6.4 UTILITIES

6.4.1 INTRODUCTION

This section addresses potential environmental impacts associated with providing utility services to the project. Analysis provided in this section is based on information contained in the Greenbriar Water Study (Wood Rodgers 2005a, provided in Appendix H), Greenbriar Sewer Study (Wood Rodgers 2005b, provided in Appendix I), Greenbriar Master Drainage Study (Wood Rodgers 2005c, provided in Appendix J), the Water Supply Assessment for the project (EDAW 2005, provided in Appendix K), review of agency documents, and consultation with local utility services providers.

6.4.2 EXISTING SETTING

WATER SUPPLY AND CONVEYANCE

The project site does not currently receive municipal water supply. When the site was previously in active agricultural production (before publication of the NOP), groundwater was pumped from on-site groundwater wells to meet irrigation needs. At the time the NOP was published, no groundwater was pumped at the site. An historical accounting of groundwater volumes pumped at the site is not available.

The City of Sacramento (City) currently provides domestic water service from a combination of surface and groundwater sources including the American River, Sacramento River, and groundwater wells to nearly 132,000 customers within its service area (City of Sacramento 2005a). Water from the American River and Sacramento River is diverted by two water treatment plants including the Sacramento River Water Treatment Plant (SWTP) located at the southern end of Bercut Drive approximately 6 miles south of the project site and the Fairbairn Water Treatment Plant (FWTP) located at the northeast corner of State University Drive South and College Town Drive approximately 10 miles southeast of the project site (City of Sacramento 2005b). Water diverted from the Sacramento and American Rivers is treated, stored in storage reservoirs, and pumped to customers via a conveyance network.

The FWTP and the SWTP divert water from the American River and Sacramento River, respectively. In 2003, the City finished an expansion of the SWTP, increasing its maximum capacity from 110 mgd to 160 mgd. The expansion also included construction of a new intake structure on the Sacramento River. An expansion of the FWTP was completed in 2005, which increased the maximum capacity of the FWTP from 90 mgd to 200 mgd. In 2002–2003, the FWTP treated an average of 59.2 mgd of water and the SWTP treated an average of approximately 56.8 mgd (City of Sacramento 2005b).

The City holds five water rights permits: one for diversion of Sacramento River water and four for diversion of American River water. The City also holds a permanent water right settlement contract with the U.S. Bureau of Reclamation (USBR). Under this agreement, the USBR agreed to operate its Folsom and Shasta facilities to provide a reliable water supply to the City's downstream diversion intakes and the City agreed to limit total diversions under its Sacramento and American River water right permits to 326,000 acre-feet annually (AFA) (City of Sacramento 2005a). During extremely dry years, the Water Forum Agreement (WFA) limits annual withdrawal from the American River to 50,000 AFY; however, there are no diversion limitations on the Sacramento River. Therefore, entitled American River water may be diverted at the WTP below the confluence of the American and Sacramento Rivers and normal-year and dry-year water supplies are identical (EDAW 2005). The City currently (for the year 2005) has a water demand of 148,898 acre-feet per year and a surplus of deliverable water supply of 56,102 acre-feet per year during normal years.

The City maintains 34 wells for potable and non-potable use. Of these wells, 32 potable wells are north of the American River, and two are south of the American River (Peifer, pers. comm., 2005). The current groundwater system can supply up to 30 mgd and produce up to 33,600 AFY. Historical average annual groundwater use for the period 1997–98 through 2003–04 was 20,454 AFY. Although the City focuses on developing surface water as

its primary source of water supply, the groundwater well system provides flexibility in providing additional water supplies when there are low river flows (City of Sacramento 2005a).

The City operates ten storage reservoirs, each with a capacity of three million gallons (MG), except for the Florin Reservoir, which has a capacity of 15 MG for a systemwide 42 MG of storage. In addition to the reservoirs, the water treatment plants together maintain an on-site storage of over 43 MG. The stored water is used to meet the city's water demand for fire flows, emergencies, and peak hours. The City's current volume of storage capacity is adequate to meet the City's flow demands during emergency events, even under full buildout conditions (City of Sacramento 2005a).

An existing 30-inch water transmission main is located south of the project site across I-5. This main is located in South Bayou Road and supplies water to the North Natomas area west of I-5 (Wood Rodgers 2005b) (See Exhibit 3-5). A 24-inch water distribution main is currently planned to be constructed along Elkhorn Boulevard starting at Natomas Boulevard (approximately 2 miles east of the project site) and would extend to the northwest corner of the project site (See Exhibit 3-5).

WASTEWATER COLLECTION AND TREATMENT

The project site is not currently linked to any wastewater collection or treatment facilities. Sanitary sewer service (i.e., collection and conveyance) in the North Natomas area is provided by the County Sanitation District No. 1 (CSD-1) for local and trunk wastewater collection and the Sacramento Regional County Sanitation District (SRCSD) for inceptor conveyance.

