composed of cast iron pipe, many of which are reaching the end of their anticipated lifetime. The City maintains a water main replacement program, although timing for water main replacement in the downtown area under this program has not yet been identified.

The City does not supply recycled water to the Central City.

Water Supply Infrastructure in the RSP Area

There are a number of water transmission lines in the vicinity of the RSP Area, including lines in 7th Street, Bercut Drive and North B Street (see Figure 2-15 in Chapter 2). A single 42-inch transmission main extends from the intersection of Bercut Drive and South Park Street to the south along the Bercut Drive alignment. This main connects to an existing concrete cylinder pipe in H Street, south of the RSP Area. Two 36-inch welded steel transmission mains are located along the northern edge of the RSP Area, within North B Street. These mains would remain in operation. A 42-inch water main is located along the Jibboom Street alignment on the western edge of the RSP Area. An 18-inch transmission main is located along the 7th Street alignment,

²⁹ City of Sacramento, *City of Sacramento 2035 General Plan Master Environmental Impact Report Background Report*, adopted March 3, 2015, p. 4-22.

³⁰ City of Sacramento Department of Utilities, 2011. *2010 Urban Water Management Plan*. October, 2011. Carollo Engineers. p. 2-6.

³¹ City of Sacramento Department of Utilities, 2016. Your Utilities. Available: <https://www.cityofsacramento.org/Utilities/Your-Utilities-Your-Community/Your-Utilities>. Accessed March 30, 2016.

terminating near the intersection of 7th and F streets. This line will be extended in the future to the intersection of 7th and I streets.³²

Water service to the Central Shops area is provided by water lines passing under the UPRR tracks.

Several water mains have been installed within the RSP Area as part of the first phase of infrastructure improvements for the 2007 RSP, including water mains along 5th Street, 6th Street and Railyards Boulevard within the RSP Area. The City also plans to extend water lines in F Street and G Street in the RSP Area.³³

Regulatory Setting

The regulatory setting for water supply is described on pages 6.11-23 through 6.11-26 of the 2007 RSP Draft EIR. The following information is based on the 2007 RSP EIR, updated as needed. For example, since 2007, the State has adopted the Sustainable Groundwater Management Act, which is discussed below.

Federal

U.S. Environmental Protection Agency (EPA)

The EPA established primary drinking water standards in the Clean Water Act (CWA) Section 304 and states are required to ensure that potable water for the public meets these standards. Standards for 81 individual constituents have been established under the Safe Drinking Water Act, as amended in 1986. The U.S. EPA may add additional constituents in the future.

Safe Drinking Water Act

The U.S. Environmental Protection Agency (US EPA) administers the Safe Drinking Water Act (SDWA), the primary federal law that regulates the quality of drinking water and establishes standards to protect public health and safety. The California Department of Health Services (DHS) implements the SDWA and oversees public water system quality statewide. DHS establishes legal drinking water standards for contaminants that could threaten public health.

State

Drinking Water Quality

The California Department of Health Services (DHS) is responsible for implementing the federal Safe Drinking Water Act of 1974 and its updates, as well as California statutes and regulations related to drinking water. As part of their efforts, the DHS inspects and provides regulatory oversight for public water systems within California. In the Sacramento area, the CVRWQCB also has the responsibility for protecting the beneficial uses of the State's waters, including groundwater, and these include municipal drinking water supply, as well as various other uses.

³² Kimley-Horn and Associates, Inc., 2016. *The Railyards Water Master Plan*, May 2016, p. 10.

³³ Kimley-Horn and Associates, Inc., 2016. *The Railyards Water Master Plan*, May 2016, p. 10.

Public water system operators are required to monitor their drinking water sources regularly for microbiological, chemical, and radiological contaminants to show that drinking water supplies meet the regulatory requirements listed in Title 22 of the California Code of Regulations (CCR) as primary maximum contaminant levels (MCLs). Primary standards are developed to protect public health and are legally enforceable. Among these contaminants are approximately 80 specific inorganic and organic contaminants and six radiological contaminants that reflect the natural environment, as well as human activities. Examples of potential primary inorganic contaminants are aluminum and arsenic, while radiological contaminants can include uranium and radium.

Public water system operators are also required to monitor for a number of other contaminants and characteristics that deal with the aesthetic properties of drinking water. These are known as secondary MCLs. Secondary standards are generally associated with qualities such as taste, odor, and appearance, but these are generally non-enforceable guidelines. However, in California secondary standards are legally enforceable for all new drinking water systems and new sources developed by existing public water suppliers. The public water system operators are also required to analyze samples for unregulated contaminants, and to report other contaminants that may be detected during sampling.

Urban Water Management Planning Act

California Water Code Section 10610 (et seq.) requires that all public water systems providing water for municipal purposes to more than 3,000 customers, or supplying more than 3,000 afy, must prepare an Urban Water Management Plan (UWMP). UWMPs represent key water supply planning documents for municipalities and water purveyors in California, and often form the basis of Water Supply Assessments (see below) prepared for individual projects. UWMPs must be updated at least every five years on or before December 31, in years ending in five and zero. The City adopted its most recent UWMP on October 31, 2011. The 2015 UWMP is anticipated to be completed in Summer 2016.

Senate Bill 610 – Water Supply Assessments

Public Resources Code (PRC) Section 21151.9 requires that a Water Supply Assessment (WSA) be prepared for proposed projects as defined in the statute to ensure that long-term water supplies are sufficient to meet the project's demands in normal, single dry and multiple dry years for a period of 20 years. Preparation of a WSA is required if a proposed action meets the statutory definition of a "project", which includes at least one of the following (Water Code Section 20912(a)).

- A proposed residential development of more than 500 dwelling units (du);
- A proposed shopping center or business establishment employing more than 1,000 persons or having more than 500,000 square feet (sf) of floor space;
- A commercial building employing more than 1,000 persons or having more than 250,000 sf of floor space;

- A hotel or motel with more than 500 rooms;
- A proposed industrial, manufacturing, or processing plant, or industrial park, planned to house more than 1,000 persons, occupying more than 40 acres of land, or having more than 650,000 sf of floor area;
- A mixed-use project that includes one or more of these elements; or
- A project creating the equivalent demand of 500 residential units.

The proposed project includes more than 500 dwelling units, and, therefore, qualifies as a “Project” under Section 10912 (a) of the Water Code. Thus, the City has prepared a WSA as required by these criteria under SB 610 (included as Appendix K).

Completion of a WSA requires collection of proposed water supply data and information relevant to the project in question, an evaluation of existing/current use, a projection of anticipated demand sufficient to serve the project for a period of at least 20 years, delineation of proposed water supply sources, and an evaluation of water supply sufficiency under single year and multiple year drought conditions.

Senate Bill 221 – Written Verification of Water Supply

Government Code Section 66473.7(a)(1) requires an affirmative written verification of sufficient water supply. Senate Bill 221 is designed as a “fail-safe” mechanism to ensure that collaboration on finding the needed water supplies to serve a new large subdivision occurs early in the planning process. This verification must also include documentation of historical water deliveries for the previous 20 years, as well as a description of reasonably foreseeable impacts of the proposed subdivision on the availability of water resources of the region. Government Code section 66473.7 (b) (1) states:

The legislative body of a city or county or the advisory agency, to the extent that it is authorized by local ordinance to approve, conditionally approve, or disapprove the tentative map, shall include as a condition in any tentative map that includes a subdivision a requirement that a sufficient water supply shall be available. Proof of the availability of a sufficient water supply shall be requested by the subdivision applicant or local agency, at the discretion of the local agency, and shall be based on written verification from the applicable public water system within 90 days of a request.

In other words, as a result of the information contained in the written verification, the city or county may attach conditions to assure there is an adequate water supply available to serve the proposed project as part of the tentative map approval process.

While in most cases, following project certification, additional water supply verification is required to be completed at the Tentative Map stage, prior to adoption of the Final Map, for

certain tentative maps. Pursuant to Government Code §66473.7(i), additional water supply verification is *not* required for:

Any residential project proposed for a site that is within an urbanized area and has been previously developed for urban uses, or where the immediate contiguous properties surrounding the residential project site are, or previously have been, developed for urban uses, or housing projects that are exclusively for very low and low income households.

California Water Conservation Act

SBx7-7 was enacted in November 2009, and requires each urban water supplier to select one of four water conservation targets contained in California Water Code Section 10608.20 with the statewide goal of achieving a 20% reduction in urban per-capita water use by 2020. Under SBx7-7, urban retail water suppliers (in this case, the City of Sacramento) are required to develop water use targets and submit a water management plan to DWR by July 2011. The plan must include the baseline daily per capita water use, water use target, interim water use target, and compliance daily per capita water use. In addition, the state will make incremental progress towards this goal by reducing per capita water use by at least 10% by December 31, 2015.

Sustainable Groundwater Management Act of 2014

The Sustainable Groundwater Management Act of 2014 (SGMA) became law on January 1, 2015, and applies to all groundwater basins in the state (Water Code Section 10720.3). (The SGMA is comprised of three separate bills: Senate Bill 1168, Senate Bill 1319, and Assembly Bill 1739. All three were signed into law by the Governor on September 16, 2014.) By enacting the SGMA, the legislature intended to provide local agencies with the authority and the technical and financial assistance necessary to sustainably manage groundwater within their jurisdiction (Water Code Section 10720.1).

