

City of SACRAMENTO

Community Development Department
Environmental Planning Services
916-808-5842

300 Richards Boulevard
Sacramento, CA
95811

ADDENDUM TO MITIGATED NEGATIVE DECLARATION

The City of Sacramento, California, a municipal corporation, does hereby prepare, declare, and publish this Addendum to a previously certified environmental impact report for the following described project:

Shasta Park Reservoir – 2nd Well The project includes the construction and operation of a secondary water well (Well 166) at the Shasta Water Facility. Well 166 will be constructed in the intermediate aquifers, between depths of 800 and 1,000 feet, with an estimated design capacity of 2,200 gallons per minute (gpm).

The City of Sacramento, Community Development Department, has reviewed the proposed project and on the basis of the whole record before it, has determined that there is no substantial evidence that the project, as identified in the attached Addendum, would have a significant effect on the environment beyond that which was evaluated in the mitigated negative declaration. A subsequent mitigated negative declaration is not required pursuant to the California Environmental Quality Act of 1970 (Sections 21000, et. Seq., Public Resources Code of the State of California).

This Addendum to an adopted mitigated negative declaration (MND) has been prepared pursuant to Title 14, Section 15164 of the California Code of Regulations; the Sacramento Local Environmental Regulations (Resolution 91-892) adopted by the City of Sacramento.

The environmental document prepared for the Shasta Park Reservoir Project, including the MND as well as the City Council Resolutions adopting the MND and adopting the required findings, can be reviewed at the offices of the Community Development Department, Planning Division, 300 Richards Boulevard, Sacramento, California 95811 during public counter hours, or on the City's website at: <http://www.cityofsacramento.org/Community-Development/Planning/Environmental/Impact-Reports>

Environmental Services Manager, City of Sacramento,
California, a municipal corporation

By:  _____

Date: July 11, 2017

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Shasta Park Reservoir – 2nd Well Addendum to a Mitigated Negative Declaration

File Number/Project Name:

Project Location: The proposed project site is located approximately 900 feet west of SR-99 and directly east of the Cosumnes River College's Bruceville Road entrance in the South Sacramento Community Plan area. The site consists of a portion of Assessor's Parcel Number 117-0182-023 (See Attachments A and B)

Existing General Plan Designations and Zoning: The City of Sacramento 2035 General Plan designates the area as Suburban Neighborhood High Density and the zoning of the site is Residential (R-2B-R-PUD) in the College Square Planned Unit Development.

Project Background: The 2005 Water Master Plan concluded that a finished water reservoir should be constructed in the southeast portion of Sacramento to help maintain service pressure through peak demand periods, and to provide additional emergency and fire suppression water supply.

An Initial Study, Mitigated Negative Declaration, and Mitigation Reporting Program were prepared for this project in accordance with the California Environmental Quality Act (CEQA). The City Council adopted the Mitigated Negative Declaration and Mitigation Reporting Program on May 22, 2012 (Resolution No. 2012-138).

On May 22, 2012 City Council also approved the purchase of a 5.31-acre vacant parcel (APN 117-0182-023), which is located at the terminal end of Imagination Parkway, immediately north of the Shasta Community Park.

The Shasta Park facility was approved for the construction and operation of a water well (Well 165), an aeration system to remove methane, filtration to remove manganese, chlorine and fluoride systems, a 4 million-gallon wire-wrapped prestressed concrete water storage reservoir, a 12 million gallons per day capacity booster pump station, and a control building. The Shasta Park facility was originally designed to accommodate a second well.

- The treatment systems for the deep well can be easily expanded for the needs of a second intermediate well.
- The distribution system in the south area of the City has more significant supply and pressure deficiencies and can greatly benefit from the addition of a second well at the Shasta Park site.

Project Description: The current proposal, consistent with the adopted MND includes the construction and operation of a secondary water well (Well 166) at the Shasta Water Facility. Well 166 will be constructed in the intermediate aquifers, between depths of 800 and 1,000 feet, with an estimated design capacity of 2,200 gallons per minute (gpm).

Discussion

An Addendum to an adopted MND may be prepared if only minor technical changes or additions are required, and none of the conditions identified in CEQA Guidelines Section 15162 are present. The following identifies the standards set forth in section 15162 as they relate to the project.

- 1. No substantial changes are proposed in the project which would require major revisions of the previously adopted MND due to the involvement of new significant**

environmental effects or a substantial increase in the severity of previously identified significant effects.

The original mitigated negative declaration for the Shasta Park Reservoir Project (SCH# 2011042039) adopted on May 22, 2012 (Resolution No. 2012-138), evaluated the construction and operation of a 4 million gallon water reservoir and water well at the subject site.

Changes to the original project from what was described in the certified Shasta Park Reservoir Project MND include the development of a secondary water well at the subject location.

Although the Addendum provides additional information and evaluation, none of the new information and evaluations trigger a need for a subsequent MND. The proposed project is within the scope of analysis of the prior project and will not result in any new potential environmental impacts or any more severe impacts than those previously evaluated and identified and proposed to be mitigated in the original Shasta Park Reservoir Project (SCH# 2011042039) MND.

As described in the Groundwater Impacts and Water Supply Assessment – Shasta Park Wells 165 & 166 (Attachment E) continuous operation of Well 166 at 2,200 gpm for one year would result in an extraction of approximately 2,900 acre feet of groundwater. This amount corresponds to one percent of the sustainable yield of the intermediate Mehrten Formation aquifer. However, with the City's conjunctive use of groundwater and surface water, the Shasta Park would be pumping only during critical dry years and summer months to meet peak demands.

Groundwater levels in the Subbasin have slightly recovered each year since the early 1990s due to conjunctive waster use. This trend will likely continue as more surface water is delivered to the region in conjunction with local water conservation practices.

- 2. No substantial changes have occurred with respect to circumstances under which the project is undertaken that would require major revisions of the previous MND due to the involvement of new significant environmental effect or a substantial increase in the severity of previously indemnified significant effects.**

The City adopted the 2035 General Plan and Master EIR in March 2015. The adoption of the 2035 General Plan does not result in a change of or any new significant effects relating to the proposed project.

The Master EIR is available for review at the offices of Development Services Department, 300 Richards Boulevard, 3rd Floor, Sacramento, CA during normal business hours, and is also available online at:

<http://www.cityofsacramento.org/Community-Development/Planning/Environmental/Impact-Reports>

- 3. No new information of substantial importance, which was not known and could not have been known with the exercise of reasonable diligence at the time the previous MND was adopted , shows any of the following:**

- a) **The project will have one or more significant effects not discussed in the previous MND;**
- b) **Significant effects previously examined will be substantially more severe than shown in the previous MND;**
- c) **Mitigation measures or alternatives previously found not to be feasible would in fact be feasible, and would substantially reduce one or more significant effects of the**

project, but the project proponents decline to adopt the mitigation measure or alternative, or;

- d) **Mitigation measures or alternatives which are considerably different from those analyzed in the previous would substantially reduce one or more significant effects on the environment, but the project proponents decline to adopt the mitigation measure or alternative.**

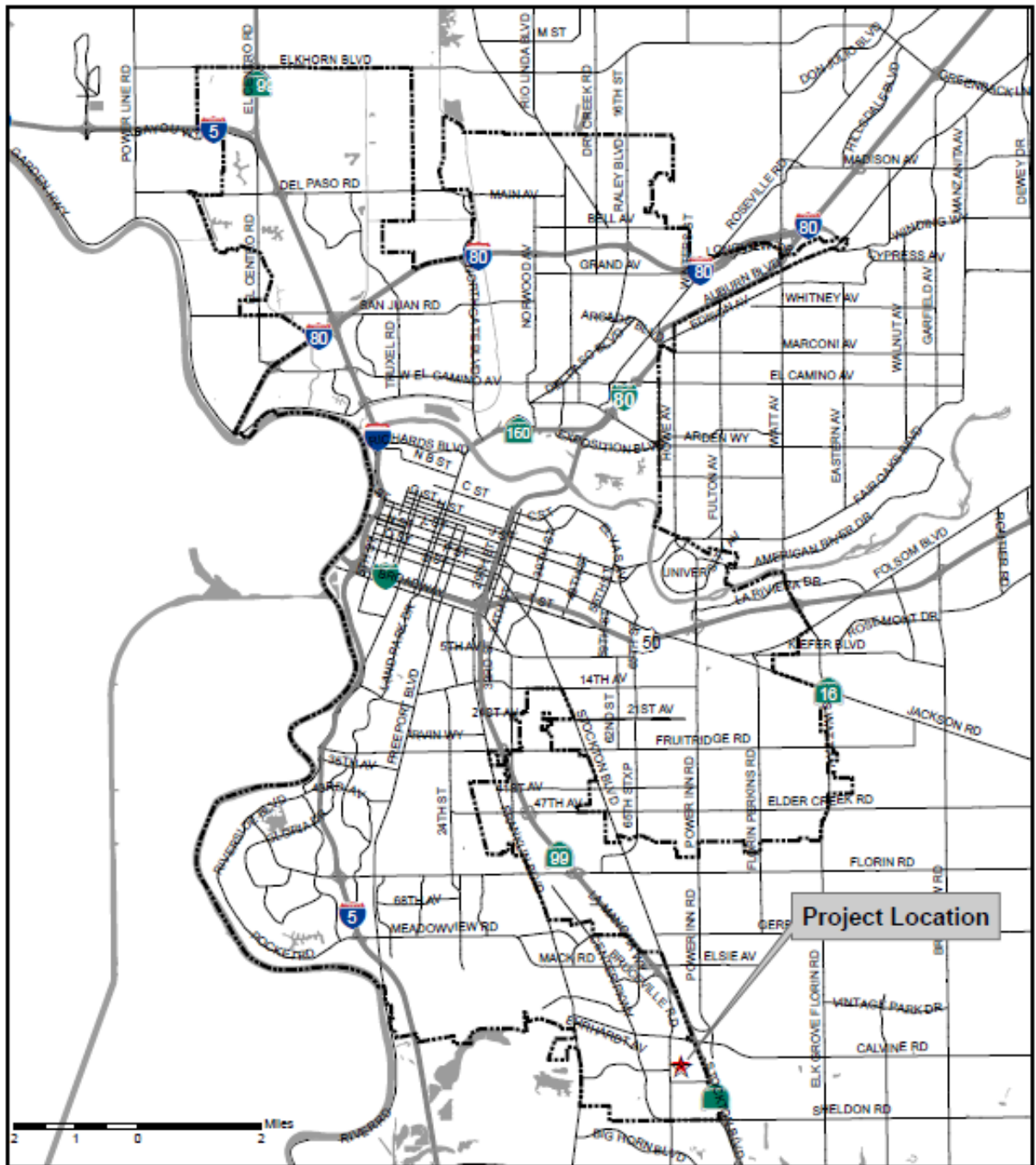
The installation of a secondary water well will not result in any additional environmental impacts that were not previously identified in the MND. The proposed project modification will not result in effects more severe than what is evaluated in the MND and mitigation measures adopted for the previous MND are consistent with what has been previously analyzed. The City Council adopted a Mitigation Reporting Program (MRP) as part of its approval of the original project and the MRP remains applicable to the revised project).

Based on the above analysis, this Addendum to the previously adopted mitigated negative declaration (MND) for the project has been prepared.

Attachments:

- A) Vicinity Map
- B) Location Map
- C) Shasta Park Water Facility Site Plans
- D) Shasta Park Reservoir Revised (April 23, 2012) Mitigated Negative Declaration
- E) Resolution No. 2012-138 - Adopting the Revised Mitigated Negative Declaration and the Mitigation Reporting Program for the Shasta Park 4MG Water Reservoir and Pump St. Project (Z14005400)
- F) Groundwater Impacts and Water Supply Assessment – Shasta Park Wells 165 & 166

Attachment - A



City of Sacramento, Community Development Department Geographic Information System

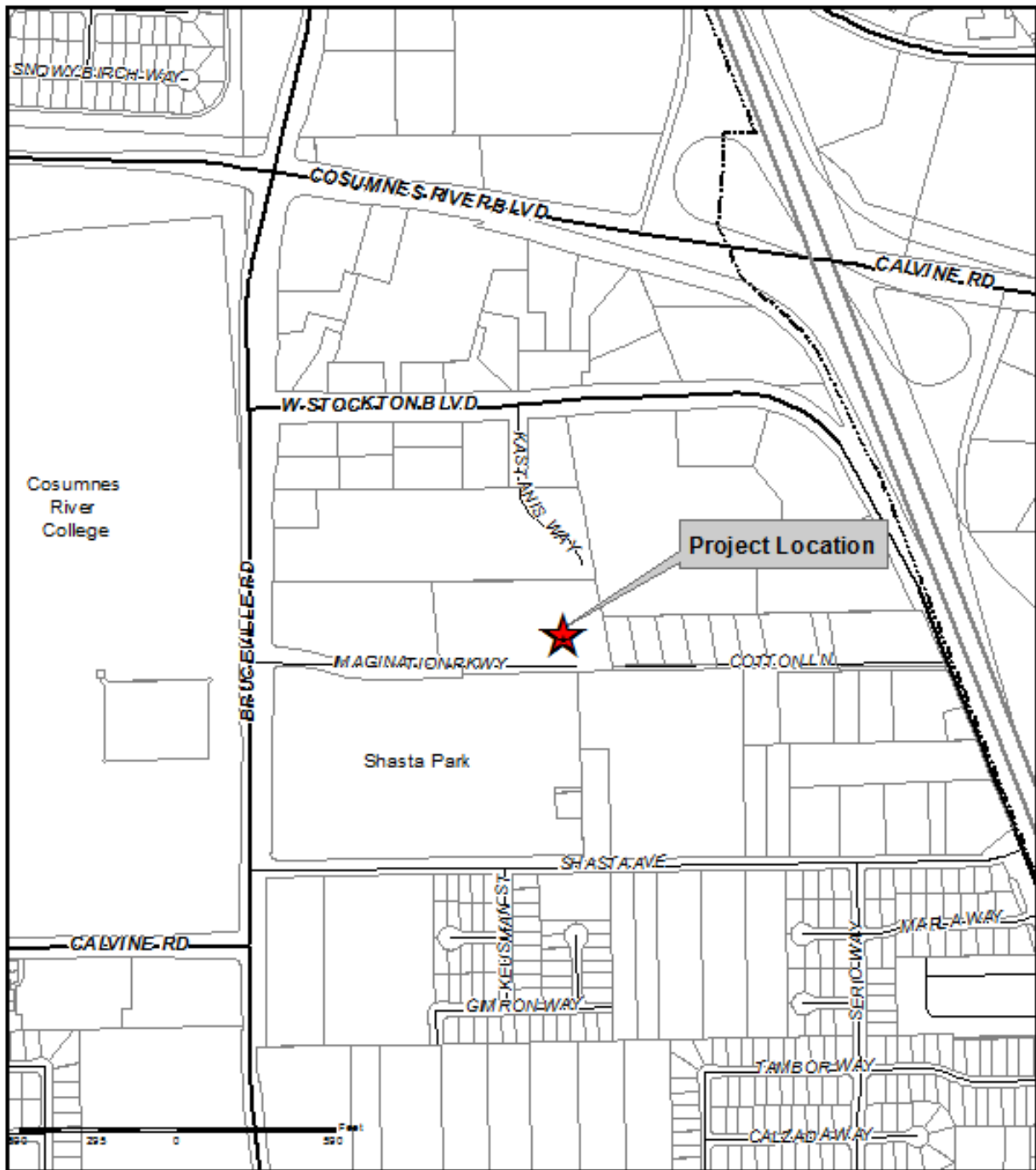


Figure 1.
Vicinity Map
Shasta Park Reservoir
City of Sacramento
(Z14005400)



S. Johnson | Nov. 18, 2010

Attachment - B



Attachment B Location Map Shasta Park Water Facility City of Sacramento



S. Johnson | Apr. 22, 2012

Attachment C

Site Plans

Attachment D

Shasta Park Reservoir Revised (April 23, 2012) Mitigated Negative Declaration



COMMUNITY DEVELOPMENT
DEPARTMENT

ENVIRONMENTAL PLANNING
SERVICES

CITY OF SACRAMENTO
CALIFORNIA

300 Richards Boulevard
Third Floor
Sacramento, CA 95811

MITIGATED NEGATIVE DECLARATION

REVISED APRIL 23, 2012

The City of Sacramento, California, a municipal corporation, does hereby prepare, declare, and publish this Mitigated Negative Declaration for the following described project:

Shasta Park Reservoir (X14005400) - The project includes the construction, operation and maintenance of a groundwater well and water reservoir on an approximately two-acre parcel east of Bruceville Road and north of Imagination Way in south Sacramento. The reservoir would have a capacity of approximately 4 million gallons. A groundwater well would be installed on the site, with a capacity of 2 million gallons per day, and an anticipated **maximum** withdrawal of approximately **2 2,200** acre-feet per year. A water treatment facility would be constructed with a capacity of 2 million gallons per day, and a pump station with a capacity of 15 million gallons per day. The pump station would pump water from the reservoir to users.

The project site is located on the north side of Imagination Parkway, approximately 1,275 **900** feet west of SR-99 and directly east of the Cosumnes River College's Bruceville Road entrance in the South Sacramento Community Plan area. The site consists of a portion of Assessor's Parcel Number (APN) 117-0182-023 in the City of Sacramento, Sacramento County.

The Lead Agency is the City of Sacramento. The City of Sacramento, Community Development Department, has reviewed the proposed project and, on the basis of the whole record before it, has determined that there is no substantial evidence that the project, with mitigation measures as identified in the attached Initial Study, will have a significant effect on the environment. This Mitigated Negative Declaration reflects the lead agency's independent judgment and analysis. An Environmental Impact Report is not required pursuant to the Environmental Quality Act of 1970 (Sections 21000, et seq., Public Resources Code of the State of California).

This Mitigated Negative Declaration has been prepared pursuant to the California Environmental Quality Act (Public Resources Code Sections 21000 et seq.), CEQA Guidelines (Title 14, Sections 15000 et seq. of the California Code of Regulations), the Sacramento Local Environmental Regulations (Resolution 91-892) adopted by the City of Sacramento, and the Sacramento City Code.

A copy of this document and all supportive documentation may be reviewed or obtained at the City of Sacramento, Community Development Department, 300 Richards Boulevard, 3rd Floor, Sacramento, CA 95811 from 9:00 a.m. to 4:00 p.m. (or 8:00 a.m. to 5:00 p.m. with prior arrangement). The CDD is closed the first Friday of each month.

Environmental Services Manager, City of Sacramento,
California, a municipal corporation

By: *Ch. Bafar*

Date: *4/23/2012*

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Shasta Park Water Reservoir Project
(Z14005400)
REVISED INITIAL STUDY

ANTICIPATED SUBSEQUENT PROJECT IN THE 2030 GENERAL PLAN MASTER EIR

This Initial Study was prepared by the City of Sacramento, Community Development Department, 300 Richards Boulevard, Third Floor, Sacramento, CA 95811, pursuant to the California Environmental Quality Act (Public Resources Code Sections 21000 *et seq.*), CEQA Guidelines (Title 14, Section 15000 *et seq.* of the California Code of Regulations) and the Sacramento Local Environmental Regulations (Resolution 91-892) adopted by the City of Sacramento.
The Lead Agency is the City of Sacramento.

Organization of the Initial Study

This Initial Study is organized into the following sections:

SECTION I - BACKGROUND: Provides summary background information about the project name, location, sponsor, and the date this Initial Study was completed.

SECTION II - PROJECT DESCRIPTION: Includes a detailed description of the Proposed Project.

SECTION III - ENVIRONMENTAL CHECKLIST AND DISCUSSION: Reviews Proposed Project and states whether the project would have additional significant environmental effects (project-specific effects) that were not evaluated in the Master EIR for the 2030 General Plan.

SECTION IV - ENVIRONMENTAL FACTORS POTENTIALLY AFFECTED: Identifies which environmental factors were determined to have additional significant environmental effects.

SECTION V - DETERMINATION: States whether environmental effects associated with development of the Proposed Project are significant, and what, if any, added environmental documentation may be required.

REFERENCES CITED: Identifies source materials that have been consulted in the preparation of the Initial Study.

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Section I - Background

Project Name: Shasta Park Water Reservoir (Z14005400)

Project Location: The proposed project site is located approximately 4,275 900 feet west of SR-99 and directly east of the Cosumnes River College's Bruceville Road entrance in the South Sacramento Community Plan area. The site consists of a portion of Assessor's Parcel Number 117-0182-023.

Project Proponent: City of Sacramento

Project Planner: Brett Ewart, Associate Engineer, Department of Utilities; Phone: (916) 808-1725; Email: bewart@cityofsacramento.org

Environmental Planner: Scott Johnson, Associate Planner, Community Development Department; Phone: (916) 808-5842; Email: srjohnson@cityofsacramento.org

Date Initial Study Completed: April 7, 2011, Revised April 23, 2012

The City of Sacramento, Community Development Department, has reviewed the Proposed Project and, on the basis of the whole record before it, has determined that the Proposed Project is an anticipated subsequent project identified and described in the 2030 General Plan Master EIR and is consistent with the land use designation and the permissible densities and intensities of use for the project site as set forth in the 2030 General Plan. See CEQA Guidelines Section 15176 (b) and (d).

The City prepared the attached Initial Study to (a) review the discussions of cumulative impacts, growth inducing impacts, and irreversible significant effects in the 2030 General Plan Master EIR to determine their adequacy for the project (see CEQA Guidelines Section 15178(b),(c)) and (b) to identify any potential new or additional project-specific significant environmental effects that were not analyzed in the Master EIR and any mitigation measures or alternatives that may avoid or mitigate the identified effects to a level of insignificance, if any.

As part of the Master EIR process, the City is required to incorporate all feasible mitigation measures or feasible alternatives appropriate to the project as set forth in the Master EIR (CEQA Guidelines Section 15177(d)). The Master EIR mitigation measures that are identified as appropriate are set forth in the applicable technical sections below.

This analysis incorporates by reference the general discussion portions of the 2030 General Plan Master EIR. (CEQA Guidelines Section 15150(a)). The Master EIR is available for public review at the City of Sacramento, Community Development Department, 300 Richards Boulevard, Third Floor, Sacramento, CA 95811, and on the City's web site at:

www.cityofsacramento.org/dsd/planning/environmental-review/eirs/

The City is soliciting views of interested persons and agencies on the content of the environmental information presented in this document. Due to the time limits mandated by State law, your response must be sent at the earliest possible date, but no later than the 30-day review period ending May 12, 2011. Please send written responses to:

Scott Johnson, Associate Planner
City of Sacramento, Community Development Department
300 Richards Blvd, 3rd Floor
Sacramento, CA 95811
srjohnson@cityofsacramento.org
Direct Line: (916) 808-5842

Section II - Project Description

Introduction

The project includes the construction, operation and maintenance of a groundwater well and water reservoir on an approximately two-acre parcel east of Bruceville Road and north of Imagination Way in south Sacramento (see Figure 1, Vicinity Map and **Revised** Figure 2, Location Map). The reservoir would be constructed of either steel or reinforced concrete and would be approximately 160 feet in diameter with a height of 35 feet.

The reservoir would have a capacity of approximately 4 million gallons. A groundwater well would be installed on the site, with a capacity of 2 million gallons per day, and an anticipated **maximum** withdrawal of approximately ~~2~~ **2,200** acre-feet per year. A water treatment facility would be constructed with a capacity of 2 million gallons per day, and a pump station with a capacity of 15 million gallons per day. The pump station would pump water from the reservoir to users.

The pumps and treatment plant would be powered with electricity, and an electrical control building would be constructed to house the electrical equipment.

The site would be improved with ~~a wall~~ **fencing** and planter ~~on~~ **along** the perimeter. See **Revised** Figure 3, Site Plan.

Project Background

The City obtains the majority of its water supply from two surface water sources (Sacramento and American rivers), with groundwater making up the balance of supply. Most of the City's water supply comes from surface water that is diverted 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 U.S. Department of the Interior, Bureau of Reclamation (Reclamation).

The City has historically constructed, expanded, and improved its water diversion, treatment, and transmission facilities as needed to accommodate increasing water supply demands. The City has planned for various system improvements to accommodate projected peak hour demands in the 2005 Water Distribution System Master Plan. Groundwater would be drawn from the Central Basin, treated and then stored on-site available for distribution as necessary. These improvements include construction of the proposed project.

The proposed project is consistent with both City and regional water planning efforts and the water rights held by the City. The goals, agreements, and implementation strategies for these efforts appear in various documents, several of which are discussed below.

City of Sacramento 2030 General Plan

In March 2009, the City adopted the 2030 General Plan. In compliance with the California Environmental Quality Act (CEQA), the City Council certified the Master Environmental Impact Report (Master EIR) for the 2030 General Plan as part of its approval of the 2030 General Plan. The 2030 General Plan establishes policies to accommodate the increase in level of development

anticipated to occur in Sacramento by 2030, including goals for developing water supply utilities. The Master EIR identifies and assesses the potential environmental impacts of implementing the overall 2030 General Plan. The Master EIR has evaluated the cumulative effects of operations and growth associated with the general plan, and the Master EIR references the City's 2005 Distribution Master Plan in its analysis. (Master EIR Public Utilities, Water Supply, page 6.11-2)

The proposed project components are consistent with the land use designation and permissible densities and intensities of use for the proposed project, as set forth in the 2030 General Plan. Consistent with the Master EIR, the City prepared this Initial Study (IS) to (1) review the discussions of cumulative impacts, growth inducing impacts, and irreversible significant effects in the Master EIR to determine their adequacy for the proposed project (see CEQA Guidelines Sections 15177 and 15178) and (2) to identify any potential new or additional project-specific significant environmental effects not analyzed in the Master EIR, and mitigation measures or alternatives, if any, that may avoid or mitigate the identified effects to a level of insignificance.