CSD-1 collects wastewater flows from its service area and conveys them through SRCSD facilities to the Sacramento Regional Wastewater Treatment Plant (SRWTP) for treatment and disposal. The SRWTP is owned and operated by the SRCSD and provides sewage treatment for the City of Sacramento, City of Folsom, City of Rancho Cordova, City of Elk Grove, and unincorporated county areas. The project site is not currently located in SRCSD's service area and would require annexation into their service area for conveyance and treatment of the project's wastewater. The City would maintain on-site sewer facilities for the project. The SRWTP is a secondary treatment facility and is currently permitted to treat an average dry weather flow (ADWF) of 181 million gallons per day (mgd) and a daily peak wet weather flow of 392 mgd. Currently, ADWF is approximately 165 mgd (SRCSD 2005). The SRCSD has recently adopted its 2020 Master Plan (2004), which identifies projected future wastewater flows within its service area and the facilities necessary to treat these flows. The 2020 Master Plan projects a population-based flow of 218 mgd ADWF by 2030 and includes new facilities which would provide capacity to meet this flow level. An EIR was certified in 2004 for the Master Plan. The adequacy of the EIR has been challenged and the challenge is not expected to be resolved before the end of 2006.

The SRCSD also maintains the regional interceptors that convey sewage to the treatment plant. The SRCSD is currently implementing large-scale improvements to the interceptor system in anticipation of growth over the next 15 years and to help relieve existing deficiencies and constraints. These improvements would serve the City, the North Natomas Community Plan Area and ultimately the project site. These improvements include:

- Construction of a 60-inch diameter parallel force main that will run from the Arden pumping station along the American River Parkway to the south bank of the American River in the vicinity of California State University, Sacramento, and the Fairbairn Water Treatment Plant and is scheduled to be operational by 2010),

- Construction of the multi-year, multi-phase Bradshaw Sewer Project, which is an 18-mile large-diameter sewer pipeline, or interceptor, which will connect to the recently built Folsom interceptor and is scheduled for completion in 2006,

- Extension of the Laguna interceptor to the SRWTP, which is currently under construction,

- Construction of the Lower Northwest interceptor (LNWI) which is a regional pipeline that will provide sewer service for the growing northern Sacramento County area and West Sacramento and is scheduled to be operational by 2010, and

- Construction of the Upper Northwest interceptor which is currently under construction and is scheduled to be operational by 2010.

The CSD-1 service area is divided into ten trunk sheds which are based on the collection systems of the individual sewer districts from which CSD-1 was originally formed. The project site is located in the Natomas trunk shed. For the most part, each trunk shed consists of a number of hydraulically independent systems, each discharging into the SRCSD interceptor system. A 33-inch sewer main is located immediately east of the project site across SR 70/99 along Greg Thatch Circle.

No existing septic facilities are located on-site.

STORM DRAINAGE

The existing topography of the project site is relatively flat with minor slopes from northeast to southwest. Drainage facilities on the project site currently consist of several drainage/irrigation ditches that ultimately convey flows to the south. Project site elevations range from 5 to 25 feet above mean sea level.

The project site consists of three watersheds: east, north/northwest, and south/southwest. A narrow area of the eastern portion of the site drains to the existing Natomas Mutual channel under SR 70/99 then south towards the West Drainage Canal. The north/northwestern portion of the project site drains into the Lone Tree Canal and flows south under I-5 through three existing 5-foot by 8-foot box culverts. The stormwater is then conveyed to the south towards the West Drainage Canal. The south/southwestern portion also drains to the south under I-5. The West Drainage Canal drains to the south and terminates in the Natomas Main Drainage Channel which is pumped into the Sacramento River (Exhibit 6.4-1).

The project site is located within the North Natomas Basin which is served by a series of Reclamation District 1000 (RD 1000) canals and pump stations that collect stormwater and discharge it into the Sacramento River. RD 1000 operates and maintains the levees surrounding the Natomas Basin and the internal drainage system (i.e., canals and pump stations inside the Natomas Basin) to evacuate agricultural and urban runoff. The City is responsible for maintenance of internal conveyance, detention basins, and pump stations that discharge into the RD 1000 system. The City of Sacramento North Natomas Comprehensive Drainage Plan (CDP) identifies various basin areas, including detention basins and pumping facilities, to mitigate developed discharge to the existing RD 1000 system within the North Natomas Community Plan area.

The City of Sacramento's storm water drainage system consists of a network of natural channels, canals, levees, subsurface drains, and pumping stations that ultimately drain into the Sacramento and American rivers. Storm water in the City, specifically urban runoff, is disposed of via one of two methods: (1) conveyance to the Sacramento River and American River through sumps, pipelines and treatment facilities organized, primarily, by drainage basin; or (2) conveyance by the City's Combined Sewer Service System (CSS), along with sewage, to the SRWTP.