Pursuant to SGMA, any local agency that has water supply, water management, or land use responsibilities within a groundwater basin may elect to be a “groundwater sustainability agency” for that basin (Water Code Section 10723). Local agencies have until January 1, 2017 to elect to become or form a groundwater sustainability agency. In the event a basin is not within the management area of a groundwater sustainability agency, the county within which the basin is located will be presumed to be the groundwater sustainability agency for the basin. However, the county may decline to serve in this capacity (Water Code Section 19724).

In October 2015, the SGA Board submitted a notification of intention to become the GSA for the Sacramento County portion of the North American sub-basin.³⁴ If approved by the State, then the SGA would work with any GSAs for other portions of the North American Basin to prepare a Groundwater Sustainability Plan.

³⁴ California Department of Water Resources, 2016. *Table of GSA Formation Notifications Received by DWR*. Available: http://www.water.ca.gov/groundwater/sgm/gsa_table.cfm. Accessed March 31, 2016.

Groundwater authorities will have additional powers under the SGMA to manage groundwater within the basin, including, for example, the power to: conduct investigations of the basin, to require registration of groundwater extraction facilities and metering of groundwater extractions, regulate groundwater extractions from individual groundwater wells or wells generally, and to assess fees on groundwater extractions (see generally, Water Code Section 10725 et seq.). SGMA also provides local agencies with additional tools and resources designed to ensure that the state's groundwater basins are sustainably managed.

SGMA also requires DWR to categorize each groundwater basin in the state as high-, medium-, low-, or very low priority (Water Code Sections 10720.7, 10722.4). The North American sub-basin has been categorized as high priority.³⁵ All basins designated as high- or medium-priority basins must be managed by a groundwater sustainability agency under a groundwater sustainability plan that complies with Water Code Section 10727 et seq. In lieu of preparation of a groundwater sustainability plan, a local agency may submit an alternative that complies with the SGMA no later than January 1, 2017 (Water Code Section 10733.6).

Office of Statewide Health Planning and Development (OSHPD)

The OSHPD is a department of the California Health and Human Services Agency. It serves as the building agency for hospitals and nursing homes in California, monitors the design and construction of inpatient facilities and assures code compliance in facility maintenance. OSHPD's primary goal in this regard is to ensure that patients in these facilities are safe in the event of an earthquake or other disaster, and that the facilities remain functional after such an event in order to meet the needs of the community affected by the disaster. OSHPD has no current regulations relative to sanitary sewer wastes. However starting in 2030, providing 72-hour service for both domestic water and sanitary sewer will be required for medical facilities under its purview.

Local

City of Sacramento 2035 General Plan

The following goals and policies from the 2035 General Plan are relevant to utilities with respect to the proposed projects.

Goal U 1.1 High-Quality Infrastructure and Services. Provide and maintain efficient, high quality public infrastructure facilities and services throughout the city.

Policies

U 1.1.1 **Provision of Adequate Utilities.** The City shall continue to provide and maintain adequate water, wastewater, and stormwater drainage utility services to areas in the city, and shall provide and maintain adequate water, wastewater, and stormwater drainage utility services to areas in the city that do not currently receive these City services upon funding and construction of necessary infrastructure.

U 1.1.6 **Growth and Level of Service.** The City shall require new development to provide adequate facilities or pay its fair share of the cost for facilities needed to provide services to accommodate growth without adversely impacting current service levels.

³⁵ California Department of Water Resources, 2014. CASGEM Groundwater Basin Prioritization Results, May 28, 2014.

Goal U 2.1 High-Quality and Reliable Water Supply. Provide water supply facilities to meet future growth within the City's Place of Use and assure a high-quality and reliable supply of water to existing and future residents.

Policies

U 2.1.9 **New Development.** The City shall ensure that water supply capacity is in place prior to granting building permits for new development.

U 2.1.15 **Landscaping.** The City shall continue to require the use of water-efficient and river-friendly landscaping in all new development, and shall use water conservation gardens (e.g., Glen Ellen Water Conservation Office) to demonstrate and promote water conserving landscapes.

General Plan Consistency Analysis

The Proposed projects would be consistent with each of the General Plan goals and policies listed above. Consistent with Policies U 1.1.1 and U 1.1.6, project utilities would be appropriately sized and installed within the Downtown project site to maintain adequate service in light of the impact analysis provided below; the project applicant would pay a fair share of the cost for any needed upgrades, as warranted. With respect to Goal U 2.1 and Policy U 2.1.9, as discussed for impacts below, the City has issued a positive water supply assessment for the proposed projects, and expects to be able to serve the Proposed projects in light of all other current and planned projects. The RSPU provides for water-efficient landscaping, consistent with Policy U 2.1.15.

Drought-Related Ordinances

The City of Sacramento has passed several ordinances in response to the recent drought. On January 14, 2014 Sacramento City Council adopted a Stage 2 Water Shortage Contingency plan, which limited outdoor watering. On June 2, 2015 Sacramento City Council passed Resolution No. 2015-0162 which added additional restrictions to water use, including the removal of a 21-day variance for watering new landscaping, limiting daytime landscape watering to 2 days per week, prohibiting irrigation of turf within medians, as well as other measures. As stated previously, the City is also installing water meters, and has experienced a dramatic reduction in water demand over the last 10 years.

In November 2015, the City revised Chapter 15.92 of Title 15 of the City Code, which addresses water efficient landscape requirements. The revised chapter is based on the State's Model Efficient Landscape Ordinance. The Ordinance requires more efficient irrigation systems, including meters on parcels over a certain size, restrictions on overhead water use, and flow sensors on landscaped areas over 5,000 sf. The Ordinance also limits the area that can be planted with high water use plants to 55% for residential landscape projects and 45% for non-residential landscapes. The City requires project applicants to submit a landscape documentation package for review and approval by the City. The landscape documentation package must contain project information that demonstrates compliance with the Ordinance, including a water-efficient landscape worksheet, a soil management report, a landscape design plan, an irrigation design plan, and a grading design plan.

Analysis, Impacts, and Mitigation

Significance Criteria

The following standards of significance are used to determine whether a water-related impact is significant. Similar standards of significance were used in the 2007 RSP EIR. The proposed projects would have a significant impact related to water supply if the following would occur:

- Increased demand for potable water in excess of existing supplies;
- Inadequate capacity in the City's water supply facilities to meet water supply demand, so as to require the construction of new water supply facilities; or
- Require or result in either the construction of new water treatment facilities or the expansion of existing facilities, the construction of which could cause significant environmental impacts.

Methodology and Assumptions

The analysis in this section focuses on the nature and magnitude of the increase in water use resulting from development of the RSPU. Water demands were estimated by applying water demand factors to each proposed land use. The demand for the proposed projects was then added to existing and cumulative demands to determine whether the City's existing and planned water supply, treatment capacity and conveyance system would be adequate to serve RSPU development. Information on water supply and demand is derived primarily from the Water Supply Assessment (Appendix K). Information on the conveyance system is based on the 2016 Railyards Water Master Plan.

Water Demand Analysis

An accurate projection of demand can be developed using water demand factors based on land use sectors. For the evaluation of the adequacy of the City's water supply, factors for annual demand are used, expressed in acre-feet per year. These factors are derived from the City's Water Supply Assessment checklist, except where the checklist does not include a comparable use. The factors are shown in **Table 4.13-9**. For residential, office, retail and museum uses, the factors are taken from the WSA checklist, and are based on the number of employees, which is based on the employee numbers found in Chapter 3, Land Use, Population and Housing. For hotels, the KP Medical Center and the MLS Stadium, the factors from the Water Master Plan are used, because the Water Supply Assessment checklist does not include these uses. The calculated annual water demand is compared to the City's supply and treatment capacity to determine whether there would be adequate water available to serve the proposed projects under existing and cumulative conditions.

The Water Master Plan evaluates the adequacy of the proposed onsite water system to provide service to the proposed projects in compliance with City requirements for water pressure, fire flows and so on. The Water Master Plan also addresses whether offsite water lines have the capacity to serve the RSP Area. The water demand factors used in this analysis are provided in **Table 4.13-10**. These demands differ from the 2007 RSP EIR in several categories. This SEIR

uses a lower rate for residential units (107 gpd/unit rather than 230 gpd/unit), recognizing the high density, urban character of the proposed projects. A single commercial rate that is more conservative than the 2007 RSP DEIR is used for office uses (0.041 gpd/sf rather than 0.0375 gpd/sf), while the retail rate is higher in the 2007 RSP DEIR (0.35 gpd/sf rather than 0.041 gpd/sf). A lower rate is also used for open space (2,678 gallons per day per acre, versus 3,829 gallons per day per acre). New rates are provided for uses that were not included in the 2007 RSP, such as the KP Medical Center and the MLS Stadium.

**TABLE 4.13-9.
WATER DEMAND FACTORS ANNUAL WATER DEMAND ANALYSIS**

Land Use	Factor/Unit
Residential (High Density)	0.12 afy/unit gpd/DU
Commercial Office/Retail	0.02 afy/employee
Museum	0.17 afy/employee
Parks	2678 gpd/acre
Hospital	387.5 gpd/bed
Medical Office	0.02 afy/employee
Soccer Stadium	3 gpd/seat
Hotel	250 gpd/room

NOTES:
afy=acre feet per year
gpd=gallons per day
sf=square feet
Source: City of Sacramento, 2016; Kimley-Horn, 2016.