The 2030 General Plan and Master EIR are available at <http://www.sacgp.org/>. The City's web site includes information regarding City operations, programs and departments and may be viewed at www.cityofsacramento.org. This document is available on the Community Development web site at <http://www.sacgp.org/index.html>.

County of Sacramento Well Ordinance

City Code section 13.04.660 provides that the County of Sacramento's well ordinance applies within the City limits. The City would obtain a permit from the County of Sacramento, Environmental Management Department pursuant to Chapter 6.28 of the County Code to construct the proposed water well. The purpose of the County's well ordinance, and state law providing for such regulation, is to protect water supplies by ensuring the proper construction, operation and abandonment of water wells. See County Code section 16.28.000 and other provisions of the well ordinance.

Construction:

Construction of the well and reservoir would require approximately 9 to 14 months. Construction would occur during weekdays during normal business hours. Drilling activities for the water well may require 24-hour activities for approximately a week or two. Equipment for drilling activities would include a drilling rig, trailers (drilling equipment and monitoring trailer), and tanks to prevent drilling materials/mud from entering waterways. Construction of the proposed production well would consist of installing a conductor casing, drilling a borehole, constructing the well, development, and production testing. A conductor pipe, a large-diameter steel pipe, would be installed to about 50 feet below ground surface (bgs) to create a permanent seal into a clay layer. After the steel conductor pipe is placed in the hole, concrete would be injected around the pipe to complete the seal.

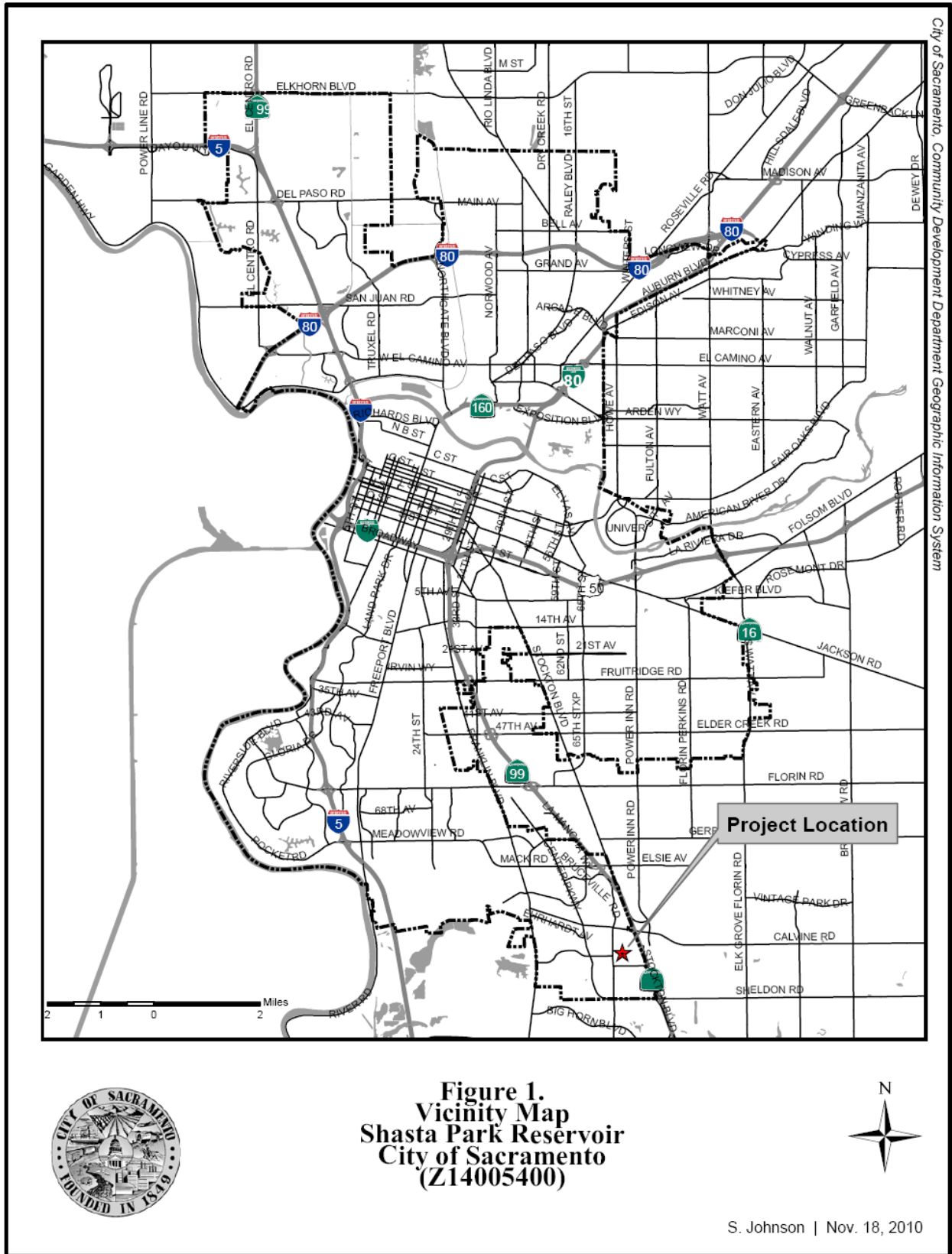
Initial earthwork would consist of clearing, grubbing, rough grading and excavation for foundation. Typical equipment used for these activities include possible use of a scraper and/or excavator, water truck for control of dust and moisture content of the soil, compaction equipment, and dump trucks.

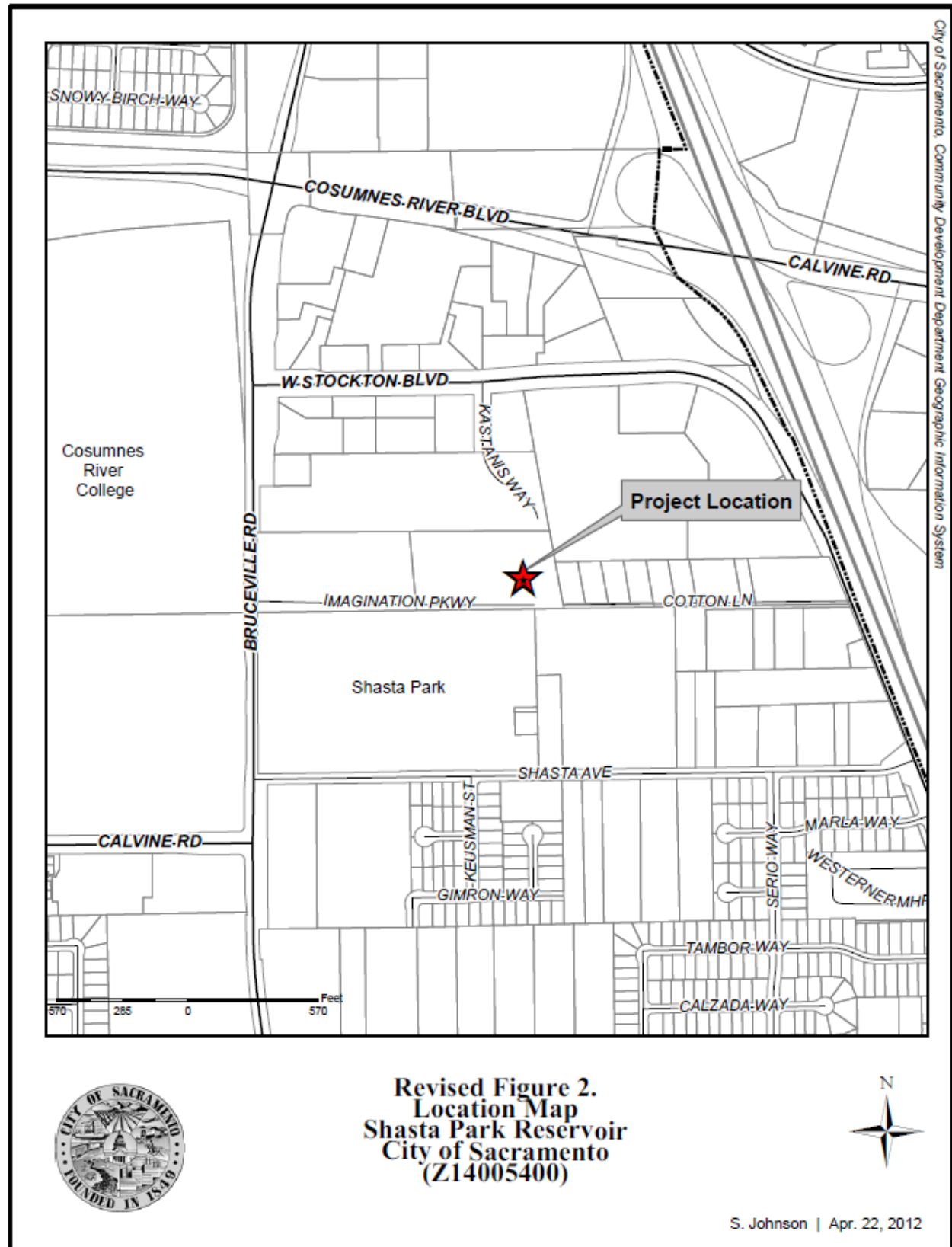
Construction of the reservoir would begin with installing potable water lines below ground at the location of the reservoir. The foundation of the reservoir would then be laid followed by reservoir wall construction. Once the walls are constructed, the reservoir will be wire wrapped (if the

concrete construction method is used) and the roof constructed. The pump and mechanical equipment would be installed followed by the construction of the pump station and control building. After the reservoir and associated mechanical pumping equipment are constructed and installed, the remaining site piping will be installed followed by paving and finishing site work including landscaping and wall/fence construction (wall/fence construction and some site paving may occur earlier in the process as warranted).

Operation and Maintenance:

Operation of the site would consist of mechanical activities used for pumping and treating water within the constructed and installed equipment on site. A back-up diesel generator would be onsite for emergency uses. Maintenance of the reservoir would require minimal activity. City reservoirs are visited on a regular basis by employees who inspect the grounds and examine the reservoir structure. None of the facilities or operations would require assignment of staff to the site.





PROJECT NO.	4
DATE	11/22/22
PROJECT NAME	WATER DISTRIBUTION IMPROVEMENTS
LOCATION	4 MG RESERVOIR - SOUTH SACRAMENTO
OVERALL SITE PLAN	

Section III – Environmental Checklist and Discussion

LAND USE AND AGRICULTURAL RESOURCES

The General Plan of the City of Sacramento has assigned a land use designation of Medium Density Residential (MDR, 16-29 dwelling units per acre) for the subject site. The project site is located within the South Sacramento Community Plan Area, which has designated the site as Special Planning District. The Zoning Code designates a zoning of Multi-family Plan Review (R-2B-R) for the project site (Section 17.20.010). Construction and operation of City utilities would be deemed consistent with the land use designations for the project site.

The project site consists of a two-acre portion of a vacant parcel (APN: 117-0182-023). The site is primarily surrounded by vacant land that is proposed for development. There are existing rural single-family residential units to the east. The closest residence is located approximately 435 feet to the east. To the north of the site is the College Square Planned Unit Development, which is currently in the development stage of a mixture of land uses, including various commercial and medium to high density residential uses. To the south of the site is the proposed Shasta Park. The project site has historically been used for dry farming and is not currently in agricultural production.

In order to be considered as Prime Farmland or Farmland of Statewide Importance, the site must have been used for irrigated agricultural production at some time during the preceding four years, and the soil must meet designated physical and chemical criteria. According to the United States Department of Agriculture definition, Unique Farmland is land other than Prime Farmland that is used for the production of specific high-value food and fiber crops. The project site has historically been pastureland that at times supported dry land farming, but there are no records indicating that the land has been used for irrigated farming within the preceding four years. Since the project site does not qualify as Prime Farmland of Statewide Importance or Unique Farmland, there would be no adverse effect on farmland.

The construction and operation of a reservoir and groundwater well are uses consistent with the designation of the site in the 2030 General Plan (mixed uses) and the City's long-range plans for public safety and public services.

ENERGY

Once constructed, the operation of the well would consume approximately 950K KWH per year and the operation of the well would 710K KWH per year for a total energy consumption of 1.66 M KWH per year for the facility.

1. AIR QUALITY	Effect will be studied in the EIR	Effect can be mitigated to less than significant	No additional significant environmental effect
Would the Proposed Project:			X
A) Conflict with or obstruct implementation of the applicable air quality plan?			
B) Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard (including releasing emissions that exceed quantitative thresholds for ozone precursors)?			X
C) Exposure sensitive receptors to substantial pollutant concentrations?			X
D) Interfere with or impede the City's efforts to reduce greenhouse gas emissions?			X

Thresholds of Significance

For purposes of this Initial Study, air quality impacts may be considered significant if construction and/or implementation of the Proposed Project would result in the following impacts that remain significant after implementation of General Plan policies or mitigation from the General Plan MEIR:

- Construction emissions of NO_x above 85 pounds per day;
- Operational emissions of NO_x or ROG above 65 pounds per day;
- Violation of any air quality standard or contribute substantially to an existing or projected air quality violation;
- PM₁₀ concentrations equal to or greater than five percent of the State ambient air quality standard (i.e., 50 micrograms/cubic meter for 24 hours) in areas where there is evidence of existing or projected violations of this standard. However, if project emissions of NO_x and ROG are below the emission thresholds given above, then the project would not result in violations of the PM₁₀ ambient air quality standards;
- CO concentrations that exceed the 1-hour state ambient air quality standard (i.e., 20.0 ppm) or the 8-hour state ambient standard (i.e., 9.0 ppm); or
- Exposure of sensitive receptors to substantial pollutant concentrations.

Ambient air quality standards have not been established for toxic air contaminants (TAC). TAC exposure is deemed to be significant if:

TAC exposures create a risk of 10 in 1 million for stationary sources, or substantially increase the risk of exposure to TACs from mobile sources.

Answers to Checklist Questions

Question A and B

The proposed project would not generate air pollutants, such as smoke or dust, as part of normal operation. The small amount of traffic generated by construction or maintenance employees would not result in significant regional air quality impacts or “hot spots” at nearby intersections. Local roadways are not significantly impacted by vehicular traffic. The project is not expected to generate through traffic to significantly impact the air quality at roadway intersections in the area.

Air emissions during construction result from activities consisting of grading and excavation and the actual construction of the structures and improvements. Construction activities may cause the air quality to temporarily degrade during construction due to emissions from heavy construction equipment and ground disturbing activities. Emissions in the grading and excavation phase of construction are primarily associated with exhaust of heavy equipment and the dust that is generated through grading activities. Emissions from the described construction activity were calculated using the URBEMIS 2007, Version 9.2.4 program, and following the guidelines of the Sacramento Metropolitan Air Quality Management District (SMAQMD). It is estimated that site activities would generate approximately 54.10 pounds of NO_x per day. These emissions fall below the threshold of significance for construction emissions. The SMAQMD Guidelines provide that if a project’s NO_x emissions from heavy-duty mobile sources are less than significant, as here, then the lead agency may assume that exhaust emissions of other pollutants from operation of equipment and worker commute vehicles are also less than significant.

Daily operation of the Shasta Reservoir and associated pump station and well will not create significant operational emissions.

Based on the analysis of site activities associated with construction of the Shasta Reservoir, both construction and operational emissions are less than significant.

Question C

Construction of the Shasta Reservoir will not create significant construction or operational emissions. The nearest residents are located approximately 435 feet to the east and there is a park to the south of the site. Water reservoirs and wells do not generate substantial emissions and will not expose sensitive receptors to substantial pollutant concentrations. This impact would be less than significant.

Question D

The City Council approved the 2030 General Plan on March 3, 2009. As part of its action, the City Council certified the Master Environmental Impact Report (Master EIR) that evaluated the environmental effects of development that is reasonably anticipated under the new general plan. The Master EIR includes extensive discussion of the potential effects of greenhouse gas emissions. The Master EIR discussions regarding climate change are incorporated here by reference. See, for example:

Draft EIR: 6.1 Air Quality (Page 6.1-1)
Final EIR: City Climate Change master Response (Page 4-1)
Errata No. 2: Climate Change (Page 12)

These documents are available at: www.cityofsacramento.org/dsd/planning/environmental-review/eirs/ and at the offices of the Community Development Department at 300 Richards Boulevard, Third Floor, Sacramento, California.

The proposed project is consistent with the land use designation for the project site. The project would result in the generation of greenhouse gases during construction and operation, as discussed below.

Short-term Construction Emissions

During construction of the project greenhouse gas emissions would be emitted from the operation of construction equipment and from worker and building supply vendor vehicles. The project area source and construction CO₂ emissions generated by the project would be approximately 110.8 metric tons per year, as modeled with the URBEMIS 2007, Version 9.2.4 program. These emissions would equate to approximately 0.000023 percent of the estimated GHG emissions for all sources in California (483 million metric tons) (CARB 2009). Construction would not exceed two years.

Long-term Operational Emissions

The major source of greenhouse gas emissions associated with the proposed project would be from energy use. CO₂ emissions make up the primary greenhouse gas. CO₂ emissions during operation of the project at full build-out would be approximately 444.5 metric tons, as estimated using the CO₂ Emissions Calculator for Electricity and Natural Gas by AECOM, which is based upon the California Climate Action Registry General Reporting Protocol Version 2.2, March 2007. These estimated emissions, which utilize SMUD's 2009 emission factors, equate to about 0.000092 percent of California's total emissions.

Buildings constructed as part of the project would be required to comply with current California building codes that enforce energy efficiency.

Ongoing Activities

The 2030 General Plan included direction to staff to prepare a Climate Action Plan for the City. Staff has continued work on this plan since adoption of the 2030 General Plan. The Climate Action Plan will provide additional guidance for the City's ongoing efforts to reduce greenhouse gas emissions. The Climate Action Plan is scheduled for completion in 2011.

Action continues at the state and federal level to combat climate change. In December 2009 the Environmental Protection Agency listed greenhouse gases as harmful emissions under the Clean Air Act. This action could eventually result in regulations that would have as their purpose the reduction of such emissions.

The Master EIR concluded that greenhouse gas emissions that could be emitted by development that is consistent with the 2030 General Plan would be cumulatively considerable and unavoidable (Errata No. 2, Page 12). The Master EIR includes a full analysis of greenhouse gas emissions and climate change, and adequately addresses these issues.

The project is consistent with the City's goals as set forth in the 2030 General Plan and MEIR relating to reduction of greenhouse gas emissions. The project would not impede the City's efforts to comply with AB32 requirements. The project would not have any significant additional environmental effects relating to greenhouse gas emissions or climate change.

Finding

The proposed project would have no additional project-specific environmental effects relating to air quality.

2. BIOLOGICAL RESOURCES	Effect will be studied in the EIR	Effect can be mitigated to less than significant	No additional significant environmental effect
Would the Proposed Project:			
A) Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Game or U.S. Fish and Wildlife Service?		X	
B) Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations or by the California Department of Fish and Game or U.S. Fish and Wildlife Service?			X
C) Have substantial adverse effect on federally protected wetlands as defined by Section 404 of the Clean Water Act (including, but not limited to marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?			X
D) Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites?			X
E) Conflict with any local policies or ordinances protecting biological resources such as a tree preservation policy or ordinance?			X
F) Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community conservation Plan, or other approved local, regional, or state habitat conservation plan?			X

Background

A Biological Resource Assessment of the Parkway at Cosumnes project site, including the proposed reservoir site, was performed in 2004 to determine whether any special status plant or wildlife species were present on the site. This was followed up by a Preliminary Biological Constraints Analysis for a ±10.6-acre Bruceville Road Parcels (APN: 117-0182-022 and 117-0182-023) by Foothill Associates in January 2007. The purpose of this analysis was to update the initial 2004 report and to determine whether any special status plants or wildlife species or sensitive habitats, such as wetlands, are located on the subject site.

The project site consists of disturbed non-native annual grassland. The site is bordered by annual grassland and new commercial construction to the north, single-family residential areas and annual grassland to the east, the recently developed Shasta Park to the south, and Bruceville Road and Cosumnes River College to the west. The site is regularly disked for weed/fire suppression. The site's elevation is approximately 25 feet above mean sea level.

Special Status Species Evaluation

The special status species evaluation considers those species identified as having relative scarcity and/or declining populations by the United States Fish and Wildlife Service (USFWS) or California Department of Fish and Game (CDFG). Special status species include those formally listed as threatened or endangered, those proposed for formal listing, candidates for federal listing, and those classified as Species of Concern by USFWS or Species of Special Concern by CDFG. Species considered to be "special animals" or "fully protected" by the CDFG or rare, threatened, or endangered in California by the California Native Plant Society (CNPS) were also included in the evaluation.

Regulatory Setting

The following city, State, and federal statutes pertain to the proposed project:

- National Environmental Policy Act (42 USC 4321 et seq.)
- Federal Endangered Species Act (16 USC 1531-1543)
- Section 404 of the Clean Water Act (33 USC 1251-1376)
- Section 10 of the Rivers and Harbors Act (33 USC 401 et seq.)
- Fish and Wildlife Coordination Act (16 USC 661-666)
- Executive Order 11990, Protection of Wetlands (May 24, 1977)
- Migratory Bird Treaty Act of 1918 (16 USC 703-711)
- California Environmental Quality Act (PRC 21000 et seq.)
- California Endangered Species Act (California Fish and Game Code 2050 et seq.)
- Native Plant Protection Act (California Fish and Game Code 1900-1913)
- City of Sacramento Heritage Tree Ordinance (SCC Section 12.64.10-12.64.70)
- City of Sacramento Street Tree Ordinance (SCC Section 12.56.10-12.56.170)

Federal Endangered Species Act

The Federal Endangered Species Act defines 'take' (Section 9) and prohibits 'taking' of a listed endangered or threatened species (16 U.S.C. 1532, 50 CFR 17.3). If a federally listed species could be harmed by a project, Section 7 or 10 consultations must be initiated, and an Incidental Take Permit must be obtained (16 U.S.C. 1539, 50 CFR 13).

Federal Migratory Bird Treaty Act

Migratory birds are protected under the federal Migratory Bird Treaty Act (MBTA) of 1918 (16 U.S.C. 703-711). The MBTA makes it unlawful to take, possess, buy, sell, purchase, or barter any migratory bird listed in 50 CFR Part 10 including feathers or other parts, nests, eggs, or products, except as allowed by implementing regulations (50 CFR 21). All migratory bird species are protected by the MBTA. Any removal of active nests during the breeding season or any disturbance that results in the abandonment of nestlings is considered a 'take' of the species under federal law.

Thresholds of Significance

For the purposes of this Initial Study, an impact is considered significant if construction and/or implementation of the project would result in the following impacts that remain significant after implementation of General Plan policies or mitigation from the General Plan MEIR:

- Creation of a potential health hazard, or use, production or disposal of materials that would pose a hazard to plant or animal populations in the area affected;
- Substantial degradation of the quality of the environment, reduction of the habitat, reduction of population below self-sustaining levels of threatened or endangered species of plant or animal; or
- Affect other species of special concern to agencies or natural resource organizations (such as regulatory waters and wetlands).

“Special-status” is defined as species that are:

- Listed as endangered or threatened under the federal Endangered Species Act (or formally proposed for, or candidates for, listing);
- Listed as endangered or threatened under the California Endangered Species Act (or proposed for listing);
- Designated as endangered or rare, pursuant to California Fish and Game Code (Section 1901);
- Designated as fully protected, pursuant to California Fish and Game Code (Section 3511, 4700, or 5050);
- Designated as species of concern by U.S. Fish and Wildlife Service (USFWS), or as species of special concern to California Department of Fish and Game (CDFG);
- Plants or animals that meet the definition of rare or endangered under the California Environmental Quality Act (CEQA).

Answers to Checklist Questions

Question A, D-F

A number of special status raptors including Swainson's hawk and burrowing owl would have a reasonable potential for occurring in the study area based on the presence of suitable foraging habitat. There are no trees located on the subject site and therefore, nesting of raptors species is very unlikely.

The proposed project site consists of approximately 2 acres of vacant land dominated by annual grassland species. As stated above the project area has been recently disked and was disturbed during the construction of Shasta Park and Imagination Way. The site is undeveloped and was historically farmland. The site is now fallow and plant species include non-native grassland species.

During the site visit in January of 2007 by Foothill Associates, no wildlife was observed at the site. However, review of the California Department of Fish & Game (DFG) California Natural Diversity Data Base (CNDDB) also identified historic occurrences of burrowing owls (*Athene cunicularia*)

northwest of the site at the Cosumnes River College Campus. Based, on the historic documentation of burrowing owls in the area, the project site could provide habitat for burrowing owls. Even though no owls were observed at the site during the site visit, owls could inhabit the area prior to development of the site, which could result in potential impacts to this species. The mitigation measures listed below will ensure that potential impacts to burrowing owls are less-than-significant.

Swainson's hawk (*Buteo swainsoni*) is a tree-nesting species known to nest in the area. Swainson's nesting activity has been documented within approximately two to three miles of the study area during the 2002 breeding season according to the California Natural Diversity Database (CNDDDB). Although some of the nest trees might have since been displaced by development or are no longer active, it is reasonable to assume that Swainson's hawks are actively nesting in the region.

Development of the proposed project site would remove potential foraging habitat for Swainson's hawk and foraging/nesting habitat of burrowing owl. The City of Sacramento requires mitigation for impacts to Swainson's hawk foraging habitat within ten miles of an active nest. Loss of foraging habitat is considered a potentially significant impact unless mitigated.

Construction and operation of the proposed facilities would not interfere with the movement of any protected species. No trees would be removed, and no habitat conservation plan or other conservation plan affects the project site.

Question B & C

The United States Army Corps of Engineers (Corps) and the United States Environmental Protection Agency regulate the discharge of dredge and fill material into "waters of the United States" under Section 404 of the Clean Water Act.