ELECTRICAL AND NATURAL GAS SERVICES

Pacific Gas and Electric (PG&E) provides natural gas service to the North Natomas community and surrounding areas through major transmission lines, distribution lines, and stations. Specifically, PG&E currently operates 8-inch main distribution lines to convey natural gas along Elkhorn Boulevard east of SR 70/99 and along East Commerce Way located southeast of the project site. PG&E also plans to extend natural gas lines to serve the future Metro Airpark project through an extension of an 8-inch main northward along the future Metro Airpark

Boulevard north to Elverta Road and along Elkhorn Boulevard westward to Power Line Road (Schlaht, pers. comm., 2005).

Sacramento Municipal Utility District (SMUD) provides electrical service throughout Sacramento County through transmission lines, distribution lines, and electrical stations. SMUD-operated electrical lines in the project area include a 12 kilovolt (Kv) electrical line that extends across the project site along Lone Tree Road and a 69 Kv single circuit line that extends north-south along Power Line Road approximately 1 mile west of the project site. SMUD plans to construct a new 69 Kv double circuit transmission line along Elkhorn Boulevard from an existing substation located at the intersection of Natomas Boulevard and Elkhorn Boulevard. This new transmission line would extend to the west to Lone Tree Road turning south along Meister Way and then traveling west to Power Line Road and the Metro Airpark development. This new 69 Kv transmission line would serve the project site and the Metro Airpark. SMUD also plans to reconfigure the existing line extending along Power Line Road from single circuit to double circuit. At the project site, SMUD is planning to construct a new substation on the parcel designated for community commercial or village commercial in the northeastern portion of the project site (Nakamoto, pers. comm., 2005). The applicant is also working with SMUD to identify feasible alternative locations both on-site and adjacent to the project site for a new substation. For purposes of this analysis, the substation is assumed to be located on-site. At the time a final location is selected, SMUD (as lead agency) will evaluate the environmental impacts associated with that location through a separate environmental process.

6.4.3 REGULATORY SETTING

WATER SUPPLY

SB 610

Senate Bills 610 and 221

SB 610 (Section 21151.9 of the Public Resources Code and Section 10910 et seq. of the Water Code) requires the preparation of "water supply assessments" for large developments (e.g., more than 500 dwelling units or nonresidential equivalent). These assessments, prepared by "public water systems" responsible for service, address whether there are adequate existing or projected water supplies available to serve proposed projects, in addition to urban and agricultural demands and other anticipated development in the service area in which the project is located. Where a WSA concludes that insufficient supplies are available, the WSA must lay out steps that would be required to obtain the necessary supply. The content requirements for the assessment include, but are not limited to, identification of the existing and future water suppliers and quantification of water demand and supply by source in 5-year increments over a 20-year projection. This information must be provided for average normal, single-dry, and multiple-dry years. The absence of an adequate current water supply does not preclude project approval, but does require a lead agency to address a water supply shortfall in its project approval findings.

A WSA has been prepared for the project (EDAW 2005) and is included as Appendix J. The conclusions of the WSA are summarized in Section 6.4.4, "Impacts and Mitigation Measures."

If the project is approved, additional complementary statutory requirements, created by 2001 legislation known as SB 221 (Government Code Section 66473.7) would apply to the approval of tentative subdivision maps for more than 500 residential dwelling units. This statute requires cities and counties to include, as a condition of approval of such Tentative Maps, the preparation of water supply verification. The verification is intended to demonstrate that there is a sufficient water supply for the newly created residential lots. The statute defines sufficient water supply as the total water supplies available during normal, single-dry, and multiple-dry years within a 20-year projection that will meet the projected demand associated with the proposed subdivision, in addition to existing and planned future uses, including, but not limited to, agricultural and industrial uses. A number of factors must be considered in determining the sufficiency of projected supplies, including:

Source: Wood Rodgers 2005

Proposed Drainage System **Exhibit 6.4-1**

- The availability of water supplies over a historical record of at least 20 years;
- The applicability of an urban water shortage contingency analysis that includes action to be undertaken by the public water system in response to water supply shortages;
- The reduction in water supply allocated to a specific water-use sector under a resolution or ordinance adopted, or a contract entered into, by the public water system, as long as that resolution, ordinance, or contract does not conflict with statutory provisions giving priority to water needed for domestic use, sanitation, and fire protection; and
- The amount of water that the water supplier can reasonably rely on receiving from other water supply projects, such as conjunctive use, reclaimed water, water conservation, and water transfer, including programs identified under federal, state, and local water initiatives, such as CALFED and Colorado River tentative agreements.

City of Sacramento General Plan

The City of Sacramento General Plan does not contain any policies applicable to the provision of water services to the project because the project is outside of the area covered by the City's current general plan. If the project area is annexed to the City, it would be subject to the provisions of Section 11 of the City Charter which provides, in part, that "[Th]e supply of water for the City of Sacramento for municipal and domestic purposes shall always be owned and controlled as a municipal utility and shall be administered by the City government."

LAFCo

The LAFCo Policies, Procedures, and Guidelines document includes the following standards related to the provision of urban services to annexed areas.