**TABLE 4.13-10.
RSPU WATER DEMAND FACTORS WATER CONVEYANCE ANALYSIS**

Land Use	Factor/Unit
Residential (High Density)	107 gpd/unit
Commercial Office/Retail	0.041 gpd/sf
Central Shops Area	0.031 gpd/sf
Institutional (Fire and Police Facility)	0.041 gpd/sf
Open Space	2678 gpd/acre
Hospital	387.5 gpd/bed
Soccer Stadium	3 gpd/seat
Hotel	250 gpd/room

NOTES:
gpd=gallons per day
sf=square feet
Source: RSPU Water Supply Assessment, 2016, Kimley-Horn, 2016.

Impacts on water treatment and conveyance capacity are based on both average and maximum day demands, because water infrastructure must be able to treat and convey water as it is used, which will be above or below the average demand, depending on time of year and other conditions. Maximum day demand is calculated by doubling average day demand. The Water Master Plan modeled the proposed RSPU water system to determine whether the system would meet City design criteria. In addition to peaking factors (maximum day and maximum hour), the analysis considered fire flow and added a system loss factor of 7.5%.³⁶

Impacts and Mitigation Measures

Impact 4.13-5: The proposed projects could increase demand for potable water.

The 2007 RSP EIR estimated that the 2007 RSP would require approximately 4,295 afy, and that the City had adequate water to serve the project (Impact 6.11-5). Therefore, this impact was found to be less than significant.

Railyards Specific Plan Update

The proposed projects would generate a demand for potable water of approximately 1,871 to 2,278 afy as shown in **Table 4.13-11**. This water demand is substantially lower than the estimated demand of 4,295 afy identified in the 2007 RSP EIR. The reduced demand is due to decreases in the number of housing units and commercial square footage, as well as different water demand factors. As discussed in the setting, water demand within the City for 2010 totaled 108,276 afy, which is 143,724 afy less than the maximum diversion amount specified in the USBR settlement contract for 2015 (252,000 afy). If the increased demand from the RSPU is added to the 2010 demand of 108,276 afy, the total demand in the City would be 110,147 to 110,554 afy, which is still less than the maximum diversion amount specified in the USBR contract under existing conditions. If project demand were added to more recent citywide demand (approximately 86,265 in 2015), then total demand would be even lower. Therefore, the RSPU would not exceed available water supply in the City, and this is considered a **less-than-significant** impact. This impact would be less severe than the Impact 6.11-5 of the 2007 RSP DEIR, because the water demand would be reduced by approximately one-half.

Railyards Specific Plan Update Land Use Variant

The land use variant would result in a water demand of 1,873 to 2,178 afy, which would be less than the RSPU. As discussed above, the City does not fully utilize its water supply under existing conditions, so it could accommodate an additional demand. Therefore, this would be a **less-than-significant** impact.

³⁶ Kimley-Horn and Associates, Inc., 2016. *The Railyards Water Master Plan*, May 2016, p. 10.

**TABLE 4.13-11.
LAND USE DESIGNATIONS WITH WATER DEMAND
(ACRE FEET PER YEAR)**

Land Use Designation (LUD)	RSPU Annual Demand 6,000 du	RSPU Annual Demand 10,000 du	Land Use Variant Annual Demand 7,000 du	Land Use Variant Annual Demand 10,000 du
Residential	720	1,200	840	1,200
Commercial Office	303	230	373	318
Commercial Retail	204	204	242	242
Museum	20	20	20	20
Parks	90	90	90	90
Hotel	308	308	308	308
Hospital	182	182	0	0
Medical Office	37	37	0	0
Soccer Stadium	7	7	0	0
Total	1,871 afy	2,278 afy	1,873 afy	2,178 afy

KP Medical Center

The KP Medical Center would generate a demand for water supply of approximately 182 afy for the hospital and an additional 37 afy for the medical office buildings, for a total of 219 afy. The City has unused water supply well in excess of this amount, so it would be able to meet the demand of the KP Medical Center. Therefore, this impact would be **less than significant**.

MLS Stadium

The MLS Stadium would generate a demand for water of approximately 7 afy, which is well below the City's excess water supply. Therefore, this impact would be **less than significant**.

Stormwater Outfall

The Stormwater Outfall would not generate any demand for water, and there would be ***no impact***.

Summary

The proposed projects would generate demand for City water supply. This demand can be met by the City's current water supplies, so the impact would be **less than significant**. Because the demand for water would be reduced relative to the 2007 RSP, the impact would be less severe.

Mitigation Measure

None required.

Impact 4.13-6: The proposed projects could increase demand for treated water and water distribution systems.

Water treatment and distribution is addressed in Impact 6.11-6 on pages 6.11-28 through 6.11-29 of the 2007 RSP EIR. The DEIR found that the City had adequate treatment and conveyance capacity to serve the 2007 RSP, so the impact was found to be less than significant.

Railyards Specific Plan Update

The proposed projects would result in an average daily demand for water of 1.6 to 2.01 mgd.³⁷ The maximum day demand would be double the average—3.12 to 4.02 mgd. In 2015, the maximum day demand for treatment at both plants combined was 120 mgd. The proposed projects would bring that total to 123.12 to 124.0 mgd. The Sacramento WTP and Fairbairn WTP have a maximum combined treatment capacity of 360 mgd if operated continuously, and a maximum combined treatment capacity of 260 mgd when diversions at the Fairbairn WTP are limited by the City’s WFA PSA. In either case, the City’s maximum day treatment capacities exceed maximum day demands with the addition of the proposed projects.

The water system for the RSPU would connect to existing City water pipelines. As discussed above, water lines have been installed in several areas already under the 2007 RSP, including portions of 5th Street, 6th Street and Railyards Boulevard. Additional water lines are proposed for Camille Lane, South Park Street, Stevens Street, the remaining portions of Railyards Boulevard, 5th Street, and 6th Street, as well as smaller cross streets. Connections to existing water lines are proposed for at the following locations:

- 5th Street and North B Street: Anticipated to be the only direct connection to the 36” line in North B Street. A parallel 12-inch main would be installed within the North B Street right-of-way (ROW) from 5th to 10th Street to allow connection and subsequent looping for 6th, 8th and 10th streets.
- 7th and I streets: The 7th Street extension planned by the City will connect to the 42-inch line within I Street. This will be completed in the final project phase.
- Bercut Drive and South Park Street: This connection will be a connection from the proposed 12-inch line in Bercut to the existing 42-inch transmission main at South Park Street.
- Bercut Drive and Camille Lane: This connection will be a connection from the proposed 12-inch distribution line to the existing 42-inch transmission main.³⁸

All of the above water lines are within or adjacent to the RSP Area, so no offsite water lines are required to serve the RSPU. The size of onsite lines are identified in the Railyards Water Master Plan, subject to review by the City to ensure that design standards have been met. Section 13 of

³⁷ Kimley-Horn and Associates, Inc., 2016. *The Railyards Water Master Plan*, May 2016, p. 18.

³⁸ Kimley-Horn and Associates, Inc., 2016. *The Railyards Water Master Plan*, May 2016, p. 13.

the City's Design Standards sets forth requirements regarding the design and operation of water distribution facilities. Those requirements include standards for pipe design, fire hydrants, and specific requirements for residential, commercial and industrial water service. Initial modeling conducted for the proposed water system indicated that it would meet the pressure and velocity requirements of the City. The modeling assumptions included only 6,000 residential units; but the project engineer has indicated that the results would be similar for the option of up to 10,000 residential units with an accompanying reduction of 1.1 msf of office uses. A fire flow analysis was also conducted, and showed that the system could meet standards, although each parcel will be subject to review by the City to ensure that fires system standards are met given the ultimate building type, size and height.³⁹ Final approvals by Department of Utilities' staff would be necessary prior to delivery of water to the project site. Any impacts associated with the installation of water supply infrastructure on-site are evaluated as part of the construction-related impacts analyzed in the other technical sections of this SEIR, as appropriate.

In summary, the City has adequate conveyance systems and sufficient treatment capacity to serve the proposed RSPU. On-site water conveyance and delivery improvements are included in the Specific Plan design packet and would be approved by the Department of Utilities prior to installation. Compulsory construction inspections would approve the materials and installations of the on-site water supply delivery systems. Therefore, impacts pertaining to water supply infrastructure would be considered *less than significant*. This impact would be similar to the 2007 RSP EIR, although the water demands would be lower under the RSPU.

Railyards Specific Plan Update Land Use Variant

The land use variant would result in a water demand of 1.35 to 1.5 mgd, with a maximum day demand of 2.7 mgd to 3.0 mgd. In combination with existing City maximum demand, this would result a maximum day demand of 122.7 to 123.0 mgd, which is within the City's existing treatment capacity of 260 to 320 mgd, depending on conditions. The land use variant would have a slightly different water system, because the street system would differ from the RSPU. Modeling with the revised water demands and street system indicate that the land use variant would also meet the design criteria for water conveyance and fire flows.⁴⁰ Therefore, this would be a **less-than-significant impact**.

KP Medical Center

The KP Medical Center would generate a demand for water supply of approximately 0.16 mgd, with a maximum day demand of 0.32 mgd. This would bring the water demand for treatment to 120.32 mgd, which is within the City's current treatment capacity. The KP Medical Center would construct connections to existing water lines, and construct new water infrastructure to City standards. Therefore, this impact would be **less than significant**.

³⁹ Kimley-Horn and Associates, Inc., 2016. *The Railyards Water Master Plan*, May 2016, p. 18.

⁴⁰ Kimley-Horn and Associates, Inc., 2016. *The Railyards Water Master Plan*, May 2016, p.10.