Wetlands are defined for regulatory purposes as "those areas that are inundated or saturated by surface or groundwater at a frequency and duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions." Wetlands generally include swamps, marshes, bogs, and similar areas (33 CFR 328.3, 40 CFR 230.3). Wetlands also include less conspicuous wetland types such as vernal pools and other seasonal wetlands. The Corps will typically take jurisdiction over the portion of a project study area that contains waters of the United States and adjacent wetlands.

The site does not contain any wetland features. There are scattered weak wetland indicator plant species throughout the site vicinity such as curly dock (*Rumex crispus*), English plantain (*Plantago lanceolata*), and Mediterranean barley (*Hordeum marinum*). However, these plants species are not associated with any wetland hydrology such as depressions or riverine features with a defined bed and bank. The site has been repeatedly tilled and leveled and this process has removed any significant topography that would support significant ponding of water. Based on these observations, there are no waters of the U.S. or other wetland features on the site that would be subject to U.S. Army Corps of Engineers jurisdiction. No riparian habitat occurs on the project site.

Mitigation Measures

Implementation of the following measures would reduce the impact to a less-than-significant level.

BR-1a) If construction or grading is scheduled during February to September, a pre-construction survey shall be conducted and prepared by a qualified biologist within thirty (30) days prior to the start of any grading or construction activities to determine the presence of any special status species or species of special concern (nesting burrowing owls).

b) If an adults-only active burrowing owl burrow(s) nest is discovered during the pre-construction survey the monitoring biologist shall install a one-way door on the burrow(s) and monitor and inspect per DFG guidelines. If an active nest with chicks is encountered, one-way doors shall not be used unless authorized by DFG in writing. No construction shall occur near the nest until the monitoring biologist has consulted with the DFG on allowing construction to proceed. The monitoring biologist shall, through consultations with DFG, determine an appropriate buffer between the nest and any construction activity allowed to proceed on the project site prior to the fledging of the chicks. No construction or grading activities shall begin until the monitoring biologist has submitted a written clearance to the Department of Development Services that the burrowing owl(s) have vacated or been safely relocated by the monitoring biologist. After active burrows are vacated, the burrow must be destroyed completely by the monitoring biologist prior to grading or construction activity.

BR-2) Prior to the issuance of grading permits, the project applicant shall preserve an equal amount of suitable raptor foraging habitat, at a 1:1 ratio. Suitable foraging habitat includes fallow land, alfalfa or other low growing crops. Preservation shall occur through the purchase of credits at a CDFG-approved mitigation bank which has the project within its service area, or through the purchase of conservation easements or fee title of lands with suitable foraging habitat no further than a ten (10) mile radius of the perimeter of the project site, or through any combination of the foregoing. Any habitat identified by the applicant shall be evaluated using the following five criteria in consultation with the CDFG:

- i. Does the mitigation parcel provide suitable foraging habitat?
- ii. Is the parcel located in close proximity to the impacted foraging habitat?
- iii. Is the parcel adjacent to other protected habitat thereby contributing to a larger habitat preserve?
- iv. Is the parcel outside of areas identified for urban growth?

A mitigation plan shall be established and submitted to the City for approval prior to the issuance of grading permits and, at a minimum, shall include confirmation of title and encumbrances, details on mitigation site location, development, maintenance and monitoring. Any easements shall be in compliance with Government Code Section 65965. Land and easements shall be approved by the City in consultation with CDFG.

Finding

With implementation of the identified mitigation measures any additional significant environmental effects would be reduced to a less-than-significant level.

3. CULTURAL AND HISTORIC RESOURCES	Effect will be studied in the EIR	Effect can be mitigated to less than significant	No additional significant environmental effect
Would the Proposed Project:			
A) Cause a substantial adverse change in the significance of a historical resource as defined in Section 15064.5?			X
B) Cause a substantial adverse change in the significance of an archaeological resource pursuant to Section 15064.5?		X	
C) Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?			X

Background

The project site is not in an area identified as having high sensitivity for archaeological resources. (Master EIR, Figure 6.4-1) High sensitivity areas are those most sensitive to urban development due to the potential presence of cultural resources. These areas include areas along the Sacramento and American Rivers, North Natomas, portions of North Sacramento which lie north of I-80 along drainage courses, the American River floodplain, the southwest portion of South Natomas, the Florin Road vicinity, and the unsurveyed drainage ditches of South Sacramento.

Summary of Analysis under the 2030 General Plan Master EIR, Including Cumulative Impacts, Growth Inducing Impacts, and Irreversible Significant Effects

Impacts 6.4-2 and 6.4-4 in the Master EIR identified cumulative effects on archaeological resources resulting from implementation of the 2030 General Plan as significant and unavoidable. The Master EIR identified development in high sensitivity areas, especially along the rivers and downtown, as areas in which such impacts would predominate.

Policies HCR 2.2 and HCR 23.1.15 in the 2030 General Plan are in place to protect archaeological resources by requiring surveys, research and testing prior to excavation in high sensitivity areas and the proper handling of discovered resources and enforcement of applicable laws and regulations. The project site is not in an identified highly sensitive area.

The Master EIR references the requirements of California Health and Safety Code section 7050.5(b) relating to procedures to be followed in the event human remains are discovered.

Thresholds of Significance

For purposes of this Initial Study, impacts to cultural and/or historic resources may be considered significant if construction and/or implementation of the Proposed Project would result in the following impacts that remain significant after implementation of General Plan policies or mitigation from the General Plan MEIR:

- Cause a substantial change in the significance of a historical or archaeological resource as defined in CEQA Guidelines Section 15064.5 or
- Directly or indirectly destroy a unique paleontological resource

Answers to Checklist Questions

Questions A-E

There are no structures located on the project site. While the project site is not located in a high sensitivity area for cultural or historical resources, construction of the project could result in the discovery of previously unidentified cultural or historical resources. The City has committed to limiting potential impacts by incorporating specific mitigation measures. Without mitigation, the impact would be considered potentially significant.

Because unknown archaeological or historic resources may be discovered as part of any excavation, there is a project-specific impact. The mitigation identified below establishes procedures for responding to such discoveries during construction. Implementation would reduce any project-specific effects to a less-than-significant level.

Mitigation Measures

Implementation of the following mitigation measures during construction would ensure that the impact would be reduced to a less-than-significant level.

CR-1a) In the event that any prehistoric subsurface archeological features or deposits, including locally darkened soil ("midden"), that could conceal cultural deposits, animal bone, obsidian and/or mortars are discovered during construction-related earth-moving activities, all work within 50 meters of the resources shall be halted, and the City shall consult with a qualified archeologist to assess the significance of the find. Archeological test excavations shall be conducted by a qualified archeologist to aid in determining the nature and integrity of the find. If the find is determined to be significant by the qualified archeologist, representatives of the City and the qualified archeologist shall coordinate to determine the appropriate course of action. All significant cultural materials recovered shall be subject to scientific analysis and professional museum curation. In addition, a report shall be prepared by the qualified archeologist according to current professional standards.

- b) If a Native American site is discovered, the evaluation process shall include consultation with the appropriate Native American representatives.

If Native American archeological, ethnographic, or spiritual resources are involved, all identification and treatment shall be conducted by qualified archeologists, who are certified by the Society of Professional Archeologists (SOPA) and/or meet the federal standards as stated in the Code of Federal Regulations (36 CFR 61), and Native American representatives, who are approved by the local Native American community as scholars of the cultural traditions.

In the event that no such Native American is available, persons who represent tribal governments and/or organizations in the locale in which resources could be affected shall be consulted. If historic archeological sites are involved, all identified treatment is

to be carried out by qualified historical archeologists, who shall meet either Register of Professional Archeologists (RPA), or 36 CFR 61 requirements.

- CR-2 If a human bone or bone of unknown origin is found during construction, all work shall stop in the vicinity of the find and the County Coroner shall be contacted immediately. If the remains are determined to be Native American, the coroner shall notify the Native American Heritage Commission, who shall notify the person most likely believed to be a descendant. The most likely descendant shall work with the contractor to develop a program for re-internment of the human remains and any associated artifacts. No additional work is to take place within the immediate vicinity of the find until the identified appropriate actions have taken place.

Finding

The proposed project would have project-specific additional significant environmental effects for cultural resources not previously examined in the Master EIR. The identified mitigation measures would reduce any project-specific effects to a less-than-significant level.

4.GEOLOGY AND SOILS	Effect will be studied in the EIR	Effect can be mitigated to less than significant	No additional significant environmental effect
Would the Proposed Project:			
A) Expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving strong seismic ground shaking or seismic-related ground failure, including liquefaction?			X
B) Result in substantial soil erosion or the loss of topsoil?			X
C) Be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction or collapse?			X
D) Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial risks to life or property?			X

Thresholds of Significance

For purposes of this Initial Study, impacts from geologic or soil conditions may be considered significant if construction and/or implementation of the Proposed Project would result in the following impact that remains significant after implementation of General Plan policies or mitigation from the General Plan MEIR:

A project built that will either introduce geologic or seismic hazards by allowing the construction of the project on such a site without protection against those hazards.

Answers to Checklist Questions

Question A

Cities in California are required to consider seismic safety as part of the General Plan Health and Safety element. The inclusion of seismic considerations in the General Plan serves to establish policies that help protect lives and property from seismic and geologic activity or unstable soil conditions. As part of the process of complying with Uniform Building Code (UBC) requirements, geotechnical engineering reports are required to assess site-specific conditions. The application of regulatory requirements minimizes the potential for significant geologic, soils, or seismic impacts.

A geotechnical investigation report for the project site was prepared on December 22, 2006 by Soil Search Engineering (SSE). Review of the 1997 UBC indicates that the site is located within Seismic Zone 3 and a site coefficient of S_D would be appropriate for seismic analysis of the site." The site is not within a current Alquist-Priolo Special Study Zone. Because the project is required to comply with regulatory requirements, seismic hazards are less than significant.

Question B-D

Preliminary findings of the SSE report detailed potential issues with plasticity and soil expansion potential, and pavement subgrade quality. While issues have been identified on the project site, the report suggests the site is suitable for the proposed project as long as proper engineering practices are followed for preparation of the soil (excavation and removing of the existing soil and importing and proper use of engineered fill). Regulatory building requirements would ensure further geotechnical investigation and adherence to appropriate construction standards; therefore, the impact is less than significant.

The SSE report indicated that no free groundwater was encountered below the existing ground elevation in the exploratory test holes at the time of drilling. State regulations and standards related to geotechnical considerations are reflected in the Sacramento City Code. Construction and design would be required to comply with the latest City-adopted code at the time of construction, including the Uniform Building Code. The code would require construction and design of buildings to meet standards that would reduce risks associated with subsidence or liquefaction. Any dewatering activities associated with the proposed project must comply with application requirements established by the Central Valley Regional Water Quality Control Board (RWQCB) to ensure that such activities would not result in substantial changes in groundwater flow or quality. Compliance with the RWQCB requirements would ensure a less than significant impact and no mitigation is required.

Finding

The proposed project would not have any project-specific additional significant environmental effects for geology and soils not previously examined in the Master EIR, and no new mitigation measures or alternatives are required.

5. HAZARDS AND HAZARDOUS MATERIALS	Effect will be studied in the EIR	Effect can be mitigated to less than significant	No additional significant environmental effect
Would the Proposed Project:			
A) Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?			X
B) Create a significant hazard to the public or environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment?			X
C) Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?			X
D) Be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment?			X
E) Result in a safety hazard for people residing or working in the project area, for a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport, or public use airport?			X

Background

The site is currently vacant. The property has been periodically disked for weed abatement. Based on a review of aerial photos, it appears that historically there was a structure located on the southwestern corner of the site, but the structure had been removed years ago. No odoriferous soils or stressed vegetation were observed on the surface of the property and no evidence of hazardous materials contamination was found on the project site during a site visit.

Goals and policies have been developed by the County of Sacramento concerning the management of hazardous substances to protect human health and the environment (Sacramento County Hazardous Waste Management Plan, 1988; 1986 to 2006 General Plan for Sacramento, 1987). These goals and policies are in conformance with the Cal/OSHA, Cal EPA, and Office of Emergency Services requirements and apply to the proposed project.

Thresholds of Significance

For purposes of this Initial Study, impacts due to hazards or hazardous materials may be considered significant if construction and/or implementation of the Proposed Project would result in the following impacts that remain significant after implementation of General Plan policies or

mitigation from the General Plan MEIR:

- Expose people (e.g., residents, pedestrians, construction workers) to existing contaminated soil during construction activities;
- Expose people (e.g., residents, pedestrians, construction workers) to asbestos-containing materials or other hazardous materials; or
- Expose people (e.g., residents, pedestrians, construction workers) to existing contaminated groundwater during dewatering activities.

Answers to Checklist Questions

Question A

The site is not listed on the most current County of Sacramento Toxic Site Cleanup Report, which lists sites where unauthorized releases of potentially hazardous materials have occurred.

Question B

The proposed site plan would be reviewed for adequacy by the Fire Department. Recommendations by the department would be incorporated into site design. Construction traffic from the development of the proposed project would not be anticipated to block roads or interfere with emergency plans due to the implementation of a traffic control plan during construction. In addition, project operational traffic would not interfere with any emergency routes or evacuation plans. The impact would be considered less than significant.

Question C

The project would construct and operate a water reservoir, groundwater well and treatment facility, and booster pumping station. None of these require storage of hazardous materials. If needed, groundwater treatment facilities which may include treatment for Iron, Manganese, Arsenic and/or gasses. The project would not result in the creation or exposure of any health hazard or potential health hazard. The impact would be considered less than significant.

Question D

The subject property is presently vacant and shows no evidence of having contained aboveground or underground motor fuel storage tanks, oil/water separators, repair garages, hydraulic lifts or dry cleaning facilities; and no known regional hazardous material impairments to ground water quality beneath or within one-quarter mile of the subject property were identified. Any septic system and associated leach fields and/or dry wells would be abandoned in accordance with local ordinances and the recommendations of a qualified geotechnical engineer and if necessary, wells be properly destroyed – this procedure requires a well abandonment permit from the Sacramento County Department of Environmental Management. If necessary, removal of any septic system and/or well would necessitate permits, essentially ensuring that appropriate measures would be implemented. Since these practices would be enforced through existing laws and regulations and the subject site has no record or evidence of containing hazardous materials, the impact would be considered less than significant.

Question E

The majority of the site consists of disturbed grassland. Absent development, the fire hazard would increase due to continuing vegetative growth on the vacant parcels. Development of the project site would eliminate the growth of on-site fire-prone vegetation, thereby reducing the fire hazard. In addition, fire extinguishers would be required onsite during all construction activities. Since development would serve to decrease the fire hazard, impacts associated with fire hazards would be considered less than significant.

Finding

The proposed project would not have any project-specific additional significant environmental effects for hazards not previously examined in the Master EIR, and no new mitigation measures or alternatives are required.

6. HYDROLOGY AND WATER QUALITY	Effect will be studied in the EIR	Effect can be mitigated to less than significant	No additional significant environmental effect
Would the Proposed Project:			
A) Violate any water quality standards or waste or discharge requirements?			X
B) Substantially deplete groundwater supplies or interfere substantially with groundwater recharge such that there would be a net deficit in aquifer volume or lowering of the local groundwater table level (e.g., the production rate of pre-existing nearby wells would drop to level which would not support existing land uses or planned uses for which permits have been granted)?			X
C) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, or substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or off-site?			X
D) Create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff?			X
E) Otherwise substantially degrade water quality?			X
G) Place within a 100-year flood hazard area structures which would impede or redirect flood flows?			X
H) Expose people or structures to a significant risk of loss, injury or death involving flooding, including flooding as a result of the failure of a levee or dam?			X

Background

The City obtains the majority of its water supply from two surface water sources (the Sacramento and American rivers), with groundwater making up the balance of supply. Most of the City's water supply comes from surface water that is diverted 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 U.S. Bureau of Reclamation.

The groundwater basin underlying Sacramento County is divided into three subbasins: North American, Central, and South American. The North American Subbasin lies south of the Bear River, east of the Feather River, and north of the American River. The general direction of drainage in the sub-basin is west-southwest. The Central Basin lies south of the American River and is part of the South American Subbasin, which is bounded on the west by the Sacramento River, on the north by the American River, on the south by the Cosumnes and Mokelumne rivers, and on the east by the Sierra Nevada Range. These rivers act as major sources of recharge for the groundwater basins in the county.

Surface water and groundwater has been the subject of much ongoing discussion and planning in Sacramento County. The Water Forum, which began with discussions in 1993 and adoption of the Water Forum Agreement in 2000, was a consensus process that included agreements among the various stakeholders on water issues regarding water use and facilities. The Water Forum Agreement included planning for both surface water and groundwater supplies. The Water Forum documents, including the Water Forum Agreement and environmental impact report, are available online at <http://www.waterforum.org/documents.cfm>.

One of the seven elements in the Water Forum Agreement is groundwater management. Implementation of this element includes adherence to long-term average annual pumping limits that are tied to sustainable yields for each of the three basins: 131,000 acre-feet for the North American Subbasin, 273,000 acre-feet for the Central Basin, and 115,000 acre-feet for the South American Subbasin.

The Water Forum Agreement also included commitment to the Water Forum Successor Effort; the formation of two groundwater management agencies was one of the results. The Central Sacramento County Groundwater Management Plan was completed in 2006, and a joint powers authority was formed by the cities of Elk Grove, Folsom, Rancho Cordova, and Sacramento, and the County of Sacramento, to implement the plan. A Board of Directors meets monthly as part of the implementation process. (See <http://www.scgah2o.org/> for information regarding the plan.) The Water Forum also led to the establishment of the Sacramento Groundwater Authority (SGA), which adopted a groundwater management plan for the North American Subbasin. (See <http://www.sgah2o.org/sga/programs/groundwater/> for information regarding the implementation effort.)

The City maintains 27 groundwater wells for potable use; 25 wells in the North American Subbasin and 2 wells in the South American Subbasin. Total capacity of the wells is 20 million gallons per day (mgd), or up to 22,400 acre-feet per year. The wells pump primarily from the North American Subbasin, with two active drinking water wells pumping from the South American Subbasin. As described in the project description, the Shasta Park Reservoir Project is located in the southern portion of the City of Sacramento, in the South American Subbasin. The Laguna Formation is one of the fresh-water-bearing aquifers in the region and consists of interbedded layers of sand, gravel, silt, and clay. California Department of Water Resources (DWR) reported that the specific yield of older alluvium, such as the Laguna Formation, is approximately 7 percent. Previous reports indicate that alluvial fan sediments of the Laguna Formation have been the interval through which nearby production wells in this area are drawing groundwater.

Groundwater levels in the South American Subbasin generally experienced declines from the mid-1960s to about 1980 and from 1987 through 1995. Groundwater levels partially or fully recovered between these drought periods and generally recovered to higher levels by 2000 than after the prior drought period. The most recent groundwater elevation maps available through the County of Sacramento's Web site indicate that the groundwater elevations in the vicinity of the proposed location for the new production well ranged between 20 and 30 feet below mean sea level (msl) in spring 2007 and between 30 and 40 feet below msl in fall 2007. In a previous report, Sacramento County Water Agency (SCWA) wells with well casing perforations or a screened interval in the Laguna Formation experienced groundwater elevations ranging between 30 feet to more than 70 feet below msl or depths to groundwater ranging from 78 to 108 feet below ground surface (Luhdorff and Scalmanini Consulting Engineers, 1998).

City of Sacramento 2030 General Plan

The 2030 General Plan was adopted in March 2009, and included the following policies directly relevant to the proposed project:

UTILITIES (U)

Citywide Utilities

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 the infrastructure necessary to provide these City services.

U 1.1.3 Sustainable Facilities and Services. The City shall continue to provide sustainable utility services and infrastructure in a cost-efficient manner.

U 1.1.12 Impacts to Environmentally Sensitive Lands. The City shall locate and design utilities to avoid or minimize impacts to environmentally sensitive areas and habitats.

WATER SYSTEMS

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 2.1.2 Optimize Capacity. The City shall optimize storage, treatment, and distribution capacity of its water system.

U 2.1.3 Water Treatment Capacity and Infrastructure. The City shall plan, secure funding for, and procure sufficient water treatment capacity and infrastructure to meet projected water demands.

The City has historically constructed, expanded, and improved its water diversion, treatment, and transmission facilities, as needed, to accommodate increasing water supply demands. The City has planned for system improvements in the 2005 Water Distribution System Master Plan that would accommodate the City's peak hour demands. These improvements include construction of the proposed project.

Groundwater Quality

Previous reports indicate that groundwater quality in the vicinity of the new production well is potentially impaired with concentrations of arsenic and manganese increasing with depth. The

Laguna and Riverbank formations have been described as the most widely targeted formations in the region because they are largely above the oxidized-reduced boundary, and generally avoid water quality problems associated with the iron and manganese at greater depths (Luhdorff and Scalmanini Consulting Engineers, 1998). In a more recent report, geologic cross-sections drawn through the vicinity of the new production well site indicate that arsenic concentrations were greatest at one of California American Water Company's Wells, approximately 1 to 1.5 miles northeast (Wood Rogers, 2010). The City's two production wells, located approximately one to one and a half miles to the northwest have acceptable concentrations of arsenic.

A previous report indicated that manganese concentrations in some wells in the western portion Sacramento County Water Agency's (SCWA) Laguna well field, more than 2 miles south of the City's new production well site, exceeded maximum contaminant levels for secondary drinking water standards (Luhdorff and Scalmanini Consulting Engineers, 1998). A geologic cross-section drawn through the vicinity of the new production well site indicates that manganese concentrations were acceptable in nearby production wells, approximately 1 mile from the new production well site, at depths less than approximately 250 to 300 feet below msl (Wood Rogers, 2010).

Thresholds of Significance

For purposes of this Initial Study, impacts to hydrology and water quality may be considered significant if construction and/or implementation of the proposed project would result in the following impacts that remain significant after implementation of General Plan policies or mitigation from the General Plan MEIR:

- Substantially degrade water quality and violate any water quality objectives set by the State Water Resources Control Board, due to increases in sediments and other contaminants generated by construction and/or development of the Specific Plan or
- Substantially increase the exposure of people and/or property to the risk of injury and damage in the event of a 100-year flood.

Answers to Checklist Questions

Question A

The proposed project site is level and would be developed with impervious surfaces and landscaping. The proposed project would result in the covering of approximately 2 acres of vacant land with utility infrastructure uses. Development with impervious surfaces would increase runoff and absorption rates. Runoff from the project site would be directed to the existing storm drain system. The additional flows to the existing system would not be substantial when compared to existing flows, and the storm drain system would be adequate to handle the anticipated flows.

The proposed project would not violate any waste discharge practices and would be consistent with the goal of NPDES stormwater regulations is to improve the quality of stormwater discharged to receiving waters to the "maximum extent practicable" through the use of structural and non-structural Best Management Practices (BMPs). With adequate infrastructure to handle the relatively small increase in surface runoff and the implementation of BMPs, the impact would be considered less than significant.

Question B

The potential for groundwater levels to be substantially depleted as a result of implementation of the project was evaluated using the “Theis equation,” utilizing appropriate assumptions about the aquifer characteristics in the vicinity of the new production well. Pumping a well causes a cone of depression, or drawdown, of the water table of an unconfined aquifer or of the piezometric surface for a confined aquifer. The Theis equation was developed to predict groundwater drawdown at any given radius from a well after a fixed period of pumping. The equation may be used alone on a well-by-well basis or in a numerical groundwater model to predict aquifer response to multiple wells, each operating independently. The Theis equation uses the flow yield, which is usually a result of pumping the well. The equation takes into account the transmissivity and storativity of the underlying formation. An assumption the model makes is that the well resides in a confined aquifer, that the aquifer is uniform, and that it extends infinitely. The Theis equation is most often applied to water wells.

Previous pump tests conducted at the two nearest City production wells (Well 83 and Well 107) approximately 1.5 miles northwest of the project site indicated that the specific capacities of these wells ranged between 60 and 127 gallons per minute per foot (gpm/ft). Previous reports indicated that the specific capacity of Sacramento County Water Agency (SCWA) wells (L46, L65, L41, L52, and L47) with total depths ranging between 238 and 295 feet, located approximately 2 to 3 miles south of the new production well, had specific capacities ranging between 17.6 and 26 gpm/ft (Luhdorff and Scalmanini Consulting Engineers, 1998). Although the Laguna Formation is reported to be an unconfined aquifer, a previous study reported that short-term aquifer tests indicated semiconfined or confined conditions (Luhdorff and Scalmanini Consulting Engineers, 1998). Therefore, because the new production well site has not been constructed or tested, aquifer properties, including storage coefficients and transmissivity values were estimated in the analysis based upon previous reports.

For the purpose of the analysis, it was assumed that the proposed production well would be pumping continuously at a rate of 2,000 gallons per minute (gpm). The results of the analysis indicate that other production wells located within 1 mile of the proposed production well, and perforated or screened in the same aquifer zone, could experience up to 9.7 feet of additional drawdown after 100 days of continuous pumping, which is considered a “worst case” scenario because production wells such as the one proposed operate intermittently as needed as opposed to continuously.

This analysis considered water-level impacts up to 2 miles from the proposed production well, where production wells screened in the same aquifer zone could have approximately 7 feet of additional drawdown. The potential for drawdown could be minimized by increasing the screen length within the proposed production well to increase the portion of the aquifer being accessed. However, increasing the total screen length could require pumping from zones of the underlying aquifer with less desirable water quality, potentially resulting in the need for wellhead treatment at the new production well. The final screen length would be determined following drilling of exploratory borings and collection of groundwater samples from a monitoring well to be constructed at the new production well location. Figure 1 shows that the majority of other wells near the production well site are other City of Sacramento wells, and most of these are beyond 1 mile. Beyond 2 miles from the proposed production well, it is believed that the impact of pumping would be less than the potential impact at 1 mile and would be difficult to measure or quantify relative to other factors such as ongoing pumping from other wells, aquifer variability, and seasonal and long-term variability in hydrologic conditions. The potential impacts would be considered less than significant.