- The annexation must be consistent with the applicable Master Service Elements (Municipal Service Review). An annexation … shall be approved only if the services element of the Spheres of Influence Plan of the affected agency or agencies demonstrates that adequate services will be provided within the time frame needed by the inhabitants of the annexed … area. Proposed annexations for land areas that lie outside of the current and next five-year increments of projected service delivery in the services element are presumed not to comply with this standard unless the applicant clearly establishes that special and unique circumstances exist which ensure the provision of quality services during the applicable time frame for the affected area consistent with the other standards. (Section I, Standard Number 4)
- The annexation must provide the lowest cost and highest quality of urban services for the affected population. LAFCo will approve an annexation … only if the Commission determines that the annexing agency possesses the capability to provide the most efficient delivery of applicable urban services for the affected population. (Section I, Standard Number 5)

WASTEWATER SERVICES

City of Sacramento General Plan

The City of Sacramento General Plan does not contain any policies applicable to the provision of wastewater services to the project site.

LAFCo

Please refer to LAFCo policies identified under Water Supply above.

STORMWATER SERVICES

City of Sacramento General Plan

The following City of Sacramento General Plan policies related to stormwater facilities are applicable to the project:

- **Drainage, Goal A**
    - *Policy 1*: Ensure that all drainage facilities are adequately sized and constructed to accommodate the projected increase in stormwater runoff from urbanization

The project's consistency with these policies is discussed in Chapter 5.0, "Project Consistency with Plans and Policies."

LAFCo

Please refer to LAFCo policies identified under Water Supply above.

ELECTRICAL AND NATURAL GAS SERVICES

City of Sacramento General Plan

The City of Sacramento General Plan does not contain any policies applicable to the provision of electrical or natural gas services to the project.

LAFCo

Please refer to LAFCo policies identified under Water Supply above.

6.4.4 IMPACTS AND MITIGATION MEASURES

METHOD OF ANALYSIS

Analysis provided in this section is based on information contained in the Greenbriar Water Study (Wood Rodgers 2005a, provided in Appendix H), Greenbriar Sewer Study (Wood Rodgers 2005b, provided in Appendix I), Greenbriar Drainage Study (Wood Rodgers 2005c, provided in Appendix J), the Water Supply Assessment for the project (EDAW 2005, provided in Appendix K), review of agency documents, and consultation with local utility services providers.

THRESHOLDS OF SIGNIFICANCE

An impact related to the provision of utility services would be considered a significant environmental impact, as defined by the State CEQA Guidelines (Appendix G), if the proposed project would:

- Create a water supply demand in excess of existing entitlements and resources;
- Result in the determination by the wastewater treatment provider that serves or may serve the project that it does not have adequate capacity to serve the project's projected demand in addition to the provider's existing commitments;
- Exceed wastewater treatment requirements of the applicable RWQCB;

- Require or result in the construction of new water or wastewater treatment facilities or expansion of existing facilities, the construction of which could cause significant environmental effects; or

- Require or result in the construction of new storm water drainage facilities or expansion of existing facilities, the construction of which could cause significant environmental effects.

- Exceed capabilities of electrical or natural gas service providers to serve the project.

IMPACTS AND MITIGATION MEASURES

IMPACT 6.4-1

Increased Demand for Water Supply and Facilities. *Water demands for the project would be met by the City of Sacramento through existing water supply entitlements available from the American River, Sacramento River, and the City's local groundwater well system. The City has sufficient water supplies to meet their existing and projected future demands in addition to the proposed project through 2030 under all water year types (e.g., normal, single-dry, and multiple-dry years). Further, other than construction of the necessary infrastructure to connect the project site to the City's existing water system, no additional water supply facilities would be needed to serve the project. Therefore, this would be a* ***less-than-significant*** *impact related to water supply.*

The project would properly close and abandoned all on-site water wells in accordance with City and County standards and would connect the project site to the City's existing water distribution system. No groundwater would be pumped at the project site for domestic, potable use. However, two groundwater wells would be constructed as part of the project to maintain in adequate levels in the lake/detention basin.

To maintain adequate water levels in the lake/detention basin throughout the year, additional water may be supplied by two groundwater wells which would be constructed adjacent to the lake/detention basin. Based on water balance calculations, the summer inflow to the lake/ detention basin would generally balance with the evaporation and infiltration rates expected for the lake/detention basin. It is estimated that a total of 82 acre-feet of water would be lost to evaporation and infiltration while the project would result in approximately 117.4 acre-feet of inflow into the lake/detention basin. This would result in a positive water balance of 35.4 acre-feet. As such, it may not be necessary to use the groundwater wells to maintain water levels in the lake depending on the hydrologic conditions. Nonetheless, the proposed groundwater wells would be available for back up purposes in the event lake levels recede. Initially, the groundwater wells would be used to fill the lake/detention basin. A total of 200 acre-feet of water would be needed to fill the basin (Matthies, pers. comm., 2006).