MLS Stadium

The MLS Stadium would generate a demand for water of approximately 0.075 mgd, with a maximum day demand of 0.15 mgd, which would be within the capacity of the City for treatment. The MLS Stadium would connect to existing water lines, and construct onsite lines to City standards. Therefore, this impact would be **less than significant**.

Stormwater Outfall

The Outfall would not generate any demand for water, and there would be **no impact**.

Summary

The proposed projects would generate demand for water treatment and conveyance. This demand can be met by the City's current water supplies, so the impact would be less than significant. Because the demand for water would be reduced relative to the 2007 RSP, the impact would be less severe.

Mitigation Measure

None required.

Cumulative Impacts

The following discussion provides an analysis of cumulative level impacts that could occur as a result of project implementation. Cumulative scenario context for water supply includes the water supply service area for the City of Sacramento, including reasonably foreseeable increases in water demand as identified in the City's 2010 Urban Water Master Plan and 2035 General Plan Master EIR. Cumulative scenario context for water treatment and conveyance includes the water supply service area for the City of Sacramento, including reasonably foreseeable increases in water demand as identified in the City's 2010 UWMP and 2035 General Plan Master EIR.

Impact 4.13-7: The proposed projects would contribute to cumulative increases in demand for water supply and treatment.

The cumulative context for this impact includes the water supply service area for the City of Sacramento, including reasonably foreseeable increases in water demand as identified in the City's 2010 Urban Water Management Plan (UWMP). As discussed previously, the 2010 UWMP does not identify specific development projects that were included in the City's water demand calculations. Instead, the UWMP proposes various categories of development within the City's service area for water supply. The UWMP considers water supply needed for future development as planned through 2035. Buildout within the downtown area is anticipated to be a mix of infill of vacant properties, and reuse and redevelopment of existing economically under-performing or obsolete developments. The 2010 UWMP was prepared after the 2007 RSP was adopted, so should reflect the development levels of the 2007 RSP.

As discussed in the 2010 UWMP and as noted previously in this chapter, Hodge flow conditions can result in diversion restrictions at the existing FWTP. As a result, the City has sufficient water production capacity to meet anticipated demands through the year 2020, but not beyond that year, under anticipated Hodge flow restrictions.⁴¹ With additional groundwater pumping, supplies could be adequate through 2030.⁴² This assumes that no additional wholesale or water wheeling customers would be served, except for those listed in **Table 4.13-12**. Additionally, **Table 4.13-13** includes additional likely future wholesale and wheeling customers, as discussed in the 2010 UWMP. No commitments have been made for these additional supplies, and such commitments would not be made unless sufficient water supply was made available.

**TABLE 4.13-12.
MAXIMUM DAY DEMAND INCLUDING CITY RETAIL DEMAND AND EXISTING WHOLESALE AND
WHEELING CUSTOMERS (MILLION GALLONS PER DAY)**

Customer	2015	2020	2025	2030	2035
City Retail Demand	240	234	246	259	281
Sacramento International Airport and Metro Air Park	2.8	2.8	2.8	2.8	2.8
California American Water Company	2.3	2.3	2.3	2.3	2.3
Sacramento County Water Agency Zone 40 Wheeling	11	11	11	11	11
Fruitridge Vista Water Company	3.2	3.2	3.2	3.2	3.2
Total	259	253	266	278	300

**TABLE 4.13-13.
MAXIMUM DAY DEMAND INCLUDING CITY RETAIL DEMAND AND LIKELY FUTURE WHOLESALE
AND WHEELING CUSTOMERS (MILLION GALLONS PER DAY)**

Customer	2015	2020	2025	2030	2035
City Retail Demand	240	234	246	259	281
Sacramento International Airport and Metro Air Park	4.1	5.9	7.6	9.3	9.3
Sacramento Suburban Water District – Town and Country System	20	20	20	30	30
California American Water Company – Arden	0.8	1.6	2.4	3.2	3.2
California American Water Company – Rosemont	5.3	10.6	15.9	21.2	21.2
California American Water Company – Parkway	4.8	8.4	12.1	15.7	15.7
Sacramento County Water Agency Zone 40 Wholesale	4.8	9.5	14.3	19.0	19.0
Sacramento County Water Agency Zone 40 Wheeling	11	11	11	11	11
Fruitridge Vista Water Company	4.8	6.4	8.0	9.6	9.6
Total	295	307	337	378	400

⁴¹ City of Sacramento Department of Utilities, 2011. 2010 Urban Water Management Plan, October, 2011. Carollo Engineers.

⁴² City of Sacramento, 2035 General Plan Draft Environmental Impact Report, p. 4.11-7.

Thus, while the City's existing water rights would be sufficient to provide water to meet foreseeable development within the City, including the proposed projects, at least through 2035, the City's ability to divert water from existing facilities would become insufficient in or before 2020 using the data provided in the 2010 UWMP. This is a significant cumulative impact. The proposed project contribution, although smaller than estimated in the 2007 RSP EIR, would contribute considerably to the cumulative demand for water. Therefore, this impact is considered **potentially significant**.

The 2015 UWMP is likely to reflect more recent data, such as the maximum daily demand of 120 mgd experienced in 2015, which is approximately half the demand anticipated by the 2010 UWMP. The reduced demand is due in part to permanent changes in City service, such as the ongoing installation of water meters, and in part due to additional drought restrictions. However, the effect of the reduced demand on future years will not be known until the 2015 UWMP is released.

Mitigation Measure

Mitigation Measure 4.13-7 (RSPU)

In order to ensure that sufficient capacity would be available to meet cumulative demands, the City shall implement, to the extent needed in order to secure sufficient supply, one or more of the following:

a. *Maximize Water Conservation*

Chapter 6 of the 2010 UWMP outlines an array of Demand Mitigation Measures (DMMs). In order to further reduce water demands, the City could require the Project to implement additional DMMs, which would support water conservation on site, and a partial offset of anticipated water demand for the Project. DMMs discussed in the 2010 UWMP include the following:

- Water Survey Programs for Single Family and Multiple Family Residential Customers*
- Residential Plumbing Retrofit*
- System Water Audits, Leak Detection, and Repair*
- Metering with Commodity Rates for all New Connections and Retrofit of Existing Connections*
- Large Landscape Conservation Programs and Incentives*
- High Efficiency Washing Machine Rebate Program*
- Public Information Programs*
- School Education Programs*

- *Conservation Programs for Commercial, Industrial, and Institutional Accounts*
- *Wholesale Agency Programs*
- *Conservation Pricing*
- *Water Conservation Coordinator*
- *Water Waste Prohibition*
- *Residential Ultra-Low Flush Toilet Replacement Program*

b. Implement New Water Diversion and/or Treatment Infrastructure

The 2010 UWMP proposes implementation of three potential additional projects that would support additional surface water diversion and/or treatment capacity within the City. Potential projects include:

- 1. Installation of a new WTP – Install a new WTP along the Sacramento or American River to support additional diversion and treatment*
- 2. Expansion of the SRWTP – Use existing water entitlements and expand design and treatment capacity of the SRWTP*
- 3. Construction of a raw water line to the FWTP in order to take advantage of available and existing treatment capacity at the FWTP.*

In addition to these projects, the City is working with other water agencies on the Sacramento River Regional Water Reliability Project or RiverArc Project, which could divert water from the Sacramento River to offset water currently diverted from the American River, and deliver that water to a new regional water treatment plant. That water would then be distributed through existing and new pipelines to local water agencies, including the City of Sacramento.⁴³ For the City of Sacramento, the RiverArc Project would enable the city to divert surface water when the Hodge flow restrictions are in place on the American River. A new water treatment plant could also be used to during peak periods, which would increase water supply reliability in the north Natomas area.⁴⁴

Each of these projects, if implemented, would require its own environmental review, as well as compliance with all applicable regulatory requirements and restrictions. Construction and operation of these facilities could result in the following categories of potentially significant impacts:

⁴³ West Yost Associates, 2015. *Sacramento River Regional Water Reliability Project, Planning Phase 1*, August 2015, p. 1.

⁴⁴ West Yost Associates, 2015. *Sacramento River Regional Water Reliability Project, Planning Phase 1*, August 2015, p. 7.

- *Exposure of soils to erosion and loss of topsoil during construction;*
- *Surface water quality degradation;*
- *Natural drainage courses and hydrology;*
- *Construction-related air emissions;*
- *Construction and operations-related noise impacts;*
- *Visual and/or light and glare impacts;*
- *Loss of protected species and degradation or loss of their habitats;*
- *Conversion of existing agricultural lands or resources;*
- *Degradation of fisheries habitat; and*
- *Exposure to pre-existing listed and unknown hazardous materials contamination.*

Mitigation measures would need to be developed to reduce any potentially significant impacts to less than significant levels. As such, due to the timing uncertainties associated with the long-term water supply infrastructure necessary to overcome the potential cumulative maximum day demands, project-specific mitigation measures would need to be tailored to the proposed projects. The following are illustrative of the types of mitigation measures that could be implemented to avoid or reduce those impacts listed above:

- *Reduction in operational and construction air emissions as required by SMAQMD;*
- *Avoidance of surface water pollution through control of on-site stormwater flows, protection of top soils or stock piles from wind and water erosion, and implementation of related BMPs;*
- *Minimization of operational and construction noise through the use of noise attenuation measures;*
- *Avoidance and/or implementation of appropriate measures to restore, create, preserve or otherwise compensate for effects to biological resources;*
- *Avoidance of effects to buried cultural resources through investigation and pre-testing, and/or on-site archaeological monitoring and implementation of appropriate steps if cultural resources are discovered during earth moving activities;*
- *Avoidance of hazardous materials effects through appropriate investigation and remediation of any on-site hazards; and*
- *Avoidance, preservation or other appropriate compensation for loss of or adverse effects to important farmlands.*

- *The City, as a lead or responsible agency, would be required to implement environmental review and mitigation measures identified for each individual project. The City would not be responsible for the actions taken by other local jurisdictions or agencies.*

c. *Implement Additional Groundwater Pumping*

As discussed in the 2010 UWMP, in order to meet demands under Hodge Flow restrictions, the City could also construct new groundwater production capacity and employ a conjunctive use program in order to meet future demands.