Not included on the map are the locations of privately owned shallow domestic wells. Because these wells tend to be screened in the shallow unconfined aquifer zones, it is believed that pumping from the proposed production well in the deeper confined system would have negligible effects on groundwater levels in these wells.

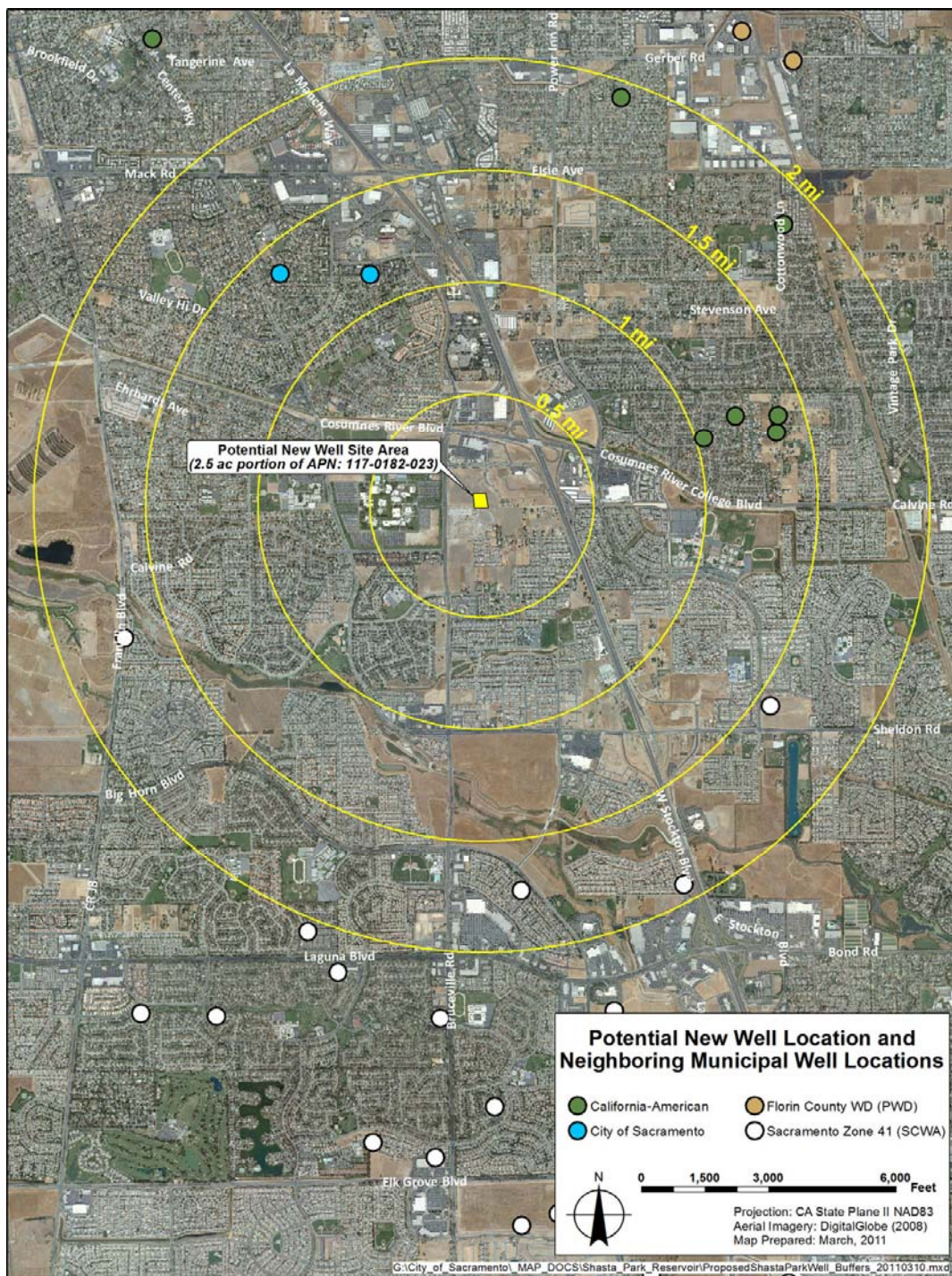


Figure 4.
Wells Within a 2-Mile Radius of the Proposed Production Well Site

Questions C - E

Construction, operation and abandonment of water wells are subject to the County of Sacramento Well Ordinance. See County Code Chapter 6.28, Wells and Pumps; City Code section 13.04.660. The City would obtain the required well permit from Sacramento County, and the construction and operation of the well would be subject to the County's oversight and regulation.

Unregulated runoff from the project site could affect water quality. Fuel, oil, grease, solvents, concrete wash, and other chemicals and wastes used in construction activities have the potential of creating toxic problems if allowed to enter waterways. Construction activities would include drilling the well, trenching for utilities, grading, construction of the reservoir and associated buildings, and paving of the driveways. These activities could potentially cause the release of sediments or materials into waterways. The degree of construction related impacts to water quality is partially determined by the duration of the various construction activities, timing of construction, and rainfall distribution. The proposed project would be required to comply with the City of Sacramento Code, Ordinance 15.88.250, Erosion and Sediment Control, effectively minimizing any potential runoff. Requirements will include treating their onsite and offsite drainage as well as the street drainage.

The project would be required to construct and implement both source control and on-site treatment controls. Off-site and on-site drainage as well as the street drainage would be treated prior to the discharge into the public drainage system. The proposed project is greater than one acre and would have to comply with the NPDES and obtain a General Permit for Stormwater Discharges Associated with Construction Activity. The NPDES permit requires the applicant to file a Notice of Intent and prepare a Stormwater Pollution Prevention Plan prior to construction. Post-construction stormwater quality control measures would be incorporated into the development to minimize the increase of urban runoff pollution caused by development of the area. In addition, the developer/builder would be required to employ BMPs before, during, and after construction. Compliance with BMP provisions would ensure that development and use of the site would result in a less-than-significant impact to surface waters and surface water quality. The project would also be required to comply with RWQCB permit requirements to ensure that groundwater is not impacted.

Compliance with these regulatory requirements would reduce any impacts to a less-than-significant level.

Questions F - H

The proposed project is located in Zone X. FEMA does not have building regulations for development in areas designated Zone X and would not require mandatory flood insurance for structures in Zone X. Flood Zone X shaded consists of areas of 500-year flood - areas of 100-year flood with average depths of less than 1 foot or with drainage areas less than 1 square mile; and areas protected by levees from 100-year flood. Because the project site would be located in a low-risk flood zone, impacts associated with water related hazards would be considered less than significant.

The proposed project would not involve substantial excavation or trenching that would impact groundwater. In the event that dewatering activities are required, these could result in a short-term change in the quantity of groundwater and/or direction of rate of flow, and groundwater quality. Any dewatering activities associated with the proposed project must comply with application requirements established by the Central Valley Regional Water Quality Control Board to ensure that such activities would not result in substantial changes in groundwater flow or quality. Development of the project would not intercept an aquifer and would not result in substantial loss of groundwater recharge capability. While development would include impermeable surfaces, the project site is only ten acres in size. Due to the estimated depth of groundwater, absence of an aquifer, and relatively small loss of groundwater recharge capability, issues associated with these impacts would be considered less than significant.

Mitigation Measures

None required.

Findings

The proposed project would not have any project-specific additional significant environmental effects for hydrology and water quality not previously examined in the Master EIR, and no new mitigation measures or alternatives are required.

7. LIGHT AND GLARE	Effect will be studied in the EIR	Effect can be mitigated to less than significant	No additional significant environmental effect
Would the Proposed Project: A. Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area?			X

Thresholds of Significance

For purposes of this Initial Study, impacts due to light and glare may be considered significant if construction and/or implementation of the Proposed Project would result in the following impacts that remain significant after implementation of General Plan policies or mitigation from the General Plan MEIR:

A project with glare that causes public hazard or annoyance for a sustained period of time or casts light onto oncoming traffic or residential uses.

Answers to Checklist Questions

Question A

The proposed facilities would include lighting for security at the site. Such lighting would, consistent with the requirements of City Code, be directed away from any nearby residences. (City Code section 17.68.030) Any project-specific effect would be less than significant.

Finding

The proposed project would not have any project-specific additional significant environmental effects for light and glare not previously examined in the Master EIR, and no new mitigation measures or alternatives are required.

CITY OF SACRAMENTO (Z14005400)		REVISED APRIL 23, 2012	
8. NOISE	Effect will be studied in the EIR	Effect can be mitigated to less than significant	No additional significant environmental effect
Would the Proposed Project result in:			
A) Exposure of persons to or generation of noise levels in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?		X	
B) Exposure of persons to or generation of excessive groundborne vibration or groundborne noise levels?		X	
C) A substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project?			X
D) A substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project?		X	

Background

The proposed project area for the production well includes vacant land to the north, east and west, and Shasta Park to the south. Further east are some residential uses and across Bruceville Road to the west is Cosumnes River College (approximately ~~1500~~ **1880** feet to nearest building). There are four residential units to the east of the site on Cotton Lane with the nearest residence located approximately ~~435~~ **55** feet to the east of the proposed construction area.

The Sacramento City Code, Chapter 8.68, states that the following activities shall be exempted from provisions of the Noise Ordinance:

Noise sources due to the erection (including excavation), demolition, drilling, alteration or repair of any building or structure between the hours of seven a.m. and six p.m., on Monday, Tuesday, Wednesday, Thursday, Friday and Saturday, and between nine a.m. and six p.m. on Sunday; provided, however, that the operation of an internal combustion engine shall not be exempt pursuant to this subsection if such engine is not equipped with suitable exhaust and intake silencers which are in good working order. The director of building inspections, may permit work to be done during the hours not exempt by this subsection in the case of urgent necessity and in the interest of public health and welfare for a period not to exceed three days. Application for this exemption may be made in conjunction with the application for the work permit or during progress of the work.

The primary source of noise in the project area is vehicle traffic on State Highway 99 to the east and Bruceville Road to the west.

Thresholds of Significance

For purposes of this Initial Study, impacts due to noise may be considered significant if construction and/or implementation of the Proposed Project would result in the following impacts that remain significant after implementation of General Plan policies or mitigation from the General Plan MEIR:

- Result in exterior noise levels in the project area that are above the upper value of the normally acceptable category for various land uses due to the project's noise level increases;
- Result in residential interior noise levels of 45 dBA L_{dn} or greater caused by noise level increases due to the project;
- Result in construction noise levels that exceed the standards in the City of Sacramento Noise Ordinance;
- Permit existing and/or planned residential and commercial areas to be exposed to vibration-peak-particle velocities greater than 0.5 inches per second due to project construction;
- Permit adjacent residential and commercial areas to be exposed to vibration peak particle velocities greater than 0.5 inches per second due to highway traffic and rail operations; or
- Permit historic buildings and archaeological sites to be exposed to vibration-peak-particle velocities greater than 0.2 inches per second due to project construction and highway traffic.

Answers to Checklist Questions

Questions A – D

The project location is in an urbanized area with substantial existing noise sources. The primary source of noise is vehicle traffic, but construction activities are common and serve to increase ambient noise levels. The ambient noise level in the project vicinity is 60 dBA CNEL. (Master EIR, Figure 6.8-1)

Operation of the groundwater well and reservoir would not include the type of work or equipment that would create or cause excessive noise or vibration. Electrical equipment used to operate the facilities would be enclosed within the control building and the well pumps would be similar to existing exterior water well pumps throughout the city. Operation of the facility would comply with the City's noise ordinance that restricts emission of noise at the project boundaries.

Construction of the proposed project would occur during normal business hours with the exception of well drilling, which requires continuation of drilling operations on a 24-hour basis until well completion. The period of time required for well drilling varies with ground conditions, and is not certain, but drilling can last from a few hours to several weeks. See Water Well Design and Construction, University of California, http://groundwater.ucdavis.edu/Publications/Harter_FWQFS_8086.pdf.

Some short-term temporary noise impacts would occur due to the well-drilling activities. Well drilling activities can result in noise levels of approximately 85 dBA at a distance of 50 feet. ~~With a noise attenuation rate of approximately 7.5 dBA for every doubling of distance,~~ Drilling noise levels at the nearest residential structure, approximately ~~400~~ 55 feet from the drilling site, would be approximately ~~62.5~~ 85 dBA. This would result in significant nighttime noise levels **during well drilling construction activities.**

The mitigation measures identified below would require the City to perform a site-specific analysis to determine the level of noise reduction needed to ensure that the noise emitted by project construction would not exceed 50 dBA at the property line of the existing residences in the area.

(See City Code section 8.68.060) Mitigation measures ensure that there will be advance notification to affected residences, and use of sound walls during 24-hour drilling that reduce impacts to an acceptable level. The mitigation measures below would reduce impacts related to noise and vibration to a less than significant level.

Mitigation Measures

- N-1) Prior to commencement of drilling operations that will include 24-hour drilling, the City shall perform a site-specific analysis to determine the Sound Transmissivity Classification (STC) level for noise reduction to achieve construction noise levels of 50 dBA or less at the residences closes to the site to the east.
- N-2) During well drilling activities or any other construction activities requiring 24-hour construction, the Department of Utilities shall include in construction specification requirements that contractors install and maintain an engineered sound wall or utilize other noise attenuation mechanism/techniques during 24-hour activities. Sound wall specifications shall include use of materials with a STC classification of 18, or greater if identified by the analysis required in Mitigation Measure N-1, and shall be installed to a height that intercepts the line of sight between the drill rig and sensitive receptors. The minimum height of the sound wall shall be fifteen (15) feet. The performance standard for the noise mitigation measure shall be reduction of noise levels within 400 feet of the drill rig to 50 dBA.
- N-3) All residences and other sensitive receptors within 1,000 feet of the drilling site shall be notified four weeks in advance. The information distributed shall include the following:
- A brief description of the drilling and testing operations, the necessity for 24-hour drilling, and the proposed schedule for drilling and testing activities; and
 - A contact person and 24-hour contact telephone number for noise complaints.

Finding

With the implementation of the mitigation measures above, project impacts from noise would be reduced to a less-than-significant level.

9. PUBLIC SERVICES	Effect will be studied in the EIR	Effect can be mitigated to less than significant	No additional significant environmental effect
Would the Proposed Project result in: A. A substantial adverse physical impact associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for any of the public services:			X
I) Fire protection?			X
II) Police protection?			X
III) Schools?			X

Thresholds of Significance

For the purposes of this Initial Study, an impact would be considered significant if the project resulted in the need for new or altered services related to fire protection, police protection, or school facilities beyond what was anticipated in the 2030 General Plan.

Answers to Checklist Questions

Question A (I, II and III)

The project would construct and operate water infrastructure facilities at the project site. The project is part of the City's ongoing efforts to provide water service for municipal and industrial purposes within the City. The Master EIR evaluated the cumulative effects of ongoing development and growth in the City, and the project would not have any effects not previously discussed and evaluated in the Master EIR.

Finding

The proposed project would not have any project-specific additional significant environmental effects on public services not previously examined in the Master EIR, and no new mitigation measures or alternatives are required.

10. PUBLIC UTILITIES	Effect will be studied in the EIR	Effect can be mitigated to less than significant	No additional significant environmental effect
Would the Proposed Project:			
A) Exceed wastewater treatment requirements of the applicable Regional Water Quality Control Board?			X
B) 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?			X
C) 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?			X
D) Have sufficient water supplies available to serve the project from existing entitlements and resources, or are new or expanded entitlements needed?			X
E) Result in a determination by the wastewater treatment provider which serves or may serve the project's projected demand in addition to the provider's existing commitments?			X

Thresholds of Significance

For the purposes of this Initial Study, an impact would be considered significant if the project resulted in the need for new or altered services related to water supply, treatment, and distribution systems; sewer systems; and drainage systems beyond what was anticipated in the 2030 General Plan:

- Result in the determination 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 impacts.

Answers to Checklist Questions

Question A, B, E

The project would construct and operate a groundwater well with associated treatment facility and water reservoir on the site. The project would have no effect on wastewater demand or facilities.

Questions C, D

The project would construct and operate a water reservoir, groundwater well with associated

treatment facility and booster pump station. The facilities would not consume water, and would not require construction of new storm drainage facilities.

Finding

The proposed project will not have any project-specific additional significant environmental effects on public utilities not previously examined in the Master EIR, and no new mitigation measures or alternatives are required.

11. RECREATION	Effect will be studied in the EIR	Effect can be mitigated to less than significant	No additional significant environmental effect
Would the Proposed Project:			
A) Increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated?			X
B) Include recreational facilities or require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment?			X

Thresholds of Significance

For purposes of this Initial Study, impacts to recreational resources may be considered significant if construction and/or implementation of the Proposed Project would result in the following impacts that remain significant after implementation of General Plan policies or mitigation from the General Plan MEIR:

- Cause or accelerate substantial physical deterioration of existing area parks or recreational facilities or
- Create a need for construction or expansion of recreational facilities beyond what was anticipated in the 2030 General Plan.

Answers to Checklist Questions

Questions A-B

The proposed project would construct and operate a water reservoir on approximately two acres, and a new groundwater well, booster pumping station and associated facilities. The project would not result in any increase in demand on recreational resources, and would not have any effects not identified in the Master EIR.

Finding

The proposed project would not have any project-specific additional significant environmental effects for recreation not previously examined in the Master EIR, and no new mitigation measures or alternatives are required.

12. TRANSPORTATION AND CIRCULATION	Effect will be studied in the EIR	Effect can be mitigated to less than significant	No additional significant environmental effect
Would the Proposed Project:			
A) Cause an increase in traffic which is substantial in relation to the existing traffic load and capacity of the street system (i.e., result in a substantial increase in either the number of vehicle trips, the volume to capacity ratio on roads, or congestion at intersections?			X
B) Exceed, either individually or cumulatively, a level of service standard established by the county congestion management agency for designated roads or highways?			X
C) Substantially increase hazards due to a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?			X
D) Result in inadequate emergency access?			X
E) Conflict with adopted policies, plans, or programs supporting alternative modes of transportation (e.g., bus turnouts, bicycle racks)?			X

Thresholds of Significance

For purposes of this Initial Study, impacts resulting from changes in transportation or circulation may be considered significant if construction and/or implementation of the Proposed Project would result in the following impacts that remain significant after implementation of General Plan policies or mitigation from the General Plan MEIR:

Roadway Segments

- The traffic generated by a project degrades peak period Level of Service (LOS) from A,B,C or D (without the project) to E or F (with project) or
- The LOS (without project) is E or F, and project generated traffic increases the Volume to Capacity Ratio (V/C ratio) by 0.02 or more.

Intersections

- The traffic generated by a project degrades peak period level of service from A, B, C or D (without project) to E or F (with project) or
- The LOS (without project) is E or F, and project generated traffic increases the peak period average vehicle delay by five seconds or more.

Freeway Facilities

Caltrans considers the following to be significant impacts.

- Off-ramps with vehicle queues that extend into the ramp's deceleration area or onto the freeway;
- Project traffic increases that cause any ramp's merge/diverge level of service to be worse than the freeway's level of service;
- Project traffic increases that cause the freeway level of service to deteriorate beyond level of service threshold defined in the Caltrans Route Concept Report for the facility; or
- The expected ramp queue is greater than the storage capacity.

Transit

- Adversely affect public transit operations or
- Fail to adequately provide for access to public transit.

Bicycle Facilities

- Adversely affect bicycle travel, bicycle paths or
- Fail to adequately provide for access by bicycle.

Pedestrian Circulation

- Adversely affect pedestrian travel, pedestrian paths or
- Fail to adequately provide for access by pedestrians.

Answers to Checklist Questions

Questions A-E

Construction of the water reservoir and associated facilities on the project site would require importation of construction materials by truck, and use of private motor vehicles by construction personnel. Access to the project site is via Bruceville Road, a divided roadway of sufficient width to accommodate construction equipment. Disruption to traffic on Bruceville Road would be intermittent and of brief duration, and any effects would be less than significant. No additional significant environmental effects would occur.

Finding

The proposed project would not have any project-specific additional significant environmental effects for transportation not previously examined in the Master EIR, and no new mitigation measures or alternatives are required.

13. MANDATORY FINDINGS OF SIGNIFICANCE	Effect will be studied in the EIR	Effect can be mitigated to less than significant	No additional significant environmental effect
A) Does the project have the potential to degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, reduce the number or restrict the range of a rare or endangered plant or animal or eliminate important examples of the major periods of California history or prehistory?			X
B) Does the project have impacts that are individually limited, but cumulatively considerable? ("Cumulatively considerable" means that the incremental effects of a project are considerable when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects.)			X
C) Does the project have environmental effects which will cause substantial adverse effects on human beings, either directly or indirectly?			X

Answers to Checklist Questions

Question A

The proposed project is consistent with the City's approach to conjunctive use. Groundwater extraction would be within the agreed-upon limits for the groundwater basin, and there would be no significant effect on other groundwater users or the environment. Mitigation measures will be implemented to ensure that the project will not degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, reduce the number or restrict the range of a rare or endangered plant or animal.

Question B

Construction of the reservoir, pumping station, well, treatment facility, and construction associated pipelines would result in temporary impacts for noise, but no cumulative effects would occur.

Question C

Installation and construction operations would have temporary effects but would not have any substantial adverse effects on human beings.

Section IV - Environmental Factors Potentially Affected

The environmental factors checked below would potentially be affected by this project.

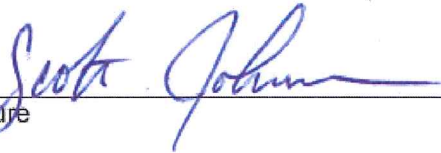
<input type="checkbox"/> Air Quality	<input checked="" type="checkbox"/> Noise
<input checked="" type="checkbox"/> Biological Resources	<input type="checkbox"/> Public Services
<input checked="" type="checkbox"/> Cultural and Historic Resources	<input type="checkbox"/> Public Utilities
<input type="checkbox"/> Geology and Soils	<input type="checkbox"/> Recreation
<input type="checkbox"/> Hazards and Hazardous Materials	<input type="checkbox"/> Transportation and Circulation
<input type="checkbox"/> Hydrology and Water Quality	<input type="checkbox"/> None Identified
<input type="checkbox"/> Light and Glare	
<input type="checkbox"/>	

Section V - Determination

On the basis of the Initial Study:

I find that (a) the Proposed Project is an anticipated subsequent project identified and described in the 2030 General Plan Master EIR; (b) the Proposed Project is consistent with the 2030 General Plan land use designation and the permissible densities and intensities of use for the project site; (c) that the discussions of cumulative impacts, growth inducing impacts, and irreversible significant effects in the Master EIR are adequate for the Proposed Project; and (d) the Proposed Project **will** have additional significant environmental effects not previously examined in the Master EIR. A Mitigated Negative Declaration will be prepared. Mitigation measures from the Master EIR will be applied to the project as appropriate, and additional feasible mitigation measures and alternatives will be incorporated to revise the Proposed Project before the negative declaration is circulated for public review, to avoid or mitigate the identified effects to a level of insignificance. (CEQA Guidelines Section 15178(b))

Signature



Date

4-7-11

Scott Johnson, Associate Planner

Signature



REVISED Date

4-23-2012

Scott Johnson, Associate Planner

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- University of California, Water Well Design and Construction, http://groundwater.ucdavis.edu/Publications/Harter_FWQFS_8086.pdf
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Attachment E

Resolution No. 2012-138 - Adopting the Revised Mitigated Negative Declaration and the Mitigation Reporting Program for the Shasta Park 4MG Water Reservoir and Pump St. Project (Z14005400)

RESOLUTION NO. 2012-138

Adopted by the Sacramento City Council

May 22, 2012

ADOPTING THE REVISED MITIGATED NEGATIVE DECLARATION AND THE MITIGATION REPORTING PROGRAM FOR THE SHASTA PARK 4MG WATER RESERVOIR AND PUMP ST. PROJECT (Z14005400)

BACKGROUND

- A. The 2005 Water Master Plan concluded that a water reservoir should be constructed in the southeast portion of Sacramento to help maintain service pressure through peak demand periods, and to provide additional emergency and fire suppression water supply.
- B. The Shasta Park 4MG Reservoir and Pump Station Project (Project) will provide for a 4 million gallon (MG) reservoir and on-site water well consistent with both City and regional water planning efforts.
- C. An Initial Study and Mitigated Negative Declaration (MND) was prepared and circulated for the Project and a Mitigation Reporting Program has been prepared. Minor revisions have been made in the Initial Study and the MND and the Revised MND does not require recirculation.