A WSA was prepared for the project as part of this EIR (Appendix K). The WSA indicated that project development would result in an average daily water demand (ADD) of approximately 2.4 million gallons per day (mgd) at full project build out (EDAW 2006) which is equivalent to approximately 2,680 acre-feet per year (AFY) (Table 6.4-1).

The City of Sacramento recently completed a 2030 demand analysis for the Reclamation Sacramento River Water Reliability Study which evaluated existing and projected demands against existing and projected water supplies. The City of Sacramento's existing water demand was calculated to be 143,784 AFY with a maximum day demand of 218 mgd (EDAW 2006).

Based on the information provided in the WSA, sufficient water supplies are available to serve the project during normal, single-dry, and multiple-dry years (conference years) based on existing available water supply entitlements as shown in Tables 6.4-2 and 6.4-3 (EDAW 2006, Appendix K). Please refer to Appendix K for additional details regarding the WSA for the project.

Table 6.4-1
Water Demand Projections for Greenbriar

Land Use Designation	Total		Unit Water Demand		Demand		
	Acres[1] (net)	Dwelling Units	gpm/ac	gpm/du	Average Daily		Average Annual (AF)
					gpm	mgd	
Low Density Residential	81	671	—	0.44	295	0.42	476
Medium Density Residential	145	2,215	—	0.44	975	1.40	1,573
High Density Residential	30	587	2.48	—	74	0.11	119
Commercial	28	—	1.86	—	52	0.07	84
Parks/Landscape	51	—	2.6	—	133	0.19	215
Schools	10	—	1.55	—	16	0.02	26
Subtotal	**345**	**3,473**	—	—	**1,545**	**2.22**	**2,493**
7.5% System Losses	—	—	—	—	**116**	**0.17**	**187**
Totals	—	—	—	—	**1,661**	**2.39**	**2,680**

Notes: gpm/ac = gallons per minute/acre, gpm/du = gallons per minute/dwelling unit
[1] Net acreage does not include street right-of-way.
Source: Wood Rodgers 2005a

Table 6.4-2
Supply and Demand Comparison during Conference Years [a]

	2005	2010	2015	2020	2025	2030
Surface Water Supply						
American River	50,000	50,000	50,000	50,000	50,000	50,000
American River diverted from the Sacramento River	73,200	95,700	120,200	146,200	172,200	179,000[c]
Sacramento River	81,800	81,800	81,800	81,800	81,800	81,800
Total Surface Water Supply [b]	**205,000**	**227,500**	**252,000**	**278,000**	**304,000**	**310,800**
Demand	135,576	157,036	178,496	199,957	221,417	242,877
Project Demand	0	2,680	2,680	2,680	2,680	2,680
Total Demand	**135,576**	**159,716**	**181,176**	**202,637**	**224,097**	**245,557**
Additional Water Supply	**69,424**	**67,784**	**70,824**	**75,363**	**79,903**	**65,243**

Notes:
[a] Total surface water supply shown is based on USBR contracted deliveries and not maximum dry year treatment and diversion capacity of 230,000 AFY
[b] Dry/Conference year demand reduced because City does not provide water to SSWD in dry years.
[c] Based on 160 mgd at SRWTP.
Source: City of Sacramento 2005b

Table 6.4-3
Maximum Day Surface Water Supply and Demand Comparison during Normal Flow Conditions (mgd)

	2005	2010	2015	2020	2025	2030
Surface Water Supply						
American River [a]	200	200	200	200	200	200
Sacramento River [a]	160	160	160	160	160	160
Total Surface Water Supply	**360**	**360**	**360**	**360**	**360**	**360**
Demand	218	234	251	267	283	300
Project Demand	-	4.4	4.4	4.4	4.4	4.4
Total Demand	**218**	**238**	**255**	**271**	**287**	**304**
Additional Water Supply	**142**	**122**	**105**	**89**	**73**	**56**

Notes: [a] Surface supply is based on plant capacity.
Source: City of Sacramento 2005b

Sufficient water supplies are available to meet existing and projected future water demands for the City in combination with the project. Therefore, this would be a ***less-than-significant*** water supply impact.

No mitigation is required.