The implementation of this mitigation measure would require environmental analysis to assess if the construction or operation of new wells would have any adverse environmental consequences; its implementation would require environmental evaluation. Any new wells, appurtenances and/or infrastructure could result in the following potentially significant environmental impacts:

- *Exposure of soils to erosion and loss of topsoil during construction;*
- *Construction-related air emissions;*
- *Destruction of buried archeological or paleontological resources;*
- *Changes in natural drainage courses and hydrology;*
- *Construction and operations-related noise impacts;*
- *Visual and/or light and glare impacts;*
- *Conversion of existing agricultural lands or resources;*
- *Drawdown of groundwater in the North American Subbasin; and*
- *Exposure to pre-existing listed and unknown hazardous materials contamination.*

In addition, although this groundwater pumping mitigation measure could supply potable water to meet proposed site demands and offset a service area capacity deficit, this mitigation measure could also cause rapid drawdown of a sustained groundwater basin. This would run counter to current groundwater management planning. Additionally, increasing groundwater withdrawals could adversely affect other groundwater pumping activities in the region, or cause notable changes to known and unknown groundwater contamination plumes in the subbasin.

Mitigation measures would need to be developed to reduce any potentially significant impacts to less than significant levels. As such, due to the timing uncertainties associated with the long-term water supply infrastructure necessary to maintain sufficient system capacity, project-specific mitigation measures would need to be tailored to the proposed projects. The following are illustrative of the types of,

mitigation measures that could be implemented to avoid or reduce those impacts listed above to less than significant levels:

- *Reduction in operational and construction air emissions as required by SMAQMD;*
- *Avoidance of surface water pollution through control of on-site stormwater flows, protection of top soils or stock piles from wind and water erosion, and implementation of related BMPs;*
- *Minimization of operational and construction noise through the use of noise attenuation measures;*
- *Avoidance and/or implementation of appropriate measures to restore, create, preserve or otherwise compensate for effects to biological resources;*
- *Avoidance of effects to buried cultural resources through investigation and pre-testing, and/or on-site archaeological monitoring and implementation of appropriate steps if cultural resources are discovered during earth moving activities;*
- *Avoidance of hazardous materials effects through appropriate investigation and remediation of any on-site hazards; and*
- *Avoidance, preservation or other appropriate compensation for loss of or adverse effects to important farmlands.*

The City, as a lead or responsible agency, would be required to implement mitigation measures identified for each mitigation project. The City would not be responsible for the actions taken by other local jurisdictions or agencies.

Impact Significance After Mitigation: Implementation of one or more of the above options could sufficiently increase water treatment capacity to meet cumulative demand. However, because the specific method has not yet been determined, and because significant environmental effects could result from implementation of each of the above options, the impact is considered **significant and unavoidable**.

Impact 4.13-8: The proposed projects would contribute to cumulative increases in demand for water conveyance.

As discussed in the setting, the City has a network of water transmission lines in the vicinity of the RSP Area, a number of which have been upsized recently. The size of these pipelines assumed additional development in the Central City, including the 2007 RSP, which had greater daily water demands than the proposed projects. Therefore, the offsite transmission lines would be adequate to serve cumulative development with the addition of the proposed projects, and this impact would be **less than significant**.

Mitigation Measure

None required.

4.13.3 Solid Waste

This section characterizes existing solid waste collection services in the proposed RSP Area. Existing plans and policies relevant to solid waste issues associated with implementation of the proposed projects are also provided. Potential impacts to solid waste collection services due to the project are evaluated based on analyses of service levels and project data. The disposal of hazardous waste, including medical waste, is discussed in Section 4.8 of the SEIR.

No comment letters associated with solid waste services were received during the Notice of Preparation (NOP) review period.

The analysis included in this section was developed based on project-specific construction and operational features, data provided in the City of Sacramento 2035 General Plan, City of Sacramento 2035 General Plan Master Environmental Impact Report, and CalRecycle's Solid Waste Information System, and communication with City of Sacramento Solid Waste Division and CalRecycle Local Assistance and Market Development staff.

Issues Addressed in the 2007 RSP EIR

In the 2007 RSP EIR, solid waste was discussed in terms of how the project would affect the available solid waste facilities based on the amount of waste generated. This issue is still applicable to the proposed projects and is discussed in this section. However, the proposed projects include the KP Medical Center and the Stadium uses, which were not evaluated in the 2007 RSP EIR.

Environmental Setting

The environmental setting for solid waste is described on pages 6.10-21 through 6.10-22 of the 2007 RSP Draft EIR and the information presented is substantially unchanged since certification of the 2007 RSP EIR. The following discussion is based on the 2007 RSP EIR setting, updated as appropriate.

Within the City of Sacramento, residential waste is collected by the City's Recycling and Solid Waste Division and commercial and multi-family waste is collected by private franchised haulers.⁴⁵⁻⁴⁶ Solid waste collected by the commercial haulers is taken to either a transfer station and then transported to a landfill or is taken directly to a landfill facility. Commercial waste can

⁴⁵ City of Sacramento, 2015. *About RSW*. <http://portal.cityofsacramento.org/General-Services/RSW/About-RSW>. Accessed December 9, 2015.

⁴⁶ City of Sacramento, 2015. *Commercial and Construction Services*. Available: <http://portal.cityofsacramento.org/General-Services/RSW/Collection-Services/Commercial-Services>. Accessed December 9, 2015.

be taken to a variety of landfills, as long as they are compliant with the Sacramento Regional Solid Waste Authority (SWA) Code for commercial waste hauling.⁴⁷ A majority of the City collected residential solid waste is taken to the Sacramento Recycling and Transfer Station or the North Area Recovery Station where it is sorted for transport to disposal facilities.⁴⁸ Construction and demolition is collected by either commercial franchise haulers or hauled by the contractor or permit holder. If construction and demolition debris is being hauled by anyone else, it must be source separated and sent to an authorized recycler or delivered to a certified construction and demolition debris sorting facility.⁴⁹

On an annual basis, the City of Sacramento disposes of approximately 474,624⁵⁰ tons of solid waste. Approximately 50% of the waste is recycled and the other 50% is landfilled.⁵¹ Several facilities provide solid waste disposal services to the City of Sacramento. These include the following, in order by the amount of waste the facility receives from commercial haulers and the City of Sacramento Recycling and Solid Waste Division:⁵²

- Kiefer Landfill, located in Sloughouse, California, is operated by Sacramento County and maintains a permitted capacity of 10,815 tons per day. The landfill has nearly 113 million cubic yards of available capacity, and is estimated to have sufficient capacity to maintain operations through 2035.⁵³⁻⁵⁴
- 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, with a remaining capacity of approximately 24 million cubic yards and is estimated to have sufficient capacity to maintain operations through 2021.⁵⁵⁻⁵⁶

⁴⁷ Sacramento Regional Solid Waste Authority Commercial Code. *Title II of SWA Code Regulating Commercial Solid Waste Collection, Transportation, or Disposal*. Available: <http://www.swa.saccounty.net/Documents/SWA%20Title%20II.pdf>. Accessed December 15, 2015.

⁴⁸ City of Sacramento, 2015. City's 2014 CalRecycle Electronic Annual Report.

⁴⁹ City of Sacramento, 2013, Construction & Demolition Management Plan. Available: <http://portal.cityofsacramento.org/General-Services/RSW/Collection-Services/Recycling/Construction-and-Demolition>. Accessed December 9, 2015.

⁵⁰ City of Sacramento, 2015. City's 2014 CalRecycle Electronic Annual Report.

⁵¹ City of Sacramento, 2015. *City of Sacramento 2035 General Plan Master Environmental Impact Report, Appendix C, Background Report, Chapter 4: Utilities*. February 24, 2015. Accessed December 1, 2015.

⁵² California Department of Resources Recycling and Recovery, 2015. *Jurisdiction Disposal by Facility 2014 Reporting*. Accessed November 23, 2015.

⁵³ California Department of Resources Recycling and Recovery, 2015. *Facility Site/Summary Details: Sacramento County Landfill (Kiefer)*. <http://www.calrecycle.ca.gov/SWFacilities/Directory/34-AA-0001/Detail/>. Accessed November 23, 2015.

⁵⁴ California Department of Resources Recycling and Recovery, 2015. *Sacramento County Landfill (Kiefer) Permit*. Accessed December 9, 2015.

⁵⁵ California Department of Resources Recycling and Recovery, 2015. *Facility Site/Summary Details: Forward Landfill*. <http://www.calrecycle.ca.gov/SWFacilities/Directory/39-AA-0015/Detail/>. Accessed November 23, 2015.

⁵⁶ California Department of Resources Recycling and Recovery, 2015. *Forward Landfill Permit*. Accessed December 9, 2015.