BASED ON THE FACTS SET FORTH IN THE BACKGROUND, THE CITY COUNCIL RESOLVES AS FOLLOWS:

Section 1. The City Council finds as follows:

- A. The Project Initial Study determined, based on substantial evidence, that the Project is an anticipated subsequent project identified and described in the 2030 General Plan Master Environmental Impact Report (EIR); that the Project is consistent with the 2030 General Plan land use designation and the permissible densities and intensities of use for the project site; that the discussions of cumulative impacts, growth inducing impacts, and irreversible significant effects in the Master EIR are adequate for the Project; and that the Project would have additional potentially significant environmental effects not previously examined in the Master EIR. Mitigation measures from the Master EIR were applied to the Project as appropriate, and revisions to the Project made before the proposed MND and Initial Study were released for public review were determined by City's Environmental Planning Services to avoid or reduce the potentially significant effects to a less than significant level, and, therefore, there was no substantial evidence that the Project as revised and conditioned may have a significant effect on the environment. A MND for the Project was then completed, noticed and

circulated in accordance with the requirements of the California Environmental Quality Act (CEQA), the State CEQA Guidelines and the Sacramento Local Environmental Procedures as follows:

1. On April 13, 2011, a Notice of Intent (NOI) to Adopt the MND dated April 11, 2011, was circulated for public comments for 30 days. The NOI was sent to those public agencies that have jurisdiction by law with respect to the proposed project and to other interested parties and agencies, including property owners within 500 feet of the boundaries of the proposed project. The comments of such persons and agencies were sought.
2. On April 13, 2011, the NOI was published in the Daily Recorder, a newspaper of general circulation, and the NOI was posted in the office of the Sacramento County Clerk.
3. Minor revisions were made to the Initial Study and MND which merely clarified and made insignificant modifications regarding the location of the facilities on the parcel. The Project Reservoir will now be located on the eastern portion of the parcel. Per CEQA Guidelines Section 15073.5(c)(4), recirculation is not required. The Revised Initial Study and MND reflect these changes. The revisions do not result in new effects or significant new information, and recirculation is not required.

Section 2. The City Council has reviewed and considered the information contained in the Revised MND, including the Revised Initial Study, the revisions and conditions incorporated into the Project, and all comments received during the public review process and the public meeting on the Project. The City Council has determined that the Revised MND constitutes an adequate, accurate, objective and complete review of the environmental effects of the proposed project.

Section 3. Based on its review of the Revised MND and on the basis of the whole record, the City Council finds that the Revised MND reflects the City Council's independent judgment and analysis and that there is no substantial evidence that the Project will have a significant effect on the environment.

Section 4. The City Council adopts the Revised MND for the Project.

Section 5. Pursuant to CEQA section 21081.6 and CEQA Guidelines section 15074, and in support of its approval of the Project, the City Council adopts a Mitigation Reporting Program to require all reasonably feasible mitigation measures, including mitigation measures from the Master EIR as appropriate, be implemented by means of Project conditions, agreements, or other measures, as set forth in the Mitigation Reporting Program.

Section 6. Upon approval of the Project, the City's Environmental Planning Services shall file or cause to be filed a Notice of Determination with the Sacramento County Clerk and, if the project requires a discretionary approval from any state agency, with the State Office of Planning and Research, pursuant to section

21152(a) of the Public Resources Code and section 15075 of the State CEQA Guidelines adopted pursuant thereto.

Section 7. Pursuant to CEQA Guidelines section 15091(e), the documents and other materials that constitute the record of proceedings upon which the City Council has based its decision are located in and may be obtained from, the Office of the City Clerk at 915 I Street, Sacramento, California. The City Clerk is the custodian of records for all matters before the City Council.

Section 8. Exhibits A, B, and C are part of this Resolution.

Table of Contents

Exhibit A - Mitigation Reporting Program

Exhibit B - Revised Mitigated Negative Declaration/Initial Study

Exhibit C - Comment Letters

Adopted by the City of Sacramento City Council on May 22, 2012 by the following vote:


Ayes: Councilmembers Ashby, Cohn, D Fong, McCarty, Pannell, Schenirer, Sheedy,
and Mayor Johnson.

Noes: None.

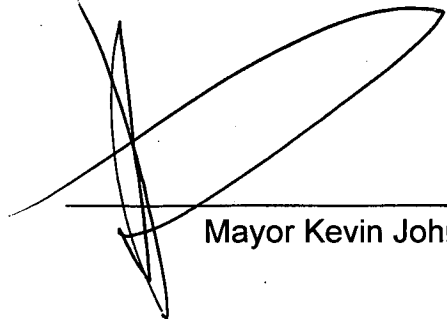
Abstain: None.

Absent: Councilmember R Fong.

Attest:



Stephanie Mizuno Assistant City Clerk



Mayor Kevin Johnson

SHASTA PARK WATER RESERVOIR PROJECT
MITIGATION REPORTING PROGRAM

In January 1989, Assembly Bill 3180 went into effect requiring the City to monitor all mitigation measures applicable to this project and included in the Mitigated Negative Declaration. For this project, mitigation reporting will be performed by the City of Sacramento Department of Transportation in accordance with the monitoring and reporting program developed by the City to implement AB 3180.

This Mitigation Reporting Program is being prepared for the Community Development Department, Environmental Planning Services, 300 Richards Boulevard, 3rd Floor, Sacramento, CA 95811, pursuant to the California Environmental Quality Guidelines, Section 21081.

Project Number: Z14005400

Project Name: Shasta Park Water Reservoir Project

Project Location: The project site is located on the north side of Imagination Parkway, approximately 900 feet west of SR-99 and directly east of the Cosumnes River College's Bruceville Road entrance in the South Sacramento Community Plan area. The site consists of a portion of Assessor's Parcel Number (APN) 117-0182-023 in the City of Sacramento, Sacramento County.

Project Description: The project includes the construction, operation and maintenance of a groundwater well and water reservoir on an approximately two-acre parcel east of Bruceville Road and north of Imagination Way in south Sacramento. The reservoir would have a capacity of approximately 4 million gallons. A groundwater well would be installed on the site, with a capacity of 2 million gallons per day, and an anticipated withdrawal of approximately 2 acre-feet per year. A water treatment facility would be constructed with a capacity of 2 million gallons per day, and a pump station with a capacity of 15 million gallons per day. The pump station would pump water from the reservoir to users.

**MITIGATION REPORTING PROGRAM CHECKLIST FOR THE
SHASTA PARK WATER RESERVOIR PROJECT (Project #Z14005400)**

Mitigation Measure	Timing of Implementation	Reporting/ Responsible Party	VERIFICATION OF COMPLIANCE	
			Initials	Date
1. BIOLOGICAL RESOURCES				
<p>MITIGATION MEASURE</p> <p>BR-1a) If construction or grading is scheduled during February to September, a pre-construction survey shall be conducted and prepared by a qualified biologist within thirty (30) days prior to the start of any grading or construction activities to determine the presence of any special status species or species of special concern (nesting burrowing owls).</p> <p>b) If an adults-only active burrowing owl burrow(s) nest is discovered during the pre-construction survey the monitoring biologist shall install a one-way door on the burrow(s) and monitor and inspect per DFG guidelines. If an active nest with chicks is encountered, one-way doors shall not be used unless authorized by DFG in writing. No construction shall occur near the nest until the monitoring biologist has consulted with the DFG on allowing construction to proceed. The monitoring biologist shall, through consultations with DFG, determine an appropriate buffer between the nest and any construction activity allowed to proceed on the project site prior to the fledging of the chicks. No construction or grading activities shall begin until the monitoring biologist has submitted a written clearance to the Department of Development Services that the burrowing owl(s) have vacated or been safely relocated by the monitoring biologist. After active burrows are vacated, the burrow must be destroyed completely by the monitoring biologist prior to grading or construction activity.</p>	Prior to grading and construction	City of Sacramento		
<p>MITIGATION MEASURE</p> <p>BR-2) Prior to the issuance of grading permits, the project applicant shall preserve an equal amount of suitable raptor foraging habitat, at a 1:1 ratio. Suitable foraging habitat includes fallow land, alfalfa or other low growing crops. Preservation shall occur through the purchase of credits at a CDFG-approved mitigation bank which has the project within its service area, or through the purchase of conservation easements or fee title of lands with suitable foraging habitat no further than a ten (10) mile radius of the perimeter of the project site, or through any combination of the foregoing. Any</p>	Prior to grading and construction	City of Sacramento		

Mitigation Measure	Timing of Implementation	Reporting/ Responsible Party	VERIFICATION OF COMPLIANCE	
			Initials	Date
<p>habitat identified by the applicant shall be evaluated using the following five criteria in consultation with the CDFG:</p> <ul style="list-style-type: none"> i. Does the mitigation parcel provide suitable foraging habitat? ii. Is the parcel located in close proximity to the impacted foraging habitat? iii. Is the parcel adjacent to other protected habitat thereby contributing to a larger habitat preserve? iv. Is the parcel outside of areas identified for urban growth? <p>A mitigation plan shall be established and submitted to the City for approval prior to the issuance of grading permits and, at a minimum, shall include confirmation of title and encumbrances, details on mitigation site location, development, maintenance and monitoring. Any easements shall be in compliance with Government Code Section 65965. Land and easements shall be approved by the City in consultation with CDFG.</p>				
2. CULTURAL RESOURCES				
<p>MITIGATION MEASURE</p> <p>CR-1a) In the event that any prehistoric subsurface archeological features or deposits, including locally darkened soil ("midden"), that could conceal cultural deposits, animal bone, obsidian and/or mortars are discovered during construction-related earth-moving activities, all work within 50 meters of the resources shall be halted, and the City shall consult with a qualified archeologist to assess the significance of the find. Archeological test excavations shall be conducted by a qualified archeologist to aid in determining the nature and integrity of the find. If the find is determined to be significant by the qualified archeologist, representatives of the City and the qualified archeologist shall coordinate to determine the appropriate course of action. All significant cultural materials recovered shall be subject to scientific analysis and professional museum curation. In addition, a report shall be prepared by the qualified archeologist according to current professional standards.</p> <p>b) If a Native American site is discovered, the evaluation process shall include consultation with the appropriate Native American representatives.</p>	Prior to, during, and following construction	City of Sacramento		

Mitigation Measure	Timing of Implementation	Reporting/ Responsible Party	VERIFICATION OF COMPLIANCE	
			Initials	Date
<p>If Native American archeological, ethnographic, or spiritual resources are involved, all identification and treatment shall be conducted by qualified archeologists, who are certified by the Society of Professional Archeologists (SOPA) and/or meet the federal standards as stated in the Code of Federal Regulations (36 CFR 61), and Native American representatives, who are approved by the local Native American community as scholars of the cultural traditions.</p> <p>In the event that no such Native American is available, persons who represent tribal governments and/or organizations in the locale in which resources could be affected shall be consulted. If historic archeological sites are involved, all identified treatment is to be carried out by qualified historical archeologists, who shall meet either Register of Professional Archeologists (RPA), or 36 CFR 61 requirements.</p>				
<p>MITIGATION MEASURE</p> <p>CR-2 If a human bone or bone of unknown origin is found during construction, all work shall stop in the vicinity of the find and the County Coroner shall be contacted immediately. If the remains are determined to be Native American, the coroner shall notify the Native American Heritage Commission, who shall notify the person most likely believed to be a descendant. The most likely descendant shall work with the contractor to develop a program for re-interment of the human remains and any associated artifacts. No additional work is to take place within the immediate vicinity of the find until the identified appropriate actions have taken place.</p>	During construction	City of Sacramento		
3. NOISE				
<p>MITIGATION MEASURE</p> <p>N-1) Prior to commencement of drilling operations that will include 24-hour drilling, the City shall perform a site-specific analysis to determine the Sound Transmissivity Classification (STC) level for noise reduction to achieve construction noise levels of</p>	Prior to Construction	City of Sacramento		

Mitigation Measure	Timing of Implementation	Reporting/ Responsible Party	VERIFICATION OF COMPLIANCE	
			Initials	Date
50 dBA or less at the residences closes to the site to the east.				
MITIGATION MEASURE N-2) During well drilling activities or any other construction activities requiring 24-hour construction, the Department of Utilities shall include in construction specification requirements that contractors install and maintain an engineered sound wall or utilize other noise attenuation mechanism/techniques during 24-hour activities. Sound wall specifications shall include use of materials with a STC classification of 18, or greater if identified by the analysis required in Mitigation Measure N-1, and shall be installed to a height that intercepts the line of sight between the drill rig and sensitive receptors. The minimum height of the sound wall shall be fifteen (15) feet. The performance standard for the noise mitigation measure shall be reduction of noise levels within 400 feet of the drill rig to 50 dBA.	During construction	City of Sacramento		
MITIGATION MEASURE N-3) All residences and other sensitive receptors within 1,000 feet of the drilling site shall be notified four weeks in advance. The information distributed shall include the following: <ul style="list-style-type: none"> • A brief description of the drilling and testing operations, the necessity for 24-hour drilling, and the proposed schedule for drilling and testing activities; and • A contact person and 24-hour contact telephone number for noise complaints. 	Prior to and during construction	City of Sacramento		



COMMUNITY DEVELOPMENT
DEPARTMENT

ENVIRONMENTAL PLANNING
SERVICES

CITY OF SACRAMENTO
CALIFORNIA

300 Richards Boulevard
Third Floor
Sacramento, CA 95811

MITIGATED NEGATIVE DECLARATION

REVISED APRIL 23, 2012

The City of Sacramento, California, a municipal corporation, does hereby prepare, declare, and publish this Mitigated Negative Declaration for the following described project:

Shasta Park Reservoir (X14005400) - The project includes the construction, operation and maintenance of a groundwater well and water reservoir on an approximately two-acre parcel east of Bruceville Road and north of Imagination Way in south Sacramento. The reservoir would have a capacity of approximately 4 million gallons. A groundwater well would be installed on the site, with a capacity of 2 million gallons per day, and an anticipated maximum withdrawal of approximately 2,200 acre-feet per year. A water treatment facility would be constructed with a capacity of 2 million gallons per day, and a pump station with a capacity of 15 million gallons per day. The pump station would pump water from the reservoir to users.

The project site is located on the north side of Imagination Parkway, approximately 1,275 900 feet west of SR-99 and directly east of the Cosumnes River College's Bruceville Road entrance in the South Sacramento Community Plan area. The site consists of a portion of Assessor's Parcel Number (APN) 117-0182-023 in the City of Sacramento, Sacramento County.

The Lead Agency is the City of Sacramento. The City of Sacramento, Community Development Department, has reviewed the proposed project and, on the basis of the whole record before it, has determined that there is no substantial evidence that the project, with mitigation measures as identified in the attached Initial Study, will have a significant effect on the environment. This Mitigated Negative Declaration reflects the lead agency's independent judgment and analysis. An Environmental Impact Report is not required pursuant to the Environmental Quality Act of 1970 (Sections 21000, et seq., Public Resources Code of the State of California).

This Mitigated Negative Declaration has been prepared pursuant to the California Environmental Quality Act (Public Resources Code Sections 21000 et seq.), CEQA Guidelines (Title 14, Sections 15000 et seq. of the California Code of Regulations), the Sacramento Local Environmental Regulations (Resolution 91-892) adopted by the City of Sacramento, and the Sacramento City Code.

A copy of this document and all supportive documentation may be reviewed or obtained at the City of Sacramento, Community Development Department, 300 Richards Boulevard, 3rd Floor, Sacramento, CA 95811 from 9:00 a.m. to 4:00 p.m. (or 8:00 a.m. to 5:00 p.m. with prior arrangement). The CDD is closed the first Friday of each month.

Environmental Services Manager, City of Sacramento,
California, a municipal corporation

By: De Bafar

Date: 4/23/2012

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Shasta Park Water Reservoir Project

(Z14005400)

REVISED INITIAL STUDY

ANTICIPATED SUBSEQUENT PROJECT IN THE 2030 GENERAL PLAN MASTER EIR

This Initial Study was prepared by the City of Sacramento, Community Development Department, 300 Richards Boulevard, Third Floor, Sacramento, CA 95811, pursuant to the California Environmental Quality Act (Public Resources Code Sections 21000 *et seq.*), CEQA Guidelines (Title 14, Section 15000 *et seq.* of the California Code of Regulations) and the Sacramento Local Environmental Regulations (Resolution 91-892) adopted by the City of Sacramento.

The Lead Agency is the City of Sacramento.

Organization of the Initial Study

This Initial Study is organized into the following sections:

SECTION I - BACKGROUND: Provides summary background information about the project name, location, sponsor, and the date this Initial Study was completed.

SECTION II - PROJECT DESCRIPTION: Includes a detailed description of the Proposed Project.

SECTION III - ENVIRONMENTAL CHECKLIST AND DISCUSSION: Reviews Proposed Project and states whether the project would have additional significant environmental effects (project-specific effects) that were not evaluated in the Master EIR for the 2030 General Plan.

SECTION IV - ENVIRONMENTAL FACTORS POTENTIALLY AFFECTED: Identifies which environmental factors were determined to have additional significant environmental effects.

SECTION V - DETERMINATION: States whether environmental effects associated with development of the Proposed Project are significant, and what, if any, added environmental documentation may be required.

REFERENCES CITED: Identifies source materials that have been consulted in the preparation of the Initial Study.

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Section I - Background

Project Name: Shasta Park Water Reservoir (Z14005400)

Project Location: The proposed project site is located approximately 1,275 900 feet west of SR-99 and directly east of the Cosumnes River College's Bruceville Road entrance in the South Sacramento Community Plan area. The site consists of a portion of Assessor's Parcel Number 117-0182-023.

Project Proponent: City of Sacramento

Project Planner: Brett Ewart, Associate Engineer, Department of Utilities; Phone: (916) 808-1725; Email: bewart@cityofsacramento.org

Environmental Planner: Scott Johnson, Associate Planner, Community Development Department; Phone: (916) 808-5842; Email: srjohnson@cityofsacramento.org

Date Initial Study Completed: April 7, 2011, Revised April 23, 2012

The City of Sacramento, Community Development Department, has reviewed the Proposed Project and, on the basis of the whole record before it, has determined that the Proposed Project is an anticipated subsequent project identified and described in the 2030 General Plan Master EIR and is consistent with the land use designation and the permissible densities and intensities of use for the project site as set forth in the 2030 General Plan. See CEQA Guidelines Section 15176 (b) and (d).

The City prepared the attached Initial Study to (a) review the discussions of cumulative impacts, growth inducing impacts, and irreversible significant effects in the 2030 General Plan Master EIR to determine their adequacy for the project (see CEQA Guidelines Section 15178(b),(c)) and (b) to identify any potential new or additional project-specific significant environmental effects that were not analyzed in the Master EIR and any mitigation measures or alternatives that may avoid or mitigate the identified effects to a level of insignificance, if any.

As part of the Master EIR process, the City is required to incorporate all feasible mitigation measures or feasible alternatives appropriate to the project as set forth in the Master EIR (CEQA Guidelines Section 15177(d)). The Master EIR mitigation measures that are identified as appropriate are set forth in the applicable technical sections below.

This analysis incorporates by reference the general discussion portions of the 2030 General Plan Master EIR. (CEQA Guidelines Section 15150(a)). The Master EIR is available for public review at the City of Sacramento, Community Development Department, 300 Richards Boulevard, Third Floor, Sacramento, CA 95811, and on the City's web site at:

www.cityofsacramento.org/dsd/planning/environmental-review/eirs/

The City is soliciting views of interested persons and agencies on the content of the environmental information presented in this document. Due to the time limits mandated by State law, your response must be sent at the earliest possible date, but no later than the 30-day review period ending May 12, 2011. Please send written responses to:

Scott Johnson, Associate Planner
City of Sacramento, Community Development Department
300 Richards Blvd, 3rd Floor
Sacramento, CA 95811
srjohnson@cityofsacramento.org
Direct Line: (916) 808-5842

Section II - Project Description

Introduction

The project includes the construction, operation and maintenance of a groundwater well and water reservoir on an approximately two-acre parcel east of Bruceville Road and north of Imagination Way in south Sacramento (see Figure 1, Vicinity Map and **Revised** Figure 2, Location Map). The reservoir would be constructed of either steel or reinforced concrete and would be approximately 160 feet in diameter with a height of 35 feet.

The reservoir would have a capacity of approximately 4 million gallons. A groundwater well would be installed on the site, with a capacity of 2 million gallons per day, and an anticipated **maximum** withdrawal of approximately **2 2,200** acre-feet per year. A water treatment facility would be constructed with a capacity of 2 million gallons per day, and a pump station with a capacity of 15 million gallons per day. The pump station would pump water from the reservoir to users.

The pumps and treatment plant would be powered with electricity, and an electrical control building would be constructed to house the electrical equipment.

The site would be improved with ~~a wall~~ **fencing** and planter ~~on~~ **along** the perimeter. See **Revised** Figure 3, Site Plan.

Project Background

The City obtains the majority of its water supply from two surface water sources (Sacramento and American rivers), with groundwater making up the balance of supply. Most of the City's water supply comes from surface water that is diverted 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 U.S. Department of the Interior, Bureau of Reclamation (Reclamation).

The City has historically constructed, expanded, and improved its water diversion, treatment, and transmission facilities as needed to accommodate increasing water supply demands. The City has planned for various system improvements to accommodate projected peak hour demands in the 2005 Water Distribution System Master Plan. Groundwater would be drawn from the Central Basin, treated and then stored on-site available for distribution as necessary. These improvements include construction of the proposed project.

The proposed project is consistent with both City and regional water planning efforts and the water rights held by the City. The goals, agreements, and implementation strategies for these efforts appear in various documents, several of which are discussed below.

City of Sacramento 2030 General Plan

In March 2009, the City adopted the 2030 General Plan. In compliance with the California Environmental Quality Act (CEQA), the City Council certified the Master Environmental Impact Report (Master EIR) for the 2030 General Plan as part of its approval of the 2030 General Plan. The 2030 General Plan establishes policies to accommodate the increase in level of development

anticipated to occur in Sacramento by 2030, including goals for developing water supply utilities. The Master EIR identifies and assesses the potential environmental impacts of implementing the overall 2030 General Plan. The Master EIR has evaluated the cumulative effects of operations and growth associated with the general plan, and the Master EIR references the City's 2005 Distribution Master Plan in its analysis. (Master EIR Public Utilities, Water Supply, page 6.11-2)

The proposed project components are consistent with the land use designation and permissible densities and intensities of use for the proposed project, as set forth in the 2030 General Plan. Consistent with the Master EIR, the City prepared this Initial Study (IS) to (1) review the discussions of cumulative impacts, growth inducing impacts, and irreversible significant effects in the Master EIR to determine their adequacy for the proposed project (see CEQA Guidelines Sections 15177 and 15178) and (2) to identify any potential new or additional project-specific significant environmental effects not analyzed in the Master EIR, and mitigation measures or alternatives, if any, that may avoid or mitigate the identified effects to a level of insignificance.

The 2030 General Plan and Master EIR are available at <http://www.sacgp.org/>. The City's web site includes information regarding City operations, programs and departments and may be viewed at www.cityofsacramento.org. This document is available on the Community Development web site at <http://www.sacgp.org/index.html>.

County of Sacramento Well Ordinance

City Code section 13.04.660 provides that the County of Sacramento's well ordinance applies within the City limits. The City would obtain a permit from the County of Sacramento, Environmental Management Department pursuant to Chapter 6.28 of the County Code to construct the proposed water well. The purpose of the County's well ordinance, and state law providing for such regulation, is to protect water supplies by ensuring the proper construction, operation and abandonment of water wells. See County Code section 16.28.000 and other provisions of the well ordinance.

Construction:

Construction of the well and reservoir would require approximately 9 to 14 months. Construction would occur during weekdays during normal business hours. Drilling activities for the water well may require 24-hour activities for approximately a week or two. Equipment for drilling activities would include a drilling rig, trailers (drilling equipment and monitoring trailer), and tanks to prevent drilling materials/mud from entering waterways. Construction of the proposed production well would consist of installing a conductor casing, drilling a borehole, constructing the well, development, and production testing. A conductor pipe, a large-diameter steel pipe, would be installed to about 50 feet below ground surface (bgs) to create a permanent seal into a clay layer. After the steel conductor pipe is placed in the hole, concrete would be injected around the pipe to complete the seal.

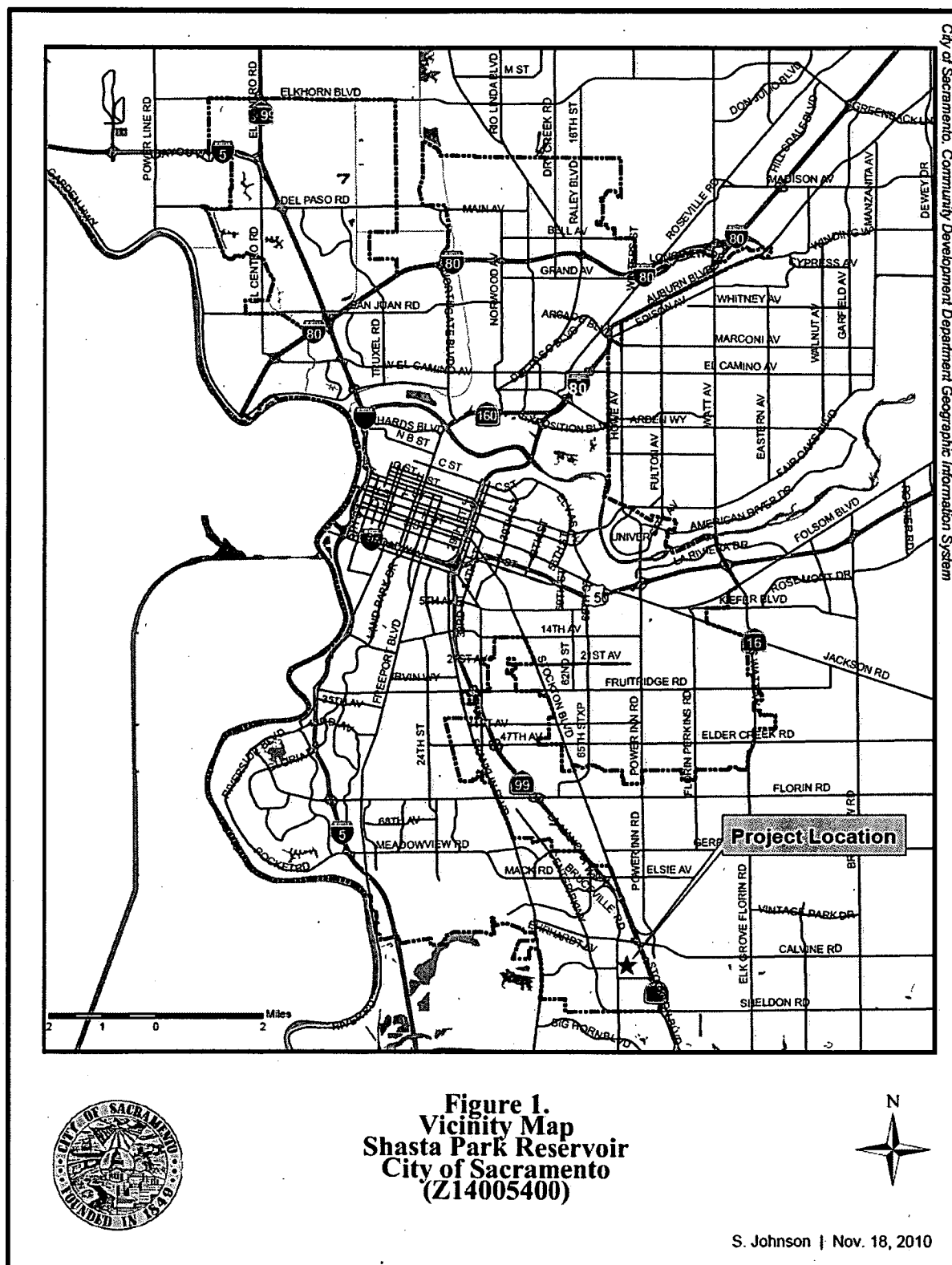
Initial earthwork would consist of clearing, grubbing, rough grading and excavation for foundation. Typical equipment used for these activities include possible use of a scraper and/or excavator, water truck for control of dust and moisture content of the soil, compaction equipment, and dump trucks.