IMPACT 6.4-2

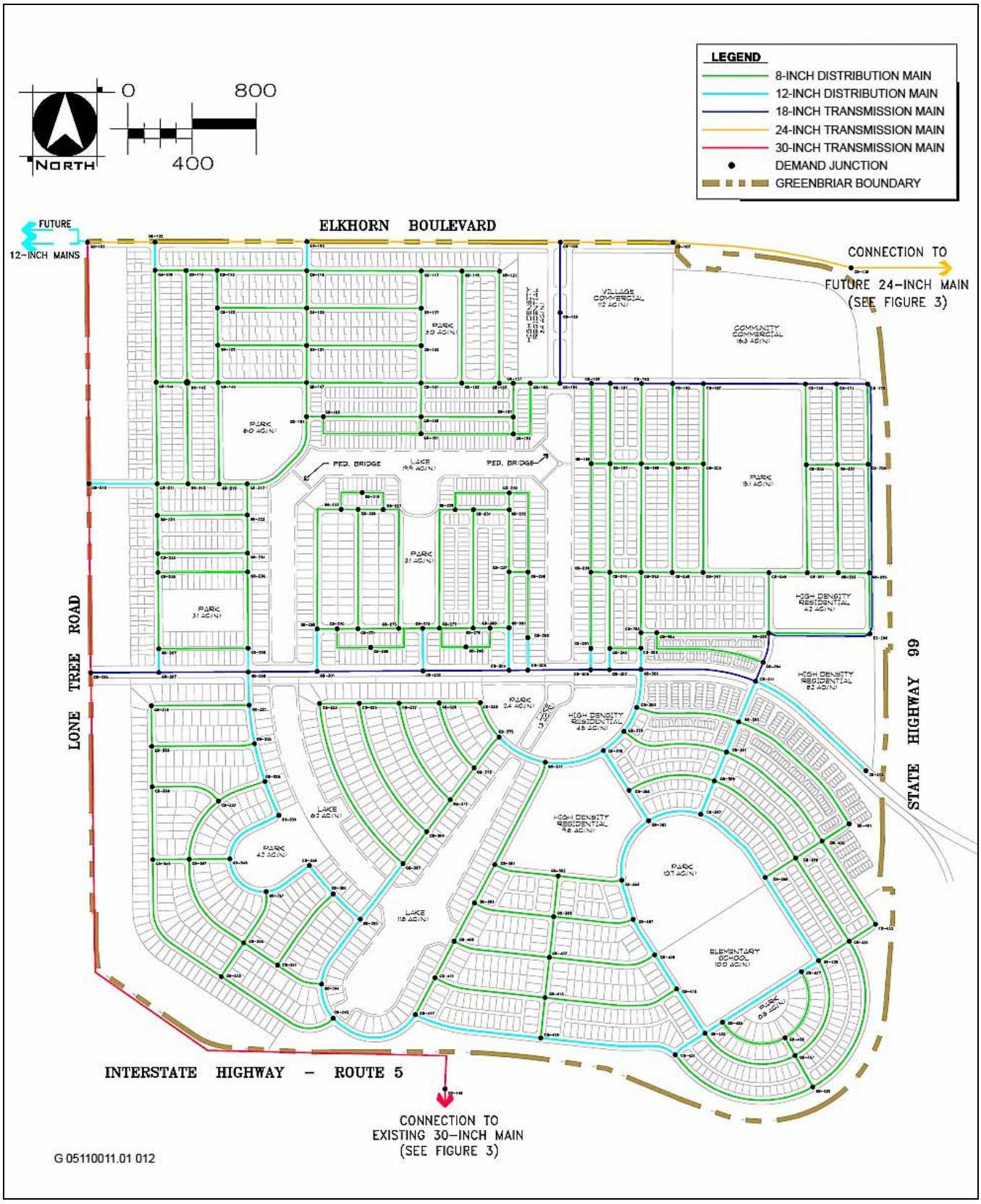
Increased Demand for Water Conveyance. *Water supply infrastructure is not currently available on the project site; therefore, water line extensions would be required to deliver water to the project site. Proposed water supply facilities would be sized to accommodate the project's water distribution and fire flow needs. Further, sufficient capacity is available within the city's off-site water distribution facilities to serve the project site. For these reasons, the provision of water to the project would result in less-than-significant water conveyance impacts.*

A preliminary water distribution system has been designed for the project and would consist of a grid of 8-inch and 12-inch distribution mains throughout areas designated for residential land uses (Exhibit 6.4-2). The proposed water distribution system would connect to off-site water distribution facilities including a 24-inch transmission pipeline in Elkhorn Boulevard and a 30-inch transmission pipeline in Lone Tree Road (Exhibit 6.4-2).

An 18-inch transmission main would run under Meister Way from the western edge of the project site to the east; it would then turn north between two parcels designated for high density residential land uses (near the eastern boundary) and run along the eastern edge of the site, and would terminate at a 24-inch transmission main located in Elkhorn Boulevard at the north (Exhibit 6.4-2).

The grid of water distribution mains on the project site and extension of transmission mains to the project site would be adequately sized to accommodate project-related water demands and fire-flow demands (Wood Rodgers 2005). Further, sufficient capacity is available within the City's water distribution system to serve the project and continue to meet the City's existing and projected future demands (Wood Rodgers 2005). Therefore, the project would result in ***less-than-significant*** impacts related to water conveyance.

No mitigation is required.



Source: Wood Rodgers 2005a

Water Distribution System **Exhibit 6.4-2**

IMPACT 6.4-3

Increased Demand for Wastewater Collection and Conveyance. *Sufficient capacity within the SRCSD interceptor system would be available to accommodate the project's wastewater demand. This would be a* ***less-than-significant*** *impact.*

With approval of the project, annexation of the project site to the City, and amendment of the SOI's for SRCSD and CSD-1, wastewater collection services would be provided by CSD-1 and the SRCSD.