- L and D Landfill, located off of Fruitridge Road in Sacramento, California, is operated by L and D Landfill, LP. The landfill has a maximum capacity of 2,540 tons per day, with a maximum permitted capacity of 6,031,055 cubic yards, sufficient to provide service through 2023. A large volume transfer facility is also located on site.⁵⁷⁻⁵⁸
- 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, with a maximum permitted capacity of 49 million cubic yards. The facility is expected to have sufficient capacity to allow operations through 2081.⁵⁹⁻⁶⁰

Regulatory Setting

The regulatory setting for solid waste is described on pages 6.10-22 through 6.10-25 of the 2007 RSP Draft EIR and the information presented is substantially unchanged since certification of the 2007 RSP EIR. The following discussion is based on the 2007 RSP EIR setting, updated as appropriate.

Federal

Resource Conservation and Recovery Act

The Resource Conservation and Recovery Act (RCRA), Subtitle D, contained in Title 42 of the United States Code (USC) § 6901 et seq. contains regulations for municipal solid waste landfills and requires states to implement their own permitting programs incorporating the federal landfill criteria. The federal regulations address the location, operation, design, groundwater monitoring, and closure of landfills. The U.S. Environmental Protection Act (EPA) waste management regulations are codified in Volume 40 of the Code of Federal Regulations (CFR) pts. 239-282. The RCRA Subtitle D is implemented by Title 27 of the Public Resources Code (PRC), approved by the EPA.

State

Integrated Waste Management Act (Assembly Bill 939)

Regulation affecting solid waste disposal in California is embodied in Public Resources Code Title 14, known as the Integrated Waste Management Act originally adopted in 1989. Assembly Bill (AB) 939 was designed to increase landfill life by diverting solid waste from landfills within

⁵⁷ California Department of Resources Recycling and Recovery, 2015. *Facility Site/ Summary Details: L and D Landfill*. <http://www.calrecycle.ca.gov/SWFacilities/Directory/34-AA-0020/Detail/>. Accessed November 23, 2015.

⁵⁸ California Department of Resources Recycling and Recovery, 2015. *L and D Landfill Permit*. Accessed December 9, 2015.

⁵⁹ California Department of Resources Recycling and Recovery, 2015. *Facility Site/ Summary Details: Yolo County Central Landfill*. <http://www.calrecycle.ca.gov/SWFacilities/Directory/57-AA-0001/Detail/>. Accessed November 23, 2015.

⁶⁰ California Department of Resources Recycling and Recovery, 2015. *Yolo County Central Landfill Permit*. Accessed December 9, 2015.

the state and conserving other resources through increasing recycling programs and incentives. AB 939 requires that counties prepare Integrated Waste Management Plans to implement landfill diversion goals, and requires that cities and counties prepare and adopt Source Reduction and Recycling Elements (SRRE). The SRRE must set forth a program for management of solid waste generated with the jurisdiction of the respective city or county. Each source reduction and recycling element must include, but is not limited to, all of the following components for solid waste generated in the jurisdiction of the plan:

- A waste characterization component,
- A source reduction component,
- A recycling component,
- A composting component,
- A solid waste facility capacity component,
- An education and public information component,
- A funding component, and
- A special waste component.

The SRRE programs are designed to achieve landfill diversion goals by encouraging recycling in the manufacture, purchase and use of recycled products. AB 939 also requires that California cities implement plans designed to divert the total solid waste generated within each jurisdiction by 50% based on a base year of 2000. The diversion rate is adjusted annually for population and economic growth when calculating the percentage achieved in a particular jurisdiction.

Public Resources Code 41780

The California State Legislature set the policy goal for the state that not less than 75% of solid waste generated be source reduced, recycled or composted by the year 2020. Furthermore, a 50% diversion rate will be enforced for local jurisdictions.

Assembly Bill 1220

The California Department of Resources Recycling and Recovery (CalRecycle) and the State Water Resources Control Board (State Water Board) completed a parallel rulemaking as a result of AB 1220 (Chapter 656, Statutes of 1993). AB 1220 required clarification of the roles and responsibilities of the two boards, the Regional Water Quality Control Boards (Regional Water Boards) and CalRecycle's local enforcement agencies in regulating solid waste disposal sites. The approved Title 27 regulations combine prior disposal site/landfill regulations of CalRecycle and the State Water Board that were maintained in Title 14 CCR and Chapter 15 of Title 23 CCR (which contains requirements for disposal of hazardous waste). The purpose for CalRecycle standards in this subdivision is to protect public health and safety and the environment. The regulations apply to active and inactive disposal sites, including facilities or equipment used at the disposal sites. These standards make clear that the primary responsibility for enforcing state

minimum standards rests with the local enforcement agency in cooperation with the Regional Water Board or other oversight agency. Subchapters of Title 27 include operating criteria for landfills and disposal sites, requirements to have enough materials to cover waste to prevent a threat to human health and the environment, requirements for operations at solid waste facilities for the handling of waste and equipment needs of the site, requirements for controlling activities on site, requirements for controlling landfill gas that is made from the decomposition of wastes on site, and requirements of the owner/operator of a facility to properly operate the site to protect the site from fire threat.

Assembly Bill 341

In an effort to reduce greenhouse gas emissions from disposing of recyclables in landfills, AB 341 requires local jurisdictions to implement commercial solid waste recycling programs. Businesses that generate four cubic yards or more of solid waste per week or multifamily dwellings of five units or more must arrange for recycling services. In order to comply with AB 341, jurisdictions' commercial recycling programs must include education, outreach and monitoring of commercial waste generators and report on the process to CalRecycle. Jurisdictions may enact mandatory commercial recycling ordinances to outline how the goals of AB 341 will be reached. For businesses to comply with AB 341, they must arrange for recyclables collection through self-haul, subscribing to franchised haulers for collection, or subscribing to a recycling service that may include mixed waste processing that yields diversion results comparable source separation.⁶¹

Assembly Bill 1826

In order to further reduce greenhouse gas emissions from disposing of organics materials in landfills, AB 1826 requires businesses to recycle their organic waste beginning on April 1, 2016, depending on the amount of solid waste they generate per week. Similar to AB 341, jurisdictions are required to implement an organic waste recycling program that includes the education, outreach and monitoring of businesses that must comply. Organic waste refers to food waste, green waste, landscaping and pruning waste, nonhazardous wood waste, and food-soiled paper that is mixed with food waste.

Local

City of Sacramento 2035 General Plan

The City's General Plan has been updated since certification of the 2007 RSP EIR. The following goals and policies from the [2035 General Plan](#) are relevant to solid waste.

Goal U 1.1 High-Quality Infrastructure and Services. Provide and maintain efficient, high-quality public infrastructure facilities and services throughout the city.

⁶¹ Assembly Bill 341: Mandatory Commercial Recycling, 2011. <http://www.calrecycle.ca.gov/recycle/commercial/#Elements>. Accessed December 15, 2015.

Policies

U 1.1.2 **Citywide Level of Service Standards.** The City shall establish and maintain service standards [Levels of Service (LOS)] for water, wastewater, stormwater drainage, and solid waste services.

Goal U 5.1 Solid Waste Facilities. Provide adequate solid waste facilities, meet or exceed State law requirements, and utilize innovative strategies for economic and efficient collection, transfer, recycling, storage, and disposal of refuse.

Policies

U 5.1.2 **Landfill Capacity.** The City shall continue to coordinate with Sacramento County in providing long term landfill disposal capacity within the Sacramento Region to reduce greenhouse gas emissions.

U 5.1.5 **Residential and Commercial Waste Disposal.** The City shall continue to provide curbside trash and recycling collection service to single-family residential dwellings and offer collection service to commercial and multifamily residential development.

The proposed projects would be consistent with Goal U 1.1 and associated policies by supporting recycling programs, implementing construction waste recycling and reuse practices, and the contracting of private franchised haulers who are required to deliver waste to a facility that has been approved by the City.

Sacramento Regional Solid Waste Authority (SWA)

The Sacramento Regional Solid Waste Authority (SWA) is a Joint Powers Authority that is funded by franchise fees and oversees solid waste, recycling, and disposal needs in the greater Sacramento area. The SWA Board of Directors is composed of elected officials from member cities (currently the City of Sacramento) and Sacramento County. The SWA regulates commercial solid waste and construction and demolition waste collected by franchised haulers through ordinances.

Title II of SWA Code Regulating Commercial Solid Waste Collection, Transportation or Disposal

Title II of the SWA Code Regulating Commercial Solid Waste Collection, Transportation, or Disposal requires that commercial franchised haulers must meet the diversion requirements in Public Resources Code Section 41780. Title II requires that all commercial generators must use the franchised haulers for solid waste and recyclables collection.⁶²

Title IV of SWA Code Regulating Business Recycling, Non-Residential, Non-Residential Property Recycling, Multi-Family Property Recycling and Single Family Residential Property (Property Managed by an Association or Other) Recycling

Title IV of the SWA Code Regulating Business Recycling, Non-Residential, Non-Residential Property Recycling, Multi-Family Property Recycling and Single Family Residential Property

⁶² SWA Commercial Code. *Title II of SWA Code Regulating Commercial Solid Waste Collection, Transportation or Disposal.* <http://www.swa.saccounty.net/Documents/SWA%20Title%20II.pdf>. Accessed December 15, 2015.