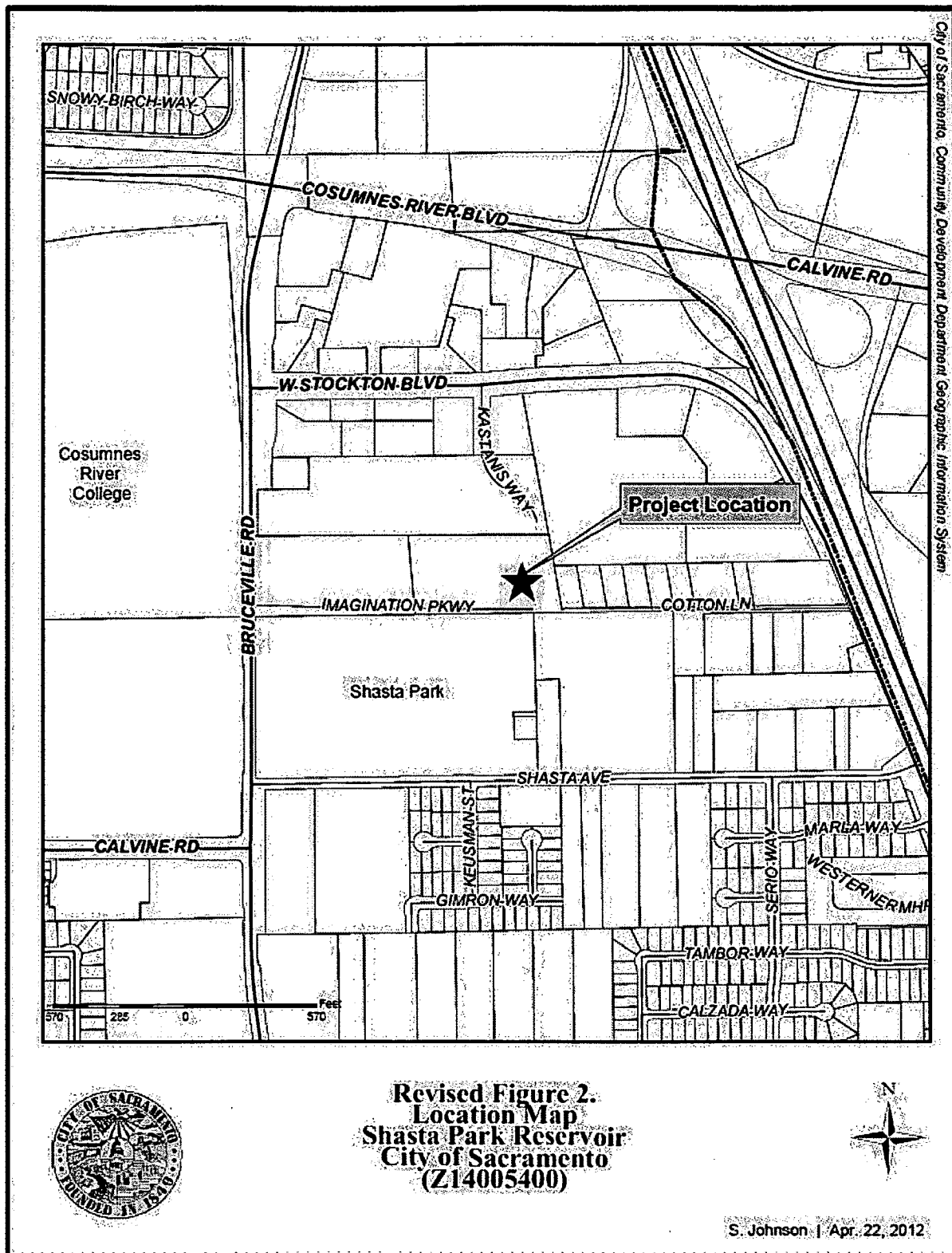
Construction of the reservoir would begin with installing potable water lines below ground at the location of the reservoir. The foundation of the reservoir would then be laid followed by reservoir wall construction. Once the walls are constructed, the reservoir will be wire wrapped (if the

concrete construction method is used) and the roof constructed. The pump and mechanical equipment would be installed followed by the construction of the pump station and control building. After the reservoir and associated mechanical pumping equipment are constructed and installed, the remaining site piping will be installed followed by paving and finishing site work including landscaping and wall/fence construction (wall/fence construction and some site paving may occur earlier in the process as warranted).

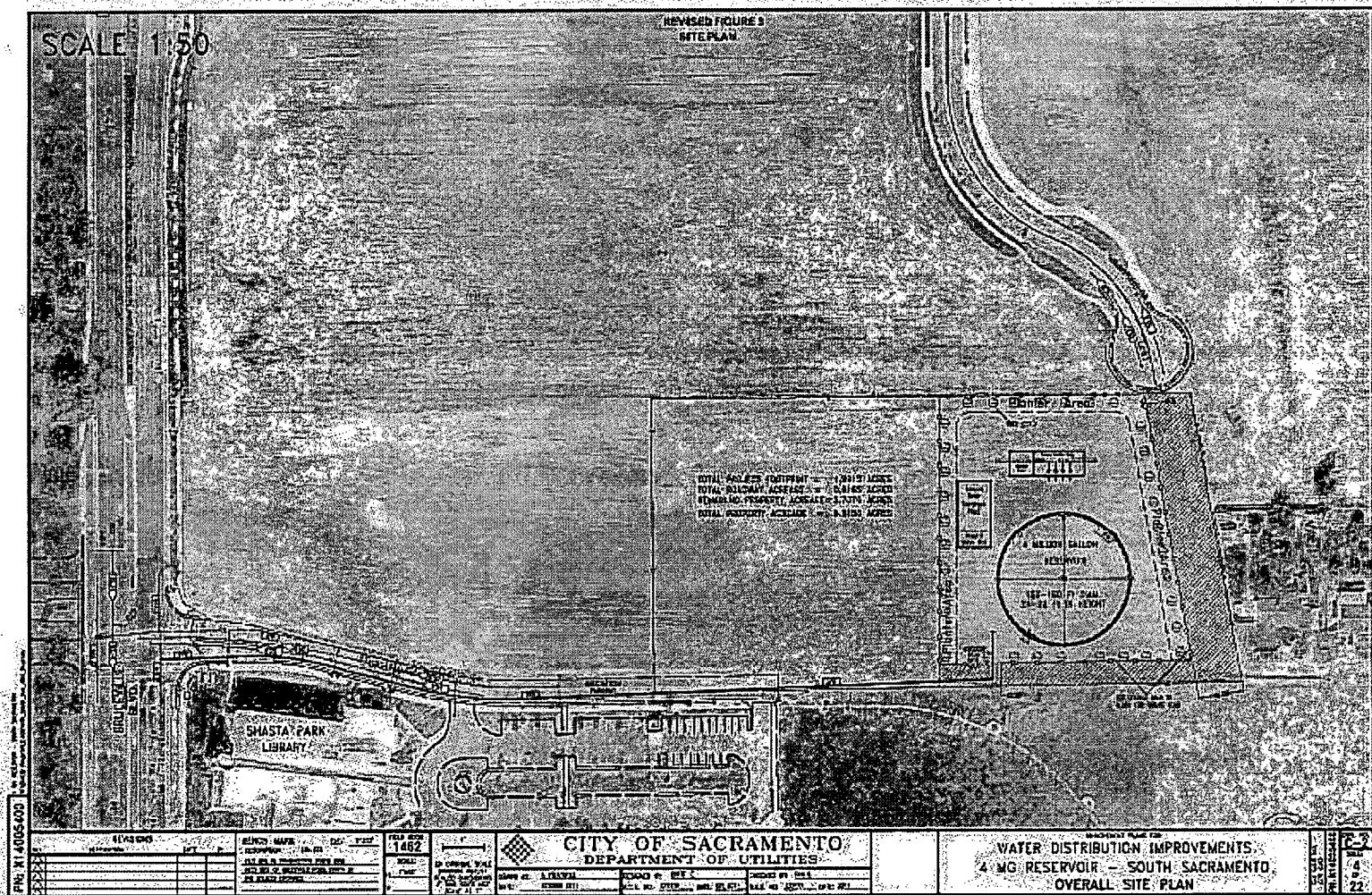
Operation and Maintenance:

Operation of the site would consist of mechanical activities used for pumping and treating water within the constructed and installed equipment on site. A back-up diesel generator would be onsite for emergency uses. Maintenance of the reservoir would require minimal activity. City reservoirs are visited on a regular basis by employees who inspect the grounds and examine the reservoir structure. None of the facilities or operations would require assignment of staff to the site.





REVISED FIGURE 3 SITE PLAN



Section III – Environmental Checklist and Discussion

LAND USE AND AGRICULTURAL RESOURCES

The General Plan of the City of Sacramento has assigned a land use designation of Medium Density Residential (MDR, 16-29 dwelling units per acre) for the subject site. The project site is located within the South Sacramento Community Plan Area, which has designated the site as Special Planning District. The Zoning Code designates a zoning of Multi-family Plan Review (R-2B-R) for the project site (Section 17.20.010). Construction and operation of City utilities would be deemed consistent with the land use designations for the project site.

The project site consists of a two-acre portion of a vacant parcel (APN: 117-0182-023). The site is primarily surrounded by vacant land that is proposed for development. There are existing rural single-family residential units to the east. The closest residence is located approximately 435 feet to the east. To the north of the site is the College Square Planned Unit Development, which is currently in the development stage of a mixture of land uses, including various commercial and medium to high density residential uses. To the south of the site is the proposed Shasta Park. The project site has historically been used for dry farming and is not currently in agricultural production.

In order to be considered as Prime Farmland or Farmland of Statewide Importance, the site must have been used for irrigated agricultural production at some time during the preceding four years, and the soil must meet designated physical and chemical criteria. According to the United States Department of Agriculture definition, Unique Farmland is land other than Prime Farmland that is used for the production of specific high-value food and fiber crops. The project site has historically been pastureland that at times supported dry land farming, but there are no records indicating that the land has been used for irrigated farming within the preceding four years. Since the project site does not qualify as Prime Farmland of Statewide Importance or Unique Farmland, there would be no adverse effect on farmland.

The construction and operation of a reservoir and groundwater well are uses consistent with the designation of the site in the 2030 General Plan (mixed uses) and the City's long-range plans for public safety and public services.

ENERGY

Once constructed, the operation of the well would consume approximately 950K KWH per year and the operation of the well would 710K KWH per year for a total energy consumption of 1.66 M KWH per year for the facility.

1. AIR QUALITY	Effect will be studied in the EIR	Effect can be mitigated to less than significant	No additional significant environmental effect
Would the Proposed Project:			X
A) Conflict with or obstruct implementation of the applicable air quality plan?			
B) Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard (including releasing emissions that exceed quantitative thresholds for ozone precursors)?			X
C) Exposure sensitive receptors to substantial pollutant concentrations?			X
D) Interfere with or impede the City's efforts to reduce greenhouse gas emissions?			X

Thresholds of Significance

For purposes of this Initial Study, air quality impacts may be considered significant if construction and/or implementation of the Proposed Project would result in the following impacts that remain significant after implementation of General Plan policies or mitigation from the General Plan MEIR:

- Construction emissions of NO_x above 85 pounds per day;
- Operational emissions of NO_x or ROG above 65 pounds per day;
- Violation of any air quality standard or contribute substantially to an existing or projected air quality violation;
- PM₁₀ concentrations equal to or greater than five percent of the State ambient air quality standard (i.e., 50 micrograms/cubic meter for 24 hours) in areas where there is evidence of existing or projected violations of this standard. However, if project emissions of NO_x and ROG are below the emission thresholds given above, then the project would not result in violations of the PM₁₀ ambient air quality standards;
- CO concentrations that exceed the 1-hour state ambient air quality standard (i.e., 20.0 ppm) or the 8-hour state ambient standard (i.e., 9.0 ppm); or
- Exposure of sensitive receptors to substantial pollutant concentrations.

Ambient air quality standards have not been established for toxic air contaminants (TAC). TAC exposure is deemed to be significant if:

TAC exposures create a risk of 10 in 1 million for stationary sources, or substantially increase the risk of exposure to TACs from mobile sources.

Answers to Checklist Questions

Question A and B

The proposed project would not generate air pollutants, such as smoke or dust, as part of normal operation. The small amount of traffic generated by construction or maintenance employees would not result in significant regional air quality impacts or "hot spots" at nearby intersections. Local roadways are not significantly impacted by vehicular traffic. The project is not expected to generate through traffic to significantly impact the air quality at roadway intersections in the area.

Air emissions during construction result from activities consisting of grading and excavation and the actual construction of the structures and improvements. Construction activities may cause the air quality to temporarily degrade during construction due to emissions from heavy construction equipment and ground disturbing activities. Emissions in the grading and excavation phase of construction are primarily associated with exhaust of heavy equipment and the dust that is generated through grading activities. Emissions from the described construction activity were calculated using the URBEMIS 2007, Version 9.2.4 program, and following the guidelines of the Sacramento Metropolitan Air Quality Management District (SMAQMD). It is estimated that site activities would generate approximately 54.10 pounds of NOx per day. These emissions fall below the threshold of significance for construction emissions. The SMAQMD Guidelines provide that if a project's NOx emissions from heavy-duty mobile sources are less than significant, as here, then the lead agency may assume that exhaust emissions of other pollutants from operation of equipment and worker commute vehicles are also less than significant.

Daily operation of the Shasta Reservoir and associated pump station and well will not create significant operational emissions.

Based on the analysis of site activities associated with construction of the Shasta Reservoir, both construction and operational emissions are less than significant.

Question C

Construction of the Shasta Reservoir will not create significant construction or operational emissions. The nearest residents are located approximately 435 feet to the east and there is a park to the south of the site. Water reservoirs and wells do not generate substantial emissions and will not expose sensitive receptors to substantial pollutant concentrations. This impact would be less than significant.

Question D

The City Council approved the 2030 General Plan on March 3, 2009. As part of its action, the City Council certified the Master Environmental Impact Report (Master EIR) that evaluated the environmental effects of development that is reasonably anticipated under the new general plan. The Master EIR includes extensive discussion of the potential effects of greenhouse gas emissions. The Master EIR discussions regarding climate change are incorporated here by reference. See, for example:

Draft EIR: 6.1 Air Quality (Page 6.1-1)

Final EIR: City Climate Change master Response (Page 4-1)

Errata No. 2: Climate Change (Page 12)

These documents are available at: www.cityofsacramento.org/dsd/planning/environmental-review/eirs/ and at the offices of the Community Development Department at 300 Richards Boulevard, Third Floor, Sacramento, California.

The proposed project is consistent with the land use designation for the project site. The project would result in the generation of greenhouse gases during construction and operation, as discussed below.

Short-term Construction Emissions

During construction of the project greenhouse gas emissions would be emitted from the operation of construction equipment and from worker and building supply vendor vehicles. The project area source and construction CO₂ emissions generated by the project would be approximately 110.8 metric tons per year, as modeled with the URBEMIS 2007, Version 9.2.4 program. These emissions would equate to approximately 0.000023 percent of the estimated GHG emissions for all sources in California (483 million metric tons) (CARB 2009). Construction would not exceed two years.

Long-term Operational Emissions

The major source of greenhouse gas emissions associated with the proposed project would be from energy use. CO₂ emissions make up the primary greenhouse gas. CO₂ emissions during operation of the project at full build-out would be approximately 444.5 metric tons, as estimated using the CO₂ Emissions Calculator for Electricity and Natural Gas by AECOM, which is based upon the California Climate Action Registry General Reporting Protocol Version 2.2, March 2007. These estimated emissions, which utilize SMUD's 2009 emission factors, equate to about 0.000092 percent of California's total emissions.

Buildings constructed as part of the project would be required to comply with current California building codes that enforce energy efficiency.

Ongoing Activities

The 2030 General Plan included direction to staff to prepare a Climate Action Plan for the City. Staff has continued work on this plan since adoption of the 2030 General Plan. The Climate Action Plan will provide additional guidance for the City's ongoing efforts to reduce greenhouse gas emissions. The Climate Action Plan is scheduled for completion in 2011.

Action continues at the state and federal level to combat climate change. In December 2009 the Environmental Protection Agency listed greenhouse gases as harmful emissions under the Clean Air Act. This action could eventually result in regulations that would have as their purpose the reduction of such emissions.

The Master EIR concluded that greenhouse gas emissions that could be emitted by development that is consistent with the 2030 General Plan would be cumulatively considerable and unavoidable (Errata No. 2, Page 12). The Master EIR includes a full analysis of greenhouse gas emissions and climate change, and adequately addresses these issues.

The project is consistent with the City's goals as set forth in the 2030 General Plan and MEIR relating to reduction of greenhouse gas emissions. The project would not impede the City's efforts to comply with AB32 requirements. The project would not have any significant additional environmental effects relating to greenhouse gas emissions or climate change.

Finding

The proposed project would have no additional project-specific environmental effects relating to air quality.

2. BIOLOGICAL RESOURCES	Effect will be studied in the EIR	Effect can be mitigated to less than significant	No additional significant environmental effect
Would the Proposed Project:			
A) Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Game or U.S. Fish and Wildlife Service?		X	
B) Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations or by the California Department of Fish and Game or U.S. Fish and Wildlife Service?			X
C) Have substantial adverse effect on federally protected wetlands as defined by Section 404 of the Clean Water Act (including, but not limited to marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?			X
D) Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites?			X
E) Conflict with any local policies or ordinances protecting biological resources such as a tree preservation policy or ordinance?			X
F) Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community conservation Plan, or other approved local, regional, or state habitat conservation plan?			X

Background

A Biological Resource Assessment of the Parkway at Cosumnes project site, including the proposed reservoir site, was performed in 2004 to determine whether any special status plant or wildlife species were present on the site. This was followed up by a Preliminary Biological Constraints Analysis for a ±10.6-acre Bruceville Road Parcels (APN: 117-0182-022 and 117-0182-023) by Foothill Associates in January 2007. The purpose of this analysis was to update the initial 2004 report and to determine whether any special status plants or wildlife species or sensitive habitats, such as wetlands, are located on the subject site.

The project site consists of disturbed non-native annual grassland. The site is bordered by annual grassland and new commercial construction to the north, single-family residential areas and annual grassland to the east, the recently developed Shasta Park to the south, and Bruceville Road and Cosumnes River College to the west. The site is regularly disked for weed/fire suppression. The site's elevation is approximately 25 feet above mean sea level.

Special Status Species Evaluation

The special status species evaluation considers those species identified as having relative scarcity and/or declining populations by the United States Fish and Wildlife Service (USFWS) or California Department of Fish and Game (CDFG). Special status species include those formally listed as threatened or endangered, those proposed for formal listing, candidates for federal listing, and those classified as Species of Concern by USFWS or Species of Special Concern by CDFG. Species considered to be "special animals" or "fully protected" by the CDFG or rare, threatened, or endangered in California by the California Native Plant Society (CNPS) were also included in the evaluation.

Regulatory Setting

The following city, State, and federal statutes pertain to the proposed project:

- National Environmental Policy Act (42 USC 4321 et seq.)
- Federal Endangered Species Act (16 USC 1531-1543)
- Section 404 of the Clean Water Act (33 USC 1251-1376)
- Section 10 of the Rivers and Harbors Act (33 USC 401 et seq.)
- Fish and Wildlife Coordination Act (16 USC 661-666)
- Executive Order 11990, Protection of Wetlands (May 24, 1977)
- Migratory Bird Treaty Act of 1918 (16 USC 703-711)
- California Environmental Quality Act (PRC 21000 et seq.)
- California Endangered Species Act (California Fish and Game Code 2050 et seq.)
- Native Plant Protection Act (California Fish and Game Code 1900-1913)
- City of Sacramento Heritage Tree Ordinance (SCC Section 12.64.10-12.64.70)
- City of Sacramento Street Tree Ordinance (SCC Section 12.56.10-12.56.170)

Federal Endangered Species Act

The Federal Endangered Species Act defines 'take' (Section 9) and prohibits 'taking' of a listed endangered or threatened species (16 U.S.C. 1532, 50 CFR 17.3). If a federally listed species could be harmed by a project, Section 7 or 10 consultations must be initiated, and an Incidental Take Permit must be obtained (16 U.S.C. 1539, 50 CFR 13).

Federal Migratory Bird Treaty Act

Migratory birds are protected under the federal Migratory Bird Treaty Act (MBTA) of 1918 (16 U.S.C. 703-711). The MBTA makes it unlawful to take, possess, buy, sell, purchase, or barter any migratory bird listed in 50 CFR Part 10 including feathers or other parts, nests, eggs, or products, except as allowed by implementing regulations (50 CFR 21). All migratory bird species are protected by the MBTA. Any removal of active nests during the breeding season or any disturbance that results in the abandonment of nestlings is considered a 'take' of the species under federal law.

Thresholds of Significance

For the purposes of this Initial Study, an impact is considered significant if construction and/or implementation of the project would result in the following impacts that remain significant after implementation of General Plan policies or mitigation from the General Plan MEIR:

- Creation of a potential health hazard, or use, production or disposal of materials that would pose a hazard to plant or animal populations in the area affected;
- Substantial degradation of the quality of the environment, reduction of the habitat, reduction of population below self-sustaining levels of threatened or endangered species of plant or animal; or
- Affect other species of special concern to agencies or natural resource organizations (such as regulatory waters and wetlands).

"Special-status" is defined as species that are:

- Listed as endangered or threatened under the federal Endangered Species Act (or formally proposed for, or candidates for, listing);
- Listed as endangered or threatened under the California Endangered Species Act (or proposed for listing);
- Designated as endangered or rare, pursuant to California Fish and Game Code (Section 1901);
- Designated as fully protected, pursuant to California Fish and Game Code (Section 3511, 4700, or 5050);
- Designated as species of concern by U.S. Fish and Wildlife Service (USFWS), or as species of special concern to California Department of Fish and Game (CDFG);
- Plants or animals that meet the definition of rare or endangered under the California Environmental Quality Act (CEQA).

Answers to Checklist Questions

Question A, D-F

A number of special status raptors including Swainson's hawk and burrowing owl would have a reasonable potential for occurring in the study area based on the presence of suitable foraging habitat. There are no trees located on the subject site and therefore, nesting of raptors species is very unlikely.

The proposed project site consists of approximately 2 acres of vacant land dominated by annual grassland species. As stated above the project area has been recently disked and was disturbed during the construction of Shasta Park and Imagination Way. The site is undeveloped and was historically farmland. The site is now fallow and plant species include non-native grassland species.

During the site visit in January of 2007 by Foothill Associates, no wildlife was observed at the site. However, review of the California Department of Fish & Game (DFG) California Natural Diversity Data Base (CNDDB) also identified historic occurrences of burrowing owls (*Athene cunicularia*)

northwest of the site at the Cosumnes River College Campus. Based, on the historic documentation of burrowing owls in the area, the project site could provide habitat for burrowing owls. Even though no owls were observed at the site during the site visit, owls could inhabit the area prior to development of the site, which could result in potential impacts to this species. The mitigation measures listed below will ensure that potential impacts to burrowing owls are less-than-significant.

Swainson's hawk (*Buteo swainsoni*) is a tree-nesting species known to nest in the area. Swainson's nesting activity has been documented within approximately two to three miles of the study area during the 2002 breeding season according to the California Natural Diversity Database (CNDDDB). Although some of the nest trees might have since been displaced by development or are no longer active, it is reasonable to assume that Swainson's hawks are actively nesting in the region.

Development of the proposed project site would remove potential foraging habitat for Swainson's hawk and foraging/nesting habitat of burrowing owl. The City of Sacramento requires mitigation for impacts to Swainson's hawk foraging habitat within ten miles of an active nest. Loss of foraging habitat is considered a potentially significant impact unless mitigated.

Construction and operation of the proposed facilities would not interfere with the movement of any protected species. No trees would be removed, and no habitat conservation plan or other conservation plan affects the project site.

Question B & C

The United States Army Corps of Engineers (Corps) and the United States Environmental Protection Agency regulate the discharge of dredge and fill material into "waters of the United States" under Section 404 of the Clean Water Act.