The proposed wastewater system for the project includes a combined gravity flow and force main system. Approximately one-quarter of the project site would be served by a gravity flow system that would connect to the existing 33-inch North Natomas interceptor located on the east side of SR 70/99 at the end of Greg Thatch Circle (Exhibit 3-6). Specific land uses to be served by the gravity flow system include the majority of high-density residential land uses, the elementary school, and portions of medium-density residential and low-density residential areas. The remaining portions of the project site would be served by gravity flow to a centrally located lift station. Flows from the lift station would be conveyed by an 18-inch sewer force main that would ultimately connect to a 33-inch sewer main extending under SR 70/99. Once across SR 70/99, the main would tie into the North Natomas interceptor located on the south side of I-5 (Exhibit 3-6). Minor extensions of wastewater infrastructure would occur off-site near Greg Thatch Circle, the construction-related impacts of which have been evaluated throughout this EIR.

Upstream wastewater flows from off-site developments including the Metro Airpark and Sacramento International Airport would be conveyed by two 16-inch force mains located within the green space buffer adjacent to Elkhorn Boulevard and SR 70/99 which tie into the 33-inch main that extends under SR 70/99 ultimately connecting to the North Natomas interceptor. Upstream flows would not be conveyed through on-site wastewater conveyance system. However, flows from the project and off-site areas would combine once they meet the 33-inch interceptor. Construction of the on-site wastewater facilities could result in construction-related environmental effects (e.g., increased air emission, construction noise), the impacts of which have been evaluated throughout this EIR.

Average projected wastewater flows for the project are approximately 3.05 mgd peak wet weather flow (PWWF) (Wood Rodgers 2005). Wastewater flows for off-site developments would generate 8.73 mgd PWWF. The project and off-site developments would generate a combined wastewater flow of 11.78 mgd PWWF before connecting with the North Natomas interceptor. The North Natomas interceptor currently has an available capacity of 15.28 mgd PWWF, which exceeds project demands (Wood Rodgers 2005). Staff of SRCSD have confirmed that adequate capacity currently is and would be available at the time of construction (i.e., 2007) and over the construction buildout period (i.e., 5–10 years) in the North Natomas interceptor as well as downstream facilities (Hedges, pers. comm., 2006). No new infrastructure would be required.

Because sufficient capacity within the CSD-1's and SRCSD's conveyance facilities would be available to serve the project, the project would result in ***less-than-significant*** impacts to wastewater collection services.

No new mitigation is required.

IMPACT 6.4-4

Environmental Impacts Associated with SRWTP Expansion. *The SRWTP would provide wastewater treatment services for the project. The SRWTP is currently undergoing expansion to accommodate wastewater treatment demands for future growth and development. As a result, the project would contribute to the need to expand the SRWTP. According to the EIR prepared for the SRWTP 2020 Master Plan Expansion, construction and operation of facility improvements could contribute to significant and unavoidable impacts related to construction-related air quality. Because the project would contribute to the need for expanding the SRWTP, and would contribute to the impacts assessed in the EIR for the SRWTP 2020 Master Plan Expansion would be a* ***significant*** *impact to wastewater facilities.*

The SRWTP would provide wastewater treatment for wastewater flows generated by the project. The SRWTP currently treats an average of 165 mgd of wastewater and is permitted to treat 181 mgd average dry weather flows (ADWF) and 392 mgd of daily peak wet weather flows. The SRCSD has determined that expansion of the SRWTP is necessary to meet increased demands over the next 20 years, a portion of which would be generated by the project. The SRCSD prepared and approved the SRWTP 2020 Master Plan Expansion Project in 2004, which would expand the plant in incremental steps on an as-needed basis to 218 mgd ADWF over the next 15 to 20 years. The SRCSD accommodate new development projects on a first-come-first-served basis. Phased facility expansion is currently on-going. The EIR prepared for the project (*Sacramento Regional Wastewater Treatment Plan 2020 Master Plan EIR, 2004*) indicated that the expansion project would result in one significant and unavoidable impact related to construction-related air quality (see discussion of cumulative air quality impacts in Chapter 7, "Other CEQA Sections"). All other impacts would be reduced to a less-than-significant level through implementation of mitigation measures recommended in the EIR. A copy of the EIR is available for review at the City of Sacramento, Planning Department, 915 I Street, Suite 300, Sacramento, California).

Although staff of SRCSD have indicated that wastewater treatment capacity is currently available to the serve the project (Hedges, pers. comm., 2006) and would account for less than 2% of the existing permitted wastewater treatment of the SRWTP under ADWF and less than 1% under daily peak wet weather flows, the project in combination with other development would contribute to the need for expansion of the SRWTP and would contribute to the impacts assessed in the EIR for the SRWTP 2020 Master Plan Expansion Project, one of which would remain significant and unavoidable. The SRCSD expects to resolve the CEQA challenge to its EIR in the near future and in time to expand the SRWTP in response to demand. Therefore, the project would contribute to a ***significant*** wastewater impact. No other feasible mitigation is available.