(Property Managed by an Association or Other) Recycling requires that commercial franchised haulers must meet a 30% total recycling rate for all commercial hauling within the City.⁶³

Source Reduction Recycling Element

The California Integrated Waste Management Act of 1989 (AB 939, noted above) mandates that each city shall prepare, adopt, and submit a SRRE. AB 939 required all cities to achieve a minimum diversion of 25% of the City's waste stream from landfilling by the year 1995 and 50% diversion by the year 2000. The City of Sacramento's Final Draft SRRE, approved in 1995, pledges to exceed the requirements of AB 939, where feasible, in an effort to achieve a 70% landfill avoidance goal adopted by City Council in August 1989. In order to achieve this goal, the City has implemented a number of programs, including curbside recycling, drop-off and buy-back centers, and compost programs.

Sacramento Municipal Code

Chapter 17.616 of the City of Sacramento Municipal Code outlines the recycling and solid waste disposal regulations. These regulations are necessary in order to lengthen the lifespan of landfills, encourage recycling, and meet State mandated goals for waste reduction and recycling, specifically AB 939. These policies provide guidelines regarding the location, size and design features of recycling and trash enclosures in a manner by which adequate, convenient space for the collection, storage, and loading of recyclable and solid waste material is provided. In addition, developers are required to submit a "statement of recycling information" to the City's solid waste manager. The requirement for this statement includes: a site plan which includes design specifications, plans for demolition and construction, and any details of proposed education/public relations programs. Section 17.616.030 of the code provides the following recycling volume and plan requirements for new developments:

- Multi-family residential: 1 cubic yard per 16 units;
- Office and general commercial: 1 cubic yard per 40,000 sf;
- Restaurant/bar: 1 cubic yard per 5,000 sf 90 gallon container minimum;
- Retail sales: 1 cubic yard per 8,000 sf 90 gallon container minimum;
- Motel/hotel/inn/bed and breakfast: 1 cubic yard per 20 rooms 90 gallon container minimum;
- Park: supply recycling receptacle with each garbage receptacle unless park prohibits food and drink from outside the park and food and beverage containers provided in the park are paper only; and

⁶³ SWA Commercial Code. Title IV of SWA Code Regulating Business Recycling, Non-Residential, Non-Residential Property Recycling, Multi-Family Property Recycling and Single Family Residential Property (Property Managed by an Association or Other) Recycling. <http://www.swa.saccounty.net/Documents/SWA%20Title%20IV.pdf>. Accessed January 18, 2016.

- Hospital/medical clinics: none except the cafeteria which must comply with the same requirements as a restaurant/bar; and
- Develop recycling plan to be submitted with improvement plan review for the project.

The Municipal Code Chapter 8.124 regarding Construction and Demolition Debris Recycling requires that projects within the City that are subject to the construction and demolition requirements must recycle at least fifty percent of all debris during the course of a project. Projects that are subject to the requirements in Chapter 8.124 are any construction, addition, repair, alteration, remodel, or renovation work within the City that has a construction permit with a job value of \$250,000 or more.⁶⁴⁻⁶⁵

Analysis, Impacts, and Mitigation

Significance Criteria

The 2007 RSP EIR used the following criterion to evaluate impacts related to solid waste:

1. Require or result in either the construction of new solid waste facilities or the expansion of existing facilities, the construction of which could cause significant environmental effects.

The City of Sacramento continues to use the above criterion for solid waste impacts (see for example the 2035 General Plan MEIR), so it is used in the following analysis.

Methodology and Assumptions

The following impact analysis evaluates potential for the proposed project components to result in the construction or expansion of solid waste facilities. Potential changes in operational solid waste generation are evaluated using waste generation factors shown in **Table 4.13-14**, estimated by square footage. The generation rates included in the tables are estimated based on a variety of factors from CalRecycle, waste generation from similar developments, and the City of Sacramento Municipal Code. The analysis also includes operational waste generation rates for the RSPU Land Use Variant. These waste generation rates are in **Table 4.13-15**, also estimated by dwelling unit and, for non-residential uses, by square footage.

There is qualitative analysis of the estimated construction and demolition (C&D) debris generated by the proposed project for both the RSPU and RSPU Land Use Variant. It should be noted that although C&D activities would produce a large amount of solid waste that would need to be disposed of, this would be a one-time contribution to the City's solid waste stream.

⁶⁴ Sacramento Municipal Code. *Chapter 8.124 Construction and Demolition Debris Recycling*. Accessed December 15, 2015.

⁶⁵ City of Sacramento, 2015. *C&D Debris Recycling Ordinance*. Available: <http://www.cityofsacramento.org/General-Services/RSW/Collection-Services/Recycling/Construction-and-Demolition>. Accessed December 15, 2015.

**TABLE 4.13-14.
SOLID WASTE GENERATION FOR THE RSPU**

Land Use Designation	Proposed du/sf	Unit	Factor	Solid Waste per day (tons)	Solid Waste per year (tons)
Residential (High Density)	6,000-10,000	Dwelling Unit	8.5 ¹	25.50-42.50	9,308-15,513
Commercial Office	4,542,730-3,442,730	square feet	0.006 ²	13.63-10.33	4,974-3,770
Commercial Retail	905,363	square feet	0.025 ²	11.32	4,131
Central Shops Area/Museum	180,000	square feet	0.025 ⁵	2.25	821
Hotel	1,100	rooms	3.2 ⁶	1.76	642
Hospital	658,003	square feet	0.02 ³	6.58	2,402
Medical Office	510,000	square feet	0.006 ³	1.53	558
Soccer Stadium	25,000	seats	0.041 ⁴	0.51	187
Total				63.08-76.78	23,023-28,024

NOTES:

1. CalRecycle, *Residential Developments: Estimated Solid Waste Generation Rates*, <http://www.calrecycle.ca.gov/wastechar/wastegenrates/Residential.htm>. Accessed November 23, 2015.
2. CalRecycle, *Commercial Sector: Estimated Solid Waste Generation and Disposal Rates*, <http://www.calrecycle.ca.gov/wastechar/wastegenrates/Commercial.htm>. Accessed November 23, 2015.
3. Estimated from the Kaiser Permanente Murrieta PEIR. April 2015. Accessed January 29, 2015.
4. Estimated from the City of San Jose's Airport West Stadium and Great Oaks Place Project. Draft completed in September 2009. <https://www.sanjoseca.gov/DocumentCenter/View/13849>. Divided stadium's 18,000 seats by 135 tons (270,000 pounds) per year for a factor of 15 pounds per seat per year. Accessed November 23, 2015.
5. Solid waste generation for the Historical/Cultural uses within the proposed project is estimated using the solid waste generation rate used for retail uses.
6. City of Sacramento, Entertainment and Sports Complex Draft EIR.

SOURCE: City of Sacramento, Railyards Specific Plan Draft EIR, August 2007; Downtown Railyards Venture, LLC, 2015; AECOM, 2015.

**TABLE 4.13-15.
SOLID WASTE GENERATION FOR THE RSPU LAND USE VARIANT**

Land Use Designation	Capacity	Unit	Factor	tons per day	tons per year
Residential (High Density)	7,000-10,000	Dwelling Unit	8.5 ¹	29.75-42.50	10,859-15,513
Commercial Office	5,601,882-4,776,882	square feet	0.006 ²	16.81-14.33	6,134-5,231
Commercial Retail	1,074,213	square feet	0.025 ²	13.43	4,901
Central Shops Area/Museum	180,000	square feet	0.025 ⁵	2.25	821
Hotel	1,100	rooms	3.2 ⁶	1.76	642
Hospital	0	square feet	0.02 ³	0.00	0
Medical Office	0	square feet	0.006 ³	0.00	0
Soccer Stadium	0	seats	0.041 ⁴	0.00	0
Total				64.00-74.27	23,357-27,108

NOTES:

1. CalRecycle, *Residential Developments: Estimated Solid Waste Generation Rates*, <http://www.calrecycle.ca.gov/wastechar/wastegenrates/Residential.htm>. Accessed November 23, 2015.
2. CalRecycle, *Commercial Sector: Estimated Solid Waste Generation and Disposal Rates*, <http://www.calrecycle.ca.gov/wastechar/wastegenrates/Commercial.htm>. Accessed November 23, 2015.
3. Estimated from the Kaiser Permanente Murrieta PEIR. April 2015. Accessed January 29, 2015.
4. Estimated from the City of San Jose's Airport West Stadium and Great Oaks Place Project. Draft completed in September 2009. <https://www.sanjoseca.gov/DocumentCenter/View/13849>. Divided stadium's 18,000 seats by 135 tons (270,000 pounds) per year for a factor of 15 pounds per seat per year. Accessed November 23, 2015.
6. Solid waste generation for the Historical/Cultural uses within the proposed project is estimated using the solid waste generation rate used for retail uses.
7. City of Sacramento, Entertainment and Sports Complex Draft EIR.

SOURCE: City of Sacramento, Railyards Specific Plan Draft EIR, August 2007; Downtown Railyards Venture, LLC, 2015; AECOM, 2015.

The method used to assess the operational solid waste generations used are similar to those used in the 2007 RSP EIR. Operation of the proposed project would result in the generation of municipal waste, as estimated based on the proposed use. Types of waste would include hospital and medical office, commercial, multi-family, office, and MLS Stadium-related wastes. Where generation rates are not available for a specific use, estimates from similar types of uses and CalRecycle data are used to estimate the amount of waste that could be generated annually by the proposed project operations. As shown in Table 4.13-14, the proposed projects would generate approximately 25,357 tons of solid waste for the 6,000 dwelling unit scenario. The 10,000 dwelling unit scenario (which would reduce office by 1.1 msf) would generate approximately 430,357 tons of solid waste per year.