Wetlands are defined for regulatory purposes as "those areas that are inundated or saturated by surface or groundwater at a frequency and duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions." Wetlands generally include swamps, marshes, bogs, and similar areas (33 CFR 328.3, 40 CFR 230.3). Wetlands also include less conspicuous wetland types such as vernal pools and other seasonal wetlands. The Corps will typically take jurisdiction over the portion of a project study area that contains waters of the United States and adjacent wetlands.

The site does not contain any wetland features. There are scattered weak wetland indicator plant species throughout the site vicinity such as curly dock (*Rumex crispus*), English plantain (*Plantago lanceolata*), and Mediterranean barley (*Hordeum marinum*). However, these plants species are not associated with any wetland hydrology such as depressions or riverine features with a defined bed and bank. The site has been repeatedly tilled and leveled and this process has removed any significant topography that would support significant ponding of water. Based on these observations, there are no waters of the U.S. or other wetland features on the site that would be subject to U.S. Army Corps of Engineers jurisdiction. No riparian habitat occurs on the project site.

Mitigation Measures

Implementation of the following measures would reduce the impact to a less-than-significant level.

- BR-1a) If construction or grading is scheduled during February to September, a pre-construction survey shall be conducted and prepared by a qualified biologist within thirty (30) days prior to the start of any grading or construction activities to determine the presence of any special status species or species of special concern (nesting burrowing owls).
- b) If an adults-only active burrowing owl burrow(s) nest is discovered during the pre-construction survey the monitoring biologist shall install a one-way door on the burrow(s) and monitor and inspect per DFG guidelines. If an active nest with chicks is encountered, one-way doors shall not be used unless authorized by DFG in writing. No construction shall occur near the nest until the monitoring biologist has consulted with the DFG on allowing construction to proceed. The monitoring biologist shall, through consultations with DFG, determine an appropriate buffer between the nest and any construction activity allowed to proceed on the project site prior to the fledging of the chicks. No construction or grading activities shall begin until the monitoring biologist has submitted a written clearance to the Department of Development Services that the burrowing owl(s) have vacated or been safely relocated by the monitoring biologist. After active burrows are vacated, the burrow must be destroyed completely by the monitoring biologist prior to grading or construction activity.
- BR-2) Prior to the issuance of grading permits, the project applicant shall preserve an equal amount of suitable raptor foraging habitat, at a 1:1 ratio. Suitable foraging habitat includes fallow land, alfalfa or other low growing crops. Preservation shall occur through the purchase of credits at a CDFG-approved mitigation bank which has the project within its service area, or through the purchase of conservation easements or fee title of lands with suitable foraging habitat no further than a ten (10) mile radius of the perimeter of the project site, or through any combination of the foregoing. Any habitat identified by the applicant shall be evaluated using the following five criteria in consultation with the CDFG:
- i. Does the mitigation parcel provide suitable foraging habitat?
 - ii. Is the parcel located in close proximity to the impacted foraging habitat?
 - iii. Is the parcel adjacent to other protected habitat thereby contributing to a larger habitat preserve?
 - iv. Is the parcel outside of areas identified for urban growth?

A mitigation plan shall be established and submitted to the City for approval prior to the issuance of grading permits and, at a minimum, shall include confirmation of title and encumbrances, details on mitigation site location, development, maintenance and monitoring. Any easements shall be in compliance with Government Code Section 65965. Land and easements shall be approved by the City in consultation with CDFG.

Finding

With implementation of the identified mitigation measures any additional significant environmental effects would be reduced to a less-than-significant level.

3. CULTURAL AND HISTORIC RESOURCES	Effect will be studied in the EIR	Effect can be mitigated to less than significant	No additional significant environmental effect
Would the Proposed Project:			
A) Cause a substantial adverse change in the significance of a historical resource as defined in Section 15064.5?			X
B) Cause a substantial adverse change in the significance of an archaeological resource pursuant to Section 15064.5?		X	
C) Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?			X

Background

The project site is not in an area identified as having high sensitivity for archaeological resources. (Master EIR, Figure 6.4-1) High sensitivity areas are those most sensitive to urban development due to the potential presence of cultural resources. These areas include areas along the Sacramento and American Rivers, North Natomas, portions of North Sacramento which lie north of I-80 along drainage courses, the American River floodplain, the southwest portion of South Natomas, the Florin Road vicinity, and the unsurveyed drainage ditches of South Sacramento.

Summary of Analysis under the 2030 General Plan Master EIR, Including Cumulative Impacts, Growth Inducing Impacts, and Irreversible Significant Effects

Impacts 6.4-2 and 6.4-4 in the Master EIR identified cumulative effects on archaeological resources resulting from implementation of the 2030 General Plan as significant and unavoidable. The Master EIR identified development in high sensitivity areas, especially along the rivers and downtown, as areas in which such impacts would predominate.

Policies HCR 2.2 and HCR 23.1.15 in the 2030 General Plan are in place to protect archaeological resources by requiring surveys, research and testing prior to excavation in high sensitivity areas and the proper handling of discovered resources and enforcement of applicable laws and regulations. The project site is not in an identified highly sensitive area.

The Master EIR references the requirements of California Health and Safety Code section 7050.5(b) relating to procedures to be followed in the event human remains are discovered.

Thresholds of Significance

For purposes of this Initial Study, impacts to cultural and/or historic resources may be considered significant if construction and/or implementation of the Proposed Project would result in the following impacts that remain significant after implementation of General Plan policies or mitigation from the General Plan MEIR:

- Cause a substantial change in the significance of a historical or archaeological resource as defined in CEQA Guidelines Section 15064.5 or
- Directly or indirectly destroy a unique paleontological resource

Answers to Checklist Questions

Questions A-E

There are no structures located on the project site. While the project site is not located in a high sensitivity area for cultural or historical resources, construction of the project could result in the discovery of previously unidentified cultural or historical resources. The City has committed to limiting potential impacts by incorporating specific mitigation measures. Without mitigation, the impact would be considered potentially significant.

Because unknown archaeological or historic resources may be discovered as part of any excavation, there is a project-specific impact. The mitigation identified below establishes procedures for responding to such discoveries during construction. Implementation would reduce any project-specific effects to a less-than-significant level.

Mitigation Measures

Implementation of the following mitigation measures during construction would ensure that the impact would be reduced to a less-than-significant level.

CR-1a) In the event that any prehistoric subsurface archeological features or deposits, including locally darkened soil ("midden"), that could conceal cultural deposits, animal bone, obsidian and/or mortars are discovered during construction-related earth-moving activities, all work within 50 meters of the resources shall be halted, and the City shall consult with a qualified archeologist to assess the significance of the find. Archeological test excavations shall be conducted by a qualified archeologist to aid in determining the nature and integrity of the find. If the find is determined to be significant by the qualified archeologist, representatives of the City and the qualified archeologist shall coordinate to determine the appropriate course of action. All significant cultural materials recovered shall be subject to scientific analysis and professional museum curation. In addition, a report shall be prepared by the qualified archeologist according to current professional standards.

- b) If a Native American site is discovered, the evaluation process shall include consultation with the appropriate Native American representatives.

If Native American archeological, ethnographic, or spiritual resources are involved, all identification and treatment shall be conducted by qualified archeologists, who are certified by the Society of Professional Archeologists (SOPA) and/or meet the federal standards as stated in the Code of Federal Regulations (36 CFR 61), and Native American representatives, who are approved by the local Native American community as scholars of the cultural traditions.

In the event that no such Native American is available, persons who represent tribal governments and/or organizations in the locale in which resources could be affected shall be consulted. If historic archeological sites are involved, all identified treatment is

to be carried out by qualified historical archeologists, who shall meet either Register of Professional Archeologists (RPA), or 36 CFR 61 requirements.

- CR-2 If a human bone or bone of unknown origin is found during construction, all work shall stop in the vicinity of the find and the County Coroner shall be contacted immediately. If the remains are determined to be Native American, the coroner shall notify the Native American Heritage Commission, who shall notify the person most likely believed to be a descendant. The most likely descendant shall work with the contractor to develop a program for re-interment of the human remains and any associated artifacts. No additional work is to take place within the immediate vicinity of the find until the identified appropriate actions have taken place.

Finding

The proposed project would have project-specific additional significant environmental effects for cultural resources not previously examined in the Master EIR. The identified mitigation measures would reduce any project-specific effects to a less-than-significant level.

4.GEOLOGY AND SOILS	Effect will be studied in the EIR	Effect can be mitigated to less than significant	No additional significant environmental effect
Would the Proposed Project:			
A)Expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving strong seismic ground shaking or seismic-related ground failure, including liquefaction?			X
B) Result in substantial soil erosion or the loss of topsoil?			X
C) Be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction or collapse?			X
D) Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial risks to life or property?			X

Thresholds of Significance

For purposes of this Initial Study, impacts from geologic or soil conditions may be considered significant if construction and/or implementation of the Proposed Project would result in the following impact that remains significant after implementation of General Plan policies or mitigation from the General Plan MEIR:

A project built that will either introduce geologic or seismic hazards by allowing the construction of the project on such a site without protection against those hazards.

Answers to Checklist Questions

Question A

Cities in California are required to consider seismic safety as part of the General Plan Health and Safety element. The inclusion of seismic considerations in the General Plan serves to establish policies that help protect lives and property from seismic and geologic activity or unstable soil conditions. As part of the process of complying with Uniform Building Code (UBC) requirements, geotechnical engineering reports are required to assess site-specific conditions. The application of regulatory requirements minimizes the potential for significant geologic, soils, or seismic impacts.

A geotechnical investigation report for the project site was prepared on December 22, 2006 by Soil Search Engineering (SSE). Review of the 1997 UBC indicates that the site is located within Seismic Zone 3 and a site coefficient of S_D would be appropriate for seismic analysis of the site." The site is not within a current Alquist-Priolo Special Study Zone. Because the project is required to comply with regulatory requirements, seismic hazards are less than significant.

Question B-D

Preliminary findings of the SSE report detailed potential issues with plasticity and soil expansion potential, and pavement subgrade quality. While issues have been identified on the project site, the report suggests the site is suitable for the proposed project as long as proper engineering practices are followed for preparation of the soil (excavation and removing of the existing soil and importing and proper use of engineered fill). Regulatory building requirements would ensure further geotechnical investigation and adherence to appropriate construction standards; therefore, the impact is less than significant.

The SSE report indicated that no free groundwater was encountered below the existing ground elevation in the exploratory test holes at the time of drilling. State regulations and standards related to geotechnical considerations are reflected in the Sacramento City Code. Construction and design would be required to comply with the latest City-adopted code at the time of construction, including the Uniform Building Code. The code would require construction and design of buildings to meet standards that would reduce risks associated with subsidence or liquefaction. Any dewatering activities associated with the proposed project must comply with application requirements established by the Central Valley Regional Water Quality Control Board (RWQCB) to ensure that such activities would not result in substantial changes in groundwater flow or quality. Compliance with the RWQCB requirements would ensure a less than significant impact and no mitigation is required.

Finding

The proposed project would not have any project-specific additional significant environmental effects for geology and soils not previously examined in the Master EIR, and no new mitigation measures or alternatives are required.

5. HAZARDS AND HAZARDOUS MATERIALS	Effect will be studied in the EIR	Effect can be mitigated to less than significant	No additional significant environmental effect
Would the Proposed Project:			
A) Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?			X
B) Create a significant hazard to the public or environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment?			X
C) Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?			X
D) Be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment?			X
E) Result in a safety hazard for people residing or working in the project area, for a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport, or public use airport?			X

Background

The site is currently vacant. The property has been periodically disked for weed abatement. Based on a review of aerial photos, it appears that historically there was a structure located on the southwestern corner of the site, but the structure had been removed years ago. No odoriferous soils or stressed vegetation were observed on the surface of the property and no evidence of hazardous materials contamination was found on the project site during a site visit.

Goals and policies have been developed by the County of Sacramento concerning the management of hazardous substances to protect human health and the environment (Sacramento County Hazardous Waste Management Plan, 1988; 1986 to 2006 General Plan for Sacramento, 1987). These goals and policies are in conformance with the Cal/OSHA, Cal EPA, and Office of Emergency Services requirements and apply to the proposed project.

Thresholds of Significance

For purposes of this Initial Study, impacts due to hazards or hazardous materials may be considered significant if construction and/or implementation of the Proposed Project would result in the following impacts that remain significant after implementation of General Plan policies or

mitigation from the General Plan MEIR:

- Expose people (e.g., residents, pedestrians, construction workers) to existing contaminated soil during construction activities;
- Expose people (e.g., residents, pedestrians, construction workers) to asbestos-containing materials or other hazardous materials; or
- Expose people (e.g., residents, pedestrians, construction workers) to existing contaminated groundwater during dewatering activities.

Answers to Checklist Questions

Question A

The site is not listed on the most current County of Sacramento Toxic Site Cleanup Report, which lists sites where unauthorized releases of potentially hazardous materials have occurred.

Question B

The proposed site plan would be reviewed for adequacy by the Fire Department. Recommendations by the department would be incorporated into site design. Construction traffic from the development of the proposed project would not be anticipated to block roads or interfere with emergency plans due to the implementation of a traffic control plan during construction. In addition, project operational traffic would not interfere with any emergency routes or evacuation plans. The impact would be considered less than significant.

Question C

The project would construct and operate a water reservoir, groundwater well and treatment facility, and booster pumping station. None of these require storage of hazardous materials. If needed, groundwater treatment facilities which may include treatment for Iron, Manganese, Arsenic and/or gasses. The project would not result in the creation or exposure of any health hazard or potential health hazard. The impact would be considered less than significant.

Question D

The subject property is presently vacant and shows no evidence of having contained aboveground or underground motor fuel storage tanks, oil/water separators, repair garages, hydraulic lifts or dry cleaning facilities; and no known regional hazardous material impairments to ground water quality beneath or within one-quarter mile of the subject property were identified. Any septic system and associated leach fields and/or dry wells would be abandoned in accordance with local ordinances and the recommendations of a qualified geotechnical engineer and if necessary, wells be properly destroyed – this procedure requires a well abandonment permit from the Sacramento County Department of Environmental Management. If necessary, removal of any septic system and/or well would necessitate permits, essentially ensuring that appropriate measures would be implemented. Since these practices would be enforced through existing laws and regulations and the subject site has no record or evidence of containing hazardous materials, the impact would be considered less than significant.

Question E

The majority of the site consists of disturbed grassland. Absent development, the fire hazard would increase due to continuing vegetative growth on the vacant parcels. Development of the project site would eliminate the growth of on-site fire-prone vegetation, thereby reducing the fire hazard. In addition, fire extinguishers would be required onsite during all construction activities. Since development would serve to decrease the fire hazard, impacts associated with fire hazards would be considered less than significant.

Finding

The proposed project would not have any project-specific additional significant environmental effects for hazards not previously examined in the Master EIR, and no new mitigation measures or alternatives are required.

6. HYDROLOGY AND WATER QUALITY	Effect will be studied in the EIR	Effect can be mitigated to less than significant	No additional significant environmental effect
Would the Proposed Project:			
A) Violate any water quality standards or waste or discharge requirements?			X
B) Substantially deplete groundwater supplies or interfere substantially with groundwater recharge such that there would be a net deficit in aquifer volume or lowering of the local groundwater table level (e.g., the production rate of pre-existing nearby wells would drop to level which would not support existing land uses or planned uses for which permits have been granted)?			X
C) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, or substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or off-site?			X
D) Create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff?			X
E) Otherwise substantially degrade water quality?			X
G) Place within a 100-year flood hazard area structures which would impede or redirect flood flows?			X
H) Expose people or structures to a significant risk of loss, injury or death involving flooding, including flooding as a result of the failure of a levee or dam?			X

Background

The City obtains the majority of its water supply from two surface water sources (the Sacramento and American rivers), with groundwater making up the balance of supply. Most of the City's water supply comes from surface water that is diverted 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 U.S. Bureau of Reclamation.

The groundwater basin underlying Sacramento County is divided into three subbasins: North American, Central, and South American. The North American Subbasin lies south of the Bear River, east of the Feather River, and north of the American River. The general direction of drainage in the sub-basin is west-southwest. The Central Basin lies south of the American River and is part of the South American Subbasin, which is bounded on the west by the Sacramento River, on the north by the American River, on the south by the Cosumnes and Mokelumne rivers, and on the east by the Sierra Nevada Range. These rivers act as major sources of recharge for the groundwater basins in the county.

Surface water and groundwater has been the subject of much ongoing discussion and planning in Sacramento County. The Water Forum, which began with discussions in 1993 and adoption of the Water Forum Agreement in 2000, was a consensus process that included agreements among the various stakeholders on water issues regarding water use and facilities. The Water Forum Agreement included planning for both surface water and groundwater supplies. The Water Forum documents, including the Water Forum Agreement and environmental impact report, are available online at <http://www.waterforum.org/documents.cfm>.

One of the seven elements in the Water Forum Agreement is groundwater management. Implementation of this element includes adherence to long-term average annual pumping limits that are tied to sustainable yields for each of the three basins: 131,000 acre-feet for the North American Subbasin, 273,000 acre-feet for the Central Basin, and 115,000 acre-feet for the South American Subbasin.

The Water Forum Agreement also included commitment to the Water Forum Successor Effort; the formation of two groundwater management agencies was one of the results. The Central Sacramento County Groundwater Management Plan was completed in 2006, and a joint powers authority was formed by the cities of Elk Grove, Folsom, Rancho Cordova, and Sacramento, and the County of Sacramento, to implement the plan. A Board of Directors meets monthly as part of the implementation process. (See <http://www.scgah2o.org/> for information regarding the plan.) The Water Forum also led to the establishment of the Sacramento Groundwater Authority (SGA), which adopted a groundwater management plan for the North American Subbasin. (See <http://www.sgah2o.org/sga/programs/groundwater/> for information regarding the implementation effort.)

The City maintains 27 groundwater wells for potable use; 25 wells in the North American Subbasin and 2 wells in the South American Subbasin. Total capacity of the wells is 20 million gallons per day (mgd), or up to 22,400 acre-feet per year. The wells pump primarily from the North American Subbasin, with two active drinking water wells pumping from the South American Subbasin. As described in the project description, the Shasta Park Reservoir Project is located in the southern portion of the City of Sacramento, in the South American Subbasin. The Laguna Formation is one of the fresh-water-bearing aquifers in the region and consists of interbedded layers of sand, gravel, silt, and clay. California Department of Water Resources (DWR) reported that the specific yield of older alluvium, such as the Laguna Formation, is approximately 7 percent. Previous reports indicate that alluvial fan sediments of the Laguna Formation have been the interval through which nearby production wells in this area are drawing groundwater.

Groundwater levels in the South American Subbasin generally experienced declines from the mid-1960s to about 1980 and from 1987 through 1995. Groundwater levels partially or fully recovered between these drought periods and generally recovered to higher levels by 2000 than after the prior drought period. The most recent groundwater elevation maps available through the County of Sacramento's Web site indicate that the groundwater elevations in the vicinity of the proposed location for the new production well ranged between 20 and 30 feet below mean sea level (msl) in spring 2007 and between 30 and 40 feet below msl in fall 2007. In a previous report, Sacramento County Water Agency (SCWA) wells with well casing perforations or a screened interval in the Laguna Formation experienced groundwater elevations ranging between 30 feet to more than 70 feet below msl or depths to groundwater ranging from 78 to 108 feet below ground surface (Luhdorff and Scalmanini Consulting Engineers, 1998).

City of Sacramento 2030 General Plan

The 2030 General Plan was adopted in March 2009, and included the following policies directly relevant to the proposed project:

UTILITIES (U)

Citywide Utilities

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 the infrastructure necessary to provide these City services.

U 1.1.3 Sustainable Facilities and Services. The City shall continue to provide sustainable utility services and infrastructure in a cost-efficient manner.

U 1.1.12 Impacts to Environmentally Sensitive Lands. The City shall locate and design utilities to avoid or minimize impacts to environmentally sensitive areas and habitats.

WATER SYSTEMS

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 2.1.2 Optimize Capacity. The City shall optimize storage, treatment, and distribution capacity of its water system.

U 2.1.3 Water Treatment Capacity and Infrastructure. The City shall plan, secure funding for, and procure sufficient water treatment capacity and infrastructure to meet projected water demands.

The City has historically constructed, expanded, and improved its water diversion, treatment, and transmission facilities, as needed, to accommodate increasing water supply demands. The City has planned for system improvements in the 2005 Water Distribution System Master Plan that would accommodate the City's peak hour demands. These improvements include construction of the proposed project.

Groundwater Quality

Previous reports indicate that groundwater quality in the vicinity of the new production well is potentially impaired with concentrations of arsenic and manganese increasing with depth. The

Laguna and Riverbank formations have been described as the most widely targeted formations in the region because they are largely above the oxidized-reduced boundary, and generally avoid water quality problems associated with the iron and manganese at greater depths (Luhdorff and Scalmanini Consulting Engineers, 1998). In a more recent report, geologic cross-sections drawn through the vicinity of the new production well site indicate that arsenic concentrations were greatest at one of California American Water Company's Wells, approximately 1 to 1.5 miles northeast (Wood Rogers, 2010). The City's two production wells, located approximately one to one and a half miles to the northwest have acceptable concentrations of arsenic.

A previous report indicated that manganese concentrations in some wells in the western portion Sacramento County Water Agency's (SCWA) Laguna well field, more than 2 miles south of the City's new production well site, exceeded maximum contaminant levels for secondary drinking water standards (Luhdorff and Scalmanini Consulting Engineers, 1998). A geologic cross-section drawn through the vicinity of the new production well site indicates that manganese concentrations were acceptable in nearby production wells, approximately 1 mile from the new production well site, at depths less than approximately 250 to 300 feet below msl (Wood Rogers, 2010).

Thresholds of Significance

For purposes of this Initial Study, impacts to hydrology and water quality may be considered significant if construction and/or implementation of the proposed project would result in the following impacts that remain significant after implementation of General Plan policies or mitigation from the General Plan MEIR:

- Substantially degrade water quality and violate any water quality objectives set by the State Water Resources Control Board, due to increases in sediments and other contaminants generated by construction and/or development of the Specific Plan or
- Substantially increase the exposure of people and/or property to the risk of injury and damage in the event of a 100-year flood.

Answers to Checklist Questions

Question A

The proposed project site is level and would be developed with impervious surfaces and landscaping. The proposed project would result in the covering of approximately 2 acres of vacant land with utility infrastructure uses. Development with impervious surfaces would increase runoff and absorption rates. Runoff from the project site would be directed to the existing storm drain system. The additional flows to the existing system would not be substantial when compared to existing flows, and the storm drain system would be adequate to handle the anticipated flows.

The proposed project would not violate any waste discharge practices and would be consistent with the goal of NPDES stormwater regulations is to improve the quality of stormwater discharged to receiving waters to the "maximum extent practicable" through the use of structural and non-structural Best Management Practices (BMPs). With adequate infrastructure to handle the relatively small increase in surface runoff and the implementation of BMPs, the impact would be considered less than significant.

Question B

The potential for groundwater levels to be substantially depleted as a result of implementation of the project was evaluated using the "Theis equation," utilizing appropriate assumptions about the aquifer characteristics in the vicinity of the new production well. Pumping a well causes a cone of depression, or drawdown, of the water table of an unconfined aquifer or of the piezometric surface for a confined aquifer. The Theis equation was developed to predict groundwater drawdown at any given radius from a well after a fixed period of pumping. The equation may be used alone on a well-by-well basis or in a numerical groundwater model to predict aquifer response to multiple wells, each operating independently. The Theis equation uses the flow yield, which is usually a result of pumping the well. The equation takes into account the transmissivity and storativity of the underlying formation. An assumption the model makes is that the well resides in a confined aquifer, that the aquifer is uniform, and that it extends infinitely. The Theis equation is most often applied to water wells.

Previous pump tests conducted at the two nearest City production wells (Well 83 and Well 107) approximately 1.5 miles northwest of the project site indicated that the specific capacities of these wells ranged between 60 and 127 gallons per minute per foot (gpm/ft). Previous reports indicated that the specific capacity of Sacramento County Water Agency (SCWA) wells (L46, L65, L41, L52, and L47) with total depths ranging between 238 and 295 feet, located approximately 2 to 3 miles south of the new production well, had specific capacities ranging between 17.6 and 26 gpm/ft (Luhdorff and Scalmanini Consulting Engineers, 1998). Although the Laguna Formation is reported to be an unconfined aquifer, a previous study reported that short-term aquifer tests indicated semiconfined or confined conditions (Luhdorff and Scalmanini Consulting Engineers, 1998). Therefore, because the new production well site has not been constructed or tested, aquifer properties, including storage coefficients and transmissivity values were estimated in the analysis based upon previous reports.

For the purpose of the analysis, it was assumed that the proposed production well would be pumping continuously at a rate of 2,000 gallons per minute (gpm). The results of the analysis indicate that other production wells located within 1 mile of the proposed production well, and perforated or screened in the same aquifer zone, could experience up to 9.7 feet of additional drawdown after 100 days of continuous pumping, which is considered a "worst case" scenario because production wells such as the one proposed operate intermittently as needed as opposed to continuously.

This analysis considered water-level impacts up to 2 miles from the proposed production well, where production wells screened in the same aquifer zone could have approximately 7 feet of additional drawdown. The potential for drawdown could be minimized by increasing the screen length within the proposed production well to increase the portion of the aquifer being accessed. However, increasing the total screen length could require pumping from zones of the underlying aquifer with less desirable water quality, potentially resulting in the need for wellhead treatment at the new production well. The final screen length would be determined following drilling of exploratory borings and collection of groundwater samples from a monitoring well to be constructed at the new production well location. Figure 1 shows that the majority of other wells near the production well site are other City of Sacramento wells, and most of these are beyond 1 mile. Beyond 2 miles from the proposed production well, it is believed that the impact of pumping would be less than the potential impact at 1 mile and would be difficult to measure or quantify relative to other factors such as ongoing pumping from other wells, aquifer variability, and seasonal and long-term variability in hydrologic conditions. The potential impacts would be considered less than significant.

Not included on the map are the locations of privately owned shallow domestic wells. Because these wells tend to be screened in the shallow unconfined aquifer zones, it is believed that pumping from the proposed production well in the deeper confined system would have negligible effects on groundwater levels in these wells.

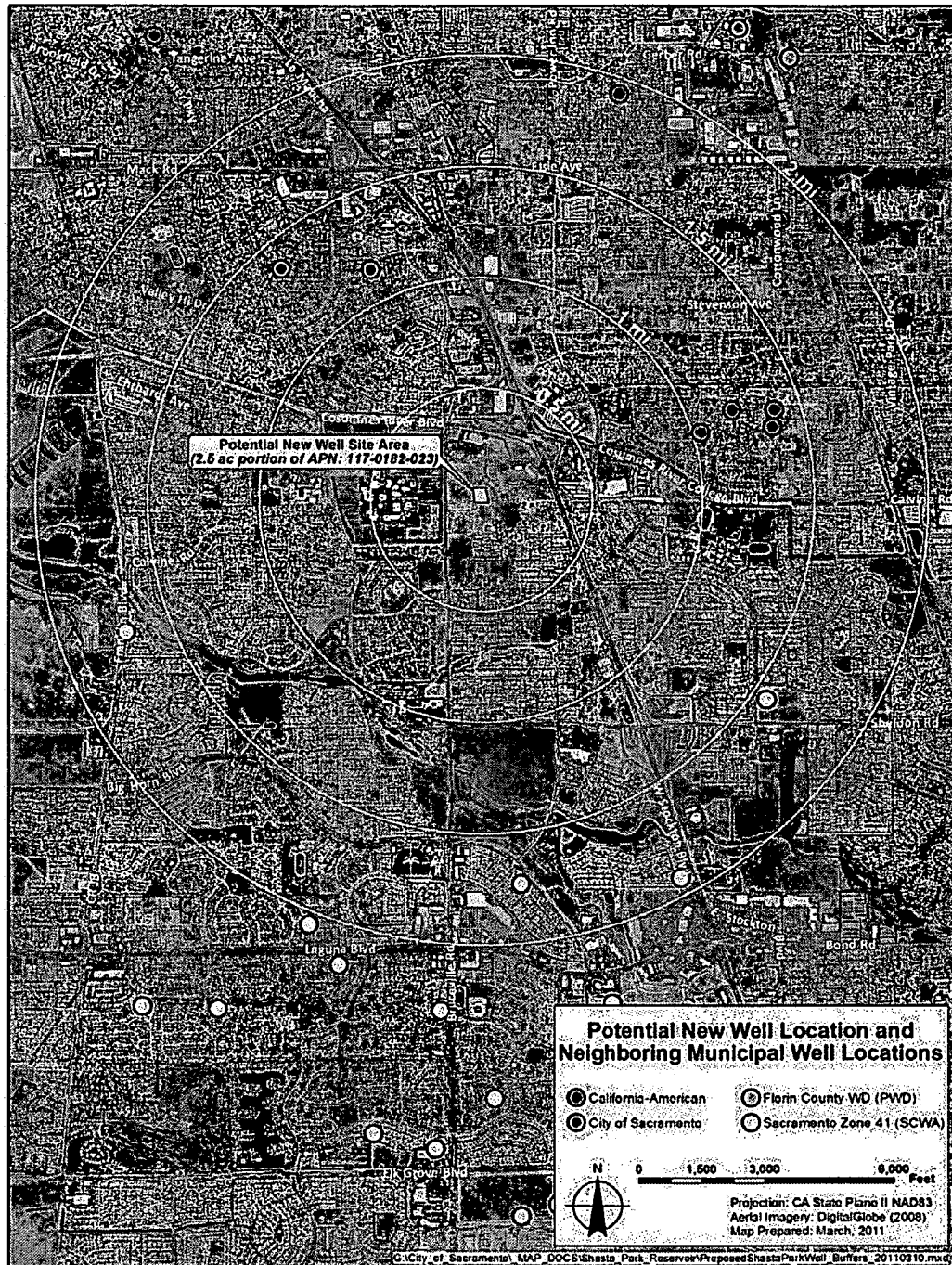


Figure 4.
Wells Within a 2-Mile Radius of the Proposed Production Well Site

Questions C - E

Construction, operation and abandonment of water wells are subject to the County of Sacramento Well Ordinance. See County Code Chapter 6.28, Wells and Pumps; City Code section 13.04.660. The City would obtain the required well permit from Sacramento County, and the construction and operation of the well would be subject to the County's oversight and regulation.

Unregulated runoff from the project site could affect water quality. Fuel, oil, grease, solvents, concrete wash, and other chemicals and wastes used in construction activities have the potential of creating toxic problems if allowed to enter waterways. Construction activities would include drilling the well, trenching for utilities, grading, construction of the reservoir and associated buildings, and paving of the driveways. These activities could potentially cause the release of sediments or materials into waterways. The degree of construction related impacts to water quality is partially determined by the duration of the various construction activities, timing of construction, and rainfall distribution. The proposed project would be required to comply with the City of Sacramento Code, Ordinance 15.88.250, Erosion and Sediment Control, effectively minimizing any potential runoff. Requirements will include treating their onsite and offsite drainage as well as the street drainage.

The project would be required to construct and implement both source control and on-site treatment controls. Off-site and on-site drainage as well as the street drainage would be treated prior to the discharge into the public drainage system. The proposed project is greater than one acre and would have to comply with the NPDES and obtain a General Permit for Stormwater Discharges Associated with Construction Activity. The NPDES permit requires the applicant to file a Notice of Intent and prepare a Stormwater Pollution Prevention Plan prior to construction. Post-construction stormwater quality control measures would be incorporated into the development to minimize the increase of urban runoff pollution caused by development of the area. In addition, the developer/builder would be required to employ BMPs before, during, and after construction. Compliance with BMP provisions would ensure that development and use of the site would result in a less-than-significant impact to surface waters and surface water quality. The project would also be required to comply with RWQCB permit requirements to ensure that groundwater is not impacted.

Compliance with these regulatory requirements would reduce any impacts to a less-than-significant level.

Questions F - H

The proposed project is located in Zone X. FEMA does not have building regulations for development in areas designated Zone X and would not require mandatory flood insurance for structures in Zone X. Flood Zone X shaded consists of areas of 500-year flood - areas of 100-year flood with average depths of less than 1 foot or with drainage areas less than 1 square mile; and areas protected by levees from 100-year flood. Because the project site would be located in a low-risk flood zone, impacts associated with water related hazards would be considered less than significant.

The proposed project would not involve substantial excavation or trenching that would impact groundwater. In the event that dewatering activities are required, these could result in a short-term change in the quantity of groundwater and/or direction of rate of flow, and groundwater quality. Any dewatering activities associated with the proposed project must comply with application requirements established by the Central Valley Regional Water Quality Control Board to ensure that such activities would not result in substantial changes in groundwater flow or quality. Development of the project would not intercept an aquifer and would not result in substantial loss of groundwater recharge capability. While development would include impermeable surfaces, the project site is only ten acres in size. Due to the estimated depth of groundwater, absence of an aquifer, and relatively small loss of groundwater recharge capability, issues associated with these impacts would be considered less than significant.

Mitigation Measures

None required.

Findings

The proposed project would not have any project-specific additional significant environmental effects for hydrology and water quality not previously examined in the Master EIR, and no new mitigation measures or alternatives are required.

7. LIGHT AND GLARE	Effect will be studied in the EIR	Effect can be mitigated to less than significant	No additional significant environmental effect
Would the Proposed Project: A. Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area?			X

Thresholds of Significance

For purposes of this Initial Study, impacts due to light and glare may be considered significant if construction and/or implementation of the Proposed Project would result in the following impacts that remain significant after implementation of General Plan policies or mitigation from the General Plan MEIR:

A project with glare that causes public hazard or annoyance for a sustained period of time or casts light onto oncoming traffic or residential uses.

Answers to Checklist Questions

Question A

The proposed facilities would include lighting for security at the site. Such lighting would, consistent with the requirements of City Code, be directed away from any nearby residences. (City Code section 17.68.030) Any project-specific effect would be less than significant.

Finding

The proposed project would not have any project-specific additional significant environmental effects for light and glare not previously examined in the Master EIR, and no new mitigation measures or alternatives are required.

SHASTA PARK RESERVOIR PROJECT**INITIAL STUDY**

CITY OF SACRAMENTO (Z14005400)		REVISED APRIL 23, 2012	
8. NOISE	Effect will be studied in the EIR	Effect can be mitigated to less than significant	No additional significant environmental effect
Would the Proposed Project result in:			
A) Exposure of persons to or generation of noise levels in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?		X	
B) Exposure of persons to or generation of excessive groundborne vibration or groundborne noise levels?		X	
C) A substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project?			X
D) A substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project?		X	

Background

The proposed project area for the production well includes vacant land to the north, east and west, and Shasta Park to the south. Further east are some residential uses and across Bruceville Road to the west is Cosumnes River College (approximately 1500 ~~1880~~ feet to nearest building). There are four residential units to the east of the site on Cotton Lane with the nearest residence located approximately 435 ~~55~~ feet to the east of the proposed construction area.

The Sacramento City Code, Chapter 8.68, states that the following activities shall be exempted from provisions of the Noise Ordinance:

Noise sources due to the erection (including excavation), demolition, drilling, alteration or repair of any building or structure between the hours of seven a.m. and six p.m., on Monday, Tuesday, Wednesday, Thursday, Friday and Saturday, and between nine a.m. and six p.m. on Sunday; provided, however, that the operation of an internal combustion engine shall not be exempt pursuant to this subsection if such engine is not equipped with suitable exhaust and intake silencers which are in good working order. The director of building inspections, may permit work to be done during the hours not exempt by this subsection in the case of urgent necessity and in the interest of public health and welfare for a period not to exceed three days. Application for this exemption may be made in conjunction with the application for the work permit or during progress of the work.

The primary source of noise in the project area is vehicle traffic on State Highway 99 to the east and Bruceville Road to the west.

Thresholds of Significance

For purposes of this Initial Study, impacts due to noise may be considered significant if construction and/or implementation of the Proposed Project would result in the following impacts that remain significant after implementation of General Plan policies or mitigation from the General Plan MEIR:

- Result in exterior noise levels in the project area that are above the upper value of the normally acceptable category for various land uses due to the project's noise level increases;
- Result in residential interior noise levels of 45 dBA L_{dn} or greater caused by noise level increases due to the project;
- Result in construction noise levels that exceed the standards in the City of Sacramento Noise Ordinance;
- Permit existing and/or planned residential and commercial areas to be exposed to vibration-peak-particle velocities greater than 0.5 inches per second due to project construction;
- Permit adjacent residential and commercial areas to be exposed to vibration peak particle velocities greater than 0.5 inches per second due to highway traffic and rail operations; or
- Permit historic buildings and archaeological sites to be exposed to vibration-peak-particle velocities greater than 0.2 inches per second due to project construction and highway traffic.

Answers to Checklist Questions

Questions A – D

The project location is in an urbanized area with substantial existing noise sources. The primary source of noise is vehicle traffic, but construction activities are common and serve to increase ambient noise levels. The ambient noise level in the project vicinity is 60 dBA CNEL. (Master EIR, Figure 6.8-1)

Operation of the groundwater well and reservoir would not include the type of work or equipment that would create or cause excessive noise or vibration. Electrical equipment used to operate the facilities would be enclosed within the control building and the well pumps would be similar to existing exterior water well pumps throughout the city. Operation of the facility would comply with the City's noise ordinance that restricts emission of noise at the project boundaries.

Construction of the proposed project would occur during normal business hours with the exception of well drilling, which requires continuation of drilling operations on a 24-hour basis until well completion. The period of time required for well drilling varies with ground conditions, and is not certain, but drilling can last from a few hours to several weeks. See Water Well Design and Construction, University of California, http://groundwater.ucdavis.edu/Publications/Harter_FWQFS_8086.pdf.

Some short-term temporary noise impacts would occur due to the well-drilling activities. Well drilling activities can result in noise levels of approximately 85 dBA at a distance of 50 feet. ~~With a noise attenuation rate of approximately 7.5 dBA for every doubling of distance,~~ Drilling noise levels at the nearest residential structure, approximately 400 ~~55~~ feet from the drilling site, would be approximately ~~62.5~~ 85 dBA. This would result in significant nighttime noise levels **during well drilling construction activities.**

The mitigation measures identified below would require the City to perform a site-specific analysis to determine the level of noise reduction needed to ensure that the noise emitted by project construction would not exceed 50 dBA at the property line of the existing residences in the area.

(See City Code section 8.68.060) Mitigation measures ensure that there will be advance notification to affected residences, and use of sound walls during 24-hour drilling that reduce impacts to an acceptable level. The mitigation measures below would reduce impacts related to noise and vibration to a less than significant level.

Mitigation Measures

- N-1) Prior to commencement of drilling operations that will include 24-hour drilling, the City shall perform a site-specific analysis to determine the Sound Transmissivity Classification (STC) level for noise reduction to achieve construction noise levels of 50 dBA or less at the residences closest to the site to the east.
- N-2) During well drilling activities or any other construction activities requiring 24-hour construction, the Department of Utilities shall include in construction specification requirements that contractors install and maintain an engineered sound wall or utilize other noise attenuation mechanism/techniques during 24-hour activities. Sound wall specifications shall include use of materials with a STC classification of 18, or greater if identified by the analysis required in Mitigation Measure N-1, and shall be installed to a height that intercepts the line of sight between the drill rig and sensitive receptors. The minimum height of the sound wall shall be fifteen (15) feet. The performance standard for the noise mitigation measure shall be reduction of noise levels within 400 feet of the drill rig to 50 dBA.
- N-3) All residences and other sensitive receptors within 1,000 feet of the drilling site shall be notified four weeks in advance. The information distributed shall include the following:
 - A brief description of the drilling and testing operations, the necessity for 24-hour drilling, and the proposed schedule for drilling and testing activities; and
 - A contact person and 24-hour contact telephone number for noise complaints.

Finding

With the implementation of the mitigation measures above, project impacts from noise would be reduced to a less-than-significant level.

9. PUBLIC SERVICES	Effect will be studied in the EIR	Effect can be mitigated to less than significant	No additional significant environmental effect
Would the Proposed Project result in: A. A substantial adverse physical impact associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for any of the public services:			X
I) Fire protection?			X
II) Police protection?			X
III) Schools?			X

Thresholds of Significance

For the purposes of this Initial Study, an impact would be considered significant if the project resulted in the need for new or altered services related to fire protection, police protection, or school facilities beyond what was anticipated in the 2030 General Plan.

Answers to Checklist Questions

Question A (I, II and III)

The project would construct and operate water infrastructure facilities at the project site. The project is part of the City's ongoing efforts to provide water service for municipal and industrial purposes within the City. The Master EIR evaluated the cumulative effects of ongoing development and growth in the City, and the project would not have any effects not previously discussed and evaluated in the Master EIR.

Finding

The proposed project would not have any project-specific additional significant environmental effects on public services not previously examined in the Master EIR, and no new mitigation measures or alternatives are required.

10. PUBLIC UTILITIES	Effect will be studied in the EIR	Effect can be mitigated to less than significant	No additional significant environmental effect
Would the Proposed Project:			
A) Exceed wastewater treatment requirements of the applicable Regional Water Quality Control Board?			X
B) 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?			X
C) 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?			X
D) Have sufficient water supplies available to serve the project from existing entitlements and resources, or are new or expanded entitlements needed?			X
E) Result in a determination by the wastewater treatment provider which serves or may serve the project's projected demand in addition to the provider's existing commitments?			X

Thresholds of Significance

For the purposes of this Initial Study, an impact would be considered significant if the project resulted in the need for new or altered services related to water supply, treatment, and distribution systems; sewer systems; and drainage systems beyond what was anticipated in the 2030 General Plan:

- Result in the determination 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 impacts.

Answers to Checklist Questions

Question A, B, E

The project would construct and operate a groundwater well with associated treatment facility and water reservoir on the site. The project would have no effect on wastewater demand or facilities.

Questions C, D

The project would construct and operate a water reservoir, groundwater well with associated

treatment facility and booster pump station. The facilities would not consume water, and would not require construction of new storm drainage facilities.

Finding

The proposed project will not have any project-specific additional significant environmental effects on public utilities not previously examined in the Master EIR, and no new mitigation measures or alternatives are required.

11. RECREATION	Effect will be studied in the EIR	Effect can be mitigated to less than significant	No additional significant environmental effect
Would the Proposed Project:			
A) Increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated?			X
B) Include recreational facilities or require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment?			X

Thresholds of Significance

For purposes of this Initial Study, impacts to recreational resources may be considered significant if construction and/or implementation of the Proposed Project would result in the following impacts that remain significant after implementation of General Plan policies or mitigation from the General Plan MEIR:

- Cause or accelerate substantial physical deterioration of existing area parks or recreational facilities or
- Create a need for construction or expansion of recreational facilities beyond what was anticipated in the 2030 General Plan.

Answers to Checklist Questions

Questions A-B

The proposed project would construct and operate a water reservoir on approximately two acres, and a new groundwater well, booster pumping station and associated facilities. The project would not result in any increase in demand on recreational resources, and would not have any effects not identified in the Master EIR.

Finding

The proposed project would not have any project-specific additional significant environmental effects for recreation not previously examined in the Master EIR, and no new mitigation measures or alternatives are required.

12. TRANSPORTATION AND CIRCULATION	Effect will be studied in the EIR	Effect can be mitigated to less than significant	No additional significant environmental effect
Would the Proposed Project:			
A) Cause an increase in traffic which is substantial in relation to the existing traffic load and capacity of the street system (i.e., result in a substantial increase in either the number of vehicle trips, the volume to capacity ratio on roads, or congestion at intersections?			X
B) Exceed, either individually or cumulatively, a level of service standard established by the county congestion management agency for designated roads or highways?			X
C) Substantially increase hazards due to a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?			X
D) Result in inadequate emergency access?			X
E) Conflict with adopted policies, plans, or programs supporting alternative modes of transportation (e.g., bus turnouts, bicycle racks)?			X

Thresholds of Significance

For purposes of this Initial Study, impacts resulting from changes in transportation or circulation may be considered significant if construction and/or implementation of the Proposed Project would result in the following impacts that remain significant after implementation of General Plan policies or mitigation from the General Plan MEIR:

Roadway Segments

- The traffic generated by a project degrades peak period Level of Service (LOS) from A,B,C or D (without the project) to E or F (with project) or
- The LOS (without project) is E or F, and project generated traffic increases the Volume to Capacity Ratio (V/C ratio) by 0.02 or more.

Intersections

- The traffic generated by a project degrades peak period level of service from A, B, C or D (without project) to E or F (with project) or
- The LOS (without project) is E or F, and project generated traffic increases the peak period average vehicle delay by five seconds or more.

Freeway Facilities

Caltrans considers the following to be significant impacts:

- Off-ramps with vehicle queues that extend into the ramp's deceleration area or onto the freeway;
- Project traffic increases that cause any ramp's merge/diverge level of service to be worse than the freeway's level of service;
- Project traffic increases that cause the freeway level of service to deteriorate beyond level of service threshold defined in the Caltrans Route Concept Report for the facility; or
- The expected ramp queue is greater than the storage capacity.

Transit

- Adversely affect public transit operations or
- Fail to adequately provide for access to public transit.

Bicycle Facilities

- Adversely affect bicycle travel, bicycle paths or
- Fail to adequately provide for access by bicycle.

Pedestrian Circulation

- Adversely affect pedestrian travel, pedestrian paths or
- Fail to adequately provide for access by pedestrians.

Answers to Checklist Questions

Questions A-E

Construction of the water reservoir and associated facilities on the project site would require importation of construction materials by truck, and use of private motor vehicles by construction personnel. Access to the project site is via Bruceville Road, a divided roadway of sufficient width to accommodate construction equipment. Disruption to traffic on Bruceville Road would be intermittent and of brief duration, and any effects would be less than significant. No additional significant environmental effects would occur.

Finding

The proposed project would not have any project-specific additional significant environmental effects for transportation not previously examined in the Master EIR, and no new mitigation measures or alternatives are required.

13. MANDATORY FINDINGS OF SIGNIFICANCE	Effect will be studied in the EIR	Effect can be mitigated to less than significant	No additional significant environmental effect
A) Does the project have the potential to degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, reduce the number or restrict the range of a rare or endangered plant or animal or eliminate important examples of the major periods of California history or prehistory?			X
B) Does the project have impacts that are individually limited, but cumulatively considerable? ("Cumulatively considerable" means that the incremental effects of a project are considerable when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects.)			X
C) Does the project have environmental effects which will cause substantial adverse effects on human beings, either directly or indirectly?			X

Answers to Checklist Questions

Question A

The proposed project is consistent with the City's approach to conjunctive use. Groundwater extraction would be within the agreed-upon limits for the groundwater basin, and there would be no significant effect on other groundwater users or the environment. Mitigation measures will be implemented to ensure that the project will not degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, reduce the number or restrict the range of a rare or endangered plant or animal.

Question B

Construction of the reservoir, pumping station, well, treatment facility, and construction associated pipelines would result in temporary impacts for noise, but no cumulative effects would occur.

Question C

Installation and construction operations would have temporary effects but would not have any substantial adverse effects on human beings.

Section IV - Environmental Factors Potentially Affected


The environmental factors checked below would potentially be affected by this project.

<input type="checkbox"/> Air Quality	<input checked="" type="checkbox"/> Noise
<input checked="" type="checkbox"/> Biological Resources	<input type="checkbox"/> Public Services
<input checked="" type="checkbox"/> Cultural and Historic Resources	<input type="checkbox"/> Public Utilities
<input type="checkbox"/> Geology and Soils	<input type="checkbox"/> Recreation
<input type="checkbox"/> Hazards and Hazardous Materials	<input type="checkbox"/> Transportation and Circulation
<input type="checkbox"/> Hydrology and Water Quality	<input type="checkbox"/> None Identified
<input type="checkbox"/> Light and Glare	

Section V - Determination

On the basis of the Initial Study:

I find that (a) the Proposed Project is an anticipated subsequent project identified and described in the 2030 General Plan Master EIR; (b) the Proposed Project is consistent with the 2030 General Plan land use designation and the permissible densities and intensities of use for the project site; (c) that the discussions of cumulative impacts, growth inducing impacts, and irreversible significant effects in the Master EIR are adequate for the Proposed Project; and (d) the Proposed Project will have additional significant environmental effects not previously examined in the Master EIR. A Mitigated Negative Declaration will be prepared. Mitigation measures from the Master EIR will be applied to the project as appropriate, and additional feasible mitigation measures and alternatives will be incorporated to revise the Proposed Project before the negative declaration is circulated for public review, to avoid or mitigate the identified effects to a level of insignificance. (CEQA Guidelines Section 15178(b))


Signature

4-7-11
Date

Scott Johnson, Associate Planner


Signature

4-23-2012
REVISED Date

Scott Johnson, Associate Planner

References

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Shasta Park Reservoir MND
Comment Letter #1



JERRY BROWN
GOVERNOR

STATE OF CALIFORNIA
GOVERNOR'S OFFICE *of* PLANNING AND RESEARCH
STATE CLEARINGHOUSE AND PLANNING UNIT



May 13, 2011

Scott Johnson
City of Sacramento
300 Richard Boulevard
Sacramento, CA 95811

Subject: Shasta Park Reservoir Project
SCH#: 2011042039

Dear Scott Johnson:

The State Clearinghouse submitted the above named Negative Declaration to selected state agencies for review. The review period closed on May 12, 2011, and no state agencies submitted comments by that date. This letter acknowledges that you have complied with the State Clearinghouse review requirements for draft environmental documents, pursuant to the California Environmental Quality Act.

Please call the State Clearinghouse at (916) 445-0613 if you have any questions regarding the environmental review process. If you have a question about the above-named project, please refer to the ten-digit State Clearinghouse number when contacting this office.

Sincerely,

A handwritten signature in black ink, appearing to read "Scott Morgan".

Scott Morgan
Director, State Clearinghouse

**Document Details Report
State Clearinghouse Data Base**

SCH# 2011042039
Project Title Shasta Park Reservoir Project
Lead Agency Sacramento, City of

Type Neg Negative Declaration
Description The project includes the construction, operation and maintenance of a groundwater well and water reservoir on an approximately two-acre parcel east of Bruceville Road and north of Imagination Way in south Sacramento. The reservoir would have a capacity of approximately 4 million gallons. A groundwater well would be installed on the site, with a capacity of 2 million gallons per day, and an anticipated withdrawal of approximately 2 acre-feet per year. A water treatment facility would be constructed with a capacity of 2 million gallons per day, and a pump station with a capacity of 15 million gallons per day. The pump station would pump water from the reservoir to users.

Lead Agency Contact

Name Scott Johnson
Agency City of Sacramento
Phone 916 808 5842 **Fax**
email
Address 300 Richard Boulevard
City Sacramento **State** CA **Zip** 95811

Project Location

County Sacramento
City Sacramento
Region
Lat / Long
Cross Streets Bruceville Road and Imagination Parkway
Parcel No. 117-0182-023
Township **Range** **Section** **Base**

Proximity to:

Highways Hwy 99
Airports
Railways
Waterways
Schools Cosumnes River College
Land Use Present use of the one Parcel is vacant land. The Zoning of the parcel is Multi-family Residential Review Zone (R-2B-R) and the General Plan Land Use is Medium Density Residential (MDR, 16-29 dwelling units per acre).

Project Issues Archaeologic-Historic; Noise; Public Services; Soil Erosion/Compaction/Grading; Toxic/Hazardous; Water Quality; Water Supply; Wildlife

Reviewing