Mitigation Measure 6.4-4: (City of Sacramento)

The environmental impacts of expanding the SRWTP were appropriately evaluated in the EIR for the SRWTP 2020 Master Plan Expansion Project. All available mitigation was recommended to reduce the environmental impacts of this project where feasible. However, the EIR concluded that even with recommended mitigation, the project would result in a significant and unavoidable impact related to construction-related air quality, the cumulative effects of which are discussed in Section 7.2, "Cumulative Impacts," of this Draft EIR.

Significance after Mitigation

Because all feasible mitigation has been recommended to reduce potentially significant impacts associated with the SRWTP expansion and no other feasible mitigation is available to reduce this impact, this impact would remain ***significant and unavoidable***.

IMPACT 6.4-5

Increased Demand for Storm Drainage. *The project would increase the volume of stormwater generated at the project site. However, RD 1000's plant #3 does not have sufficient pumping capacity to pump stormwater generated from the project site. Therefore, development of the project would result in* ***significant*** *impact related to storm drainage.*

The project would increase the volume of stormwater generated at the project site. Stormwater modeling conducted for the project indicated that the project would generate approximately 912 cubic feet per second (cfs) of stormwater during a 100-year, 24-hour storm event and 609 cfs of stormwater during a 10-year, 24-hour storm event (Wood Rodgers 2005a). The proposed drainage system consists of gravity flow within underground pipes, a lake/detention basin, and discharge to the West Drainage Canal. The project site would be graded to create building pads and streets that would direct drainage to a proposed on-site lake/detention basin. Trunk lines within the project site would be sized from 24 to 54 inches to convey storm water to the lake/detention basin. Approximately 2 feet of freeboard (vertical distance) below proposed grading and from the maximum 10-day 100-year elevation in the lake/detention basin would be maintained in the lake (Wood Rodgers 2005a).

The detention basin/lake would use a gravity outfall to discharge flows into the West Drainage Canal through two 78-inch reinforced concrete pipes and three 8-foot by 5-foot box culverts at the I-5 undercrossing located in the southwestern portion of the project site (Exhibit 6.10-3). The lake/detention basin would be designed according to the City of Sacramento standards using the City of Sacramento method for quantifying 10-year and 100-year storm events and hydraulic grade lines (Wood Rodgers 2005a). However, the City of Sacramento Department of Utilities indicated that RD 1000's plant #3 does not have sufficient capacity to pump stormwater runoff generated by the project (Paxton, pers. comm., 2006). Therefore, the project could adversely affect the capacity of the RD 1000 system.

Developers of the future Metro Airpark would be responsible for improving the storm drainage canal at the I-5 undercrossing by adding two proposed 78-inch reinforced concrete pipes adjacent to the three existing 5-foot by 8-foot box culverts. The impacts of these improvements were evaluated in the EIR prepared for that project. Addition of the reinforced concrete pipes would result in more efficient flow of drainage from the project area including the project site because the culvert would not restrict flows going under I-5. However, if these pipes are not installed, sufficient drainage capacity is available to accommodate project-related storm water volumes.

The project would increase the volume of stormwater generated at the project site. However, RD 1000's plant #3 does not have sufficient pumping capacity to pump stormwater generated from the project site. Therefore, development of the project would result in ***significant*** impact related to storm drainage.

Mitigation Measure 6.4-5: (City of Sacramento and LAFCo)

The project applicant shall fully fund the installation of a new pump that would increase pumping capacity at the RD 1000's plant #3 by 75 cubic feet per second.

Significance after Mitigation

With implementation of Mitigation Measure 6.4-5, pumping capacity at RD 1000 plant #3 would be increased to sufficiently pump stormwater generated on the project site. Therefore, this storm drainage impact would be reduced to ***less than significant***.

IMPACT 6.4-6

Increased Demand for Electric and Natural Gas Services. *The project area would be supplied with energy services by PG&E (i.e., natural gas) and SMUD (i.e., electricity). Energy services are currently being provided adjacent to the project site to the east and south and extension of these services to the site would not cause any physical disturbances beyond that already anticipated at the project site. For these reasons, the provision of energy services to the project site would result in* ***less-than-significant*** *impacts.*

The project would require extension of existing electricity and natural gas facilities adjacent to the project site. Extension of these facilities would not require any upgrades to either PG&E or SMUD's transmission system that are not currently planned for, nor would it result in any additional physical disturbances beyond that currently anticipated for the project. Further, staff of PG&E and SMUD has indicated that they would be able to serve the project and the project would not adversely affect their ability to provide services within the area (Schlaht, pers. comm., 2005; Hager, pers. comm., 2005). Therefore, the project would result in ***less-than-significant*** impacts to electrical and natural gas services.

No mitigation is required.