Solid waste generation was also calculated for the land use variant, which would not include the KP Medical Center or the MLS Stadium, as shown in Table 4.13-15.

Impacts and Mitigation Measures

Impact 4.13-9: The proposed projects would generate additional solid waste.

Railyards Specific Plan Update

The 2007 RSP EIR found that impacts with respect to solid waste would be less-than significant. (See the 2007 RSP EIR on pages 6.10-26 through 6.10-29). The 2007 RSP estimated that 22,193.8 tons/year would be generated and approximately 44% of the waste would be diverted from landfills with 12,428.5 tons landfilled. The proposed RSPU revised the land use plan unit count and square footage for the RSP, and includes the KP Medical Center and MLS Stadium, which have different waste generation rates than the previous land uses.

Construction

Construction activities generate solid waste from packing materials, unused building materials, demolition and/or removal of debris and related sources. Recyclable construction materials, including concrete, metals, wood, and other recyclables would be diverted to authorized recycling facilities. A waste recycling plan must be submitted for each construction project, and must identify and estimate the materials to be recycled during construction, and specify where and how the recyclable materials will be stored on the site. A waste recycling report that demonstrates that the project recycled a minimum of 50% of its construction waste will then be reviewed through the City's Building Department at the time of building plans. In order to comply with the City's recycling requirement, each construction project will either use a franchised hauler who reports recycling rates quarterly to the City, source separate the material by type for recycling, or ensure the waste is taken to a City certified construction and demolition debris recycling facility which also reports recycling rates to the City. These provisions would apply to all construction under the proposed projects.

As discussed in more detail below, both proposed KP Medical Center and the MLS Stadium would be designed and constructed to meet the certification requirements of the US Green

Building Council's Leadership in Energy and Environmental Design (LEED) Certification which include use of recycled content in building materials and recycling of construction waste. By following these requirements, construction and demolition debris generated by the proposed projects that would be placed in landfills would be minimized, but not completely avoided.

Construction and demolition waste that is not recycled would be delivered to one or more of the following facilities: Kiefer Landfill, Forward Landfill, L and D Landfill, or Yolo County Central Landfill. In consideration of the large volume of landfill capacity available to service the proposed projects, and the intermittent and temporary nature of construction waste, there would be sufficient landfill capacity available to accommodate the generated construction and demolition debris that cannot be recycled.

For a discussion of potentially contaminated debris that could be encountered during construction, please see Section 4.8, Hazards and Hazardous Materials.

Operation

Operational waste generated from proposed projects would be considered commercial solid waste. Project development would be required to provide for recycling as required by AB 341 and AB 1826 to further reduce the amount of solid waste to be landfilled. As shown in Table 4.13-14, there will be approximately 23,023 to 28,024 tons generated annually. The 2007 RSP EIR estimated approximately 22,193 tons would be generated annually, which would be approximately 4% to 26% less than what would be generated under the RSPU. Waste generated by the proposed RSPU and project components would be recycled or landfilled by SWA franchised commercial haulers, in accordance with the City recycling programs and requirements mentioned above. Also as shown above, the available landfill facilities maintain approximately 192,031,055 cubic yards⁶⁶ in total available capacity. The total annual solid waste estimated to be generated by proposed project uses would use approximately 0.13% of the available total annual landfill capacity. Additional, implementation of the typical recycling rates, SWA recycling requirements, and California legislative requirements would result in a portion of the total waste stream being diverted to recycling, which would further reduce the amount of solid waste generated by proposed project uses requiring landfill. For these reasons, sufficient landfill capacity would be available to serve the proposed projects, for both construction and demolition landfilled waste and operational waste, without the need for new or expanded solid waste management or disposal. Therefore, the impact would be **less than significant**.

Railyards Specific Plan Update Land Use Variant

Construction

The construction and demolition debris generated in construction the RSPU Land Use Variant would be comparable to that generated with construction of the proposed RSPU project, including the KP Medical Center and MLS Stadium. While not all the buildings would be seeking LEED

⁶⁶ One cubic yard is equivalent to approximately 0.1125 tons uncompacted, or approximately 0.375 tons compacted, as waste would arrive at the landfill from trucks or other transport equipment.

Certification, the RSPU Land Use Variant would still comply with the City construction and demolition debris recycling requirement.

Operation

As shown in Table 4.13-15, the Land Use Variant would generate a total of 23,357 to 27,108 tons, which is approximately 5% to 22% less than the proposed RSPU. The reduction in waste is due to the elimination of the KP Medical Center and the MLS, and development of commercial and residential uses on those parcels.

Waste generated by the RSPU Land Use Variant operational uses would be recycled or landfilled by SWA franchised commercial haulers, in accordance with the City recycling programs and requirements mentioned above. Also as shown above, the available landfill facilities maintain approximately 192,031,055 cubic yards⁶⁷ in total available capacity. Annual proposed project related waste would make up approximately 0.13% of the total annual capacity for the available landfills. Additionally, implementation of the typical recycling rates, SWA recycling requirements, and California legislative requirements would result in a portion of the total waste stream being diverted to recycling, which would further minimize impacts to landfill capacity. There would be sufficient landfill capacity available to serve the proposed Land Use Variant, for both construction and operation, and would not require new or expanded solid waste management or disposal. Therefore, the impact would be **less than significant**.

KP Medical Center

The solid waste at the proposed KP Medical Center project would be collected through a private franchise hauler, because it is considered a commercial solid waste generator.⁶⁸ The total annual waste generated from both the medical office buildings and hospital facilities would be approximately 3,113 tons. In order to meet LEED standards, the proposed KP Medical Center plans to implement construction waste diversion programs that would minimize waste generated and use recycled building materials. By following these requirements, construction and demolition debris generated by the proposed projects that would be placed in landfills would be minimized, but not completely avoided. Furthermore, the proposed KP Medical Center would comply with all the state and City regulations on commercial waste generators that increased recycling and decrease waste that goes to landfills, further decreasing the waste that is landfilled. The waste generated by the proposed KP Medical Center is 0.002% of the remaining capacity at the regional landfills and there would be sufficient landfill capacity available to serve the proposed KP Medical Center and would not require new or expanded solid waste management or disposal facilities. Therefore, the impact would be **less than significant**.

⁶⁷ One cubic yard is equivalent to approximately 0.1125 tons uncompacted, or approximately 0.375 tons compacted, as waste would arrive at the landfill from trucks or other transport equipment.

⁶⁸ Sacramento Regional Solid Waste Authority Commercial Code. *Title I: Definition of Terms*. Accessed November, 24, 2015.

MLS Stadium

The solid waste at the proposed MLS Stadium would be collected through a private franchise hauler because it is considered a commercial solid waste generator.⁶⁹ The total annual total generated waste of approximately 13.56 tons, based on 30 events taking place at the MLS Stadium. The proposed MLS Stadium has set sustainability targets, including the use of 10% of recycling content in building materials and recycling approximately 75% of the construction waste, to meet achieve the necessary points for achieving LEED Certification. Furthermore, the proposed MLS Stadium will comply with all the state and City regulations on commercial waste generators that increased recycling and decrease waste that goes to landfills, further decreasing the waste that is landfilled. The waste generated by the proposed MLS Stadium is well within the remaining capacity at the regional landfills and there would be sufficient landfill capacity available to serve the proposed project and would not require new or expanded solid waste management or disposal facilities. Therefore, the impact would be **less than significant**.

Stormwater Outfall

Operation of the proposed stormwater outfall would not generate any solid waste that would need to be disposed of in a landfill. Therefore, there would be **no impact**.

Summary

The proposed projects would generate more solid waste than estimated for the 2007 RSP EIR. However, since 2007, recycling requirements are more stringent, and two of the proposed projects the KP Medical Center and the MLS Stadium, would comply with LEED standards, further reducing the amount of waste needing to be landfilled. The existing landfills have capacity to accept the waste generated by the proposed projects, so this impact would be **less than significant**. The impact would be more severe than the 2007 RSP because more waste would be generated.

Mitigation Measure

None required.

Cumulative Impacts

The following discussion provides an analysis of cumulative level impacts that could occur as a result of project implementation. The cumulative context for solid waste includes all development within the Sacramento Regional County Solid Waste Authority's service area, including the City of Sacramento and unincorporated portions of Sacramento County.

Impact 4.13-10: The proposed projects would contribute to cumulative increases in solid waste.

⁶⁹ Sacramento Regional Solid Waste Authority Commercial Code. *Title I: Definition of Terms*. Accessed November, 24, 2015.

The Kiefer Sacramento County Landfill is the primary landfill used for the City, is expected to have sufficient capacity to maintain operation for at least 20 years. Growth proposed under the 2035 General Plan would result in the production of an additional 181,380 tons of solid waste per year. However, mandatory reductions of at least 50% would result in approximately 90,690 tons of solid waste per year that would be landfilled. The 2035 General Plan Master EIR concludes that existing landfills will be able to accommodate the increase in waste, so this cumulative impact is less than significant. The 2035 General Plan assumed development of the Railyards, so this figure would include most of the waste generated by the proposed projects. Available landfill capacity would be sufficient to accommodate these increases, including the additional waste from the proposed project. Therefore the project contribution would not be considerable, and the cumulative impact would be **less than significant**.

Mitigation Measure

None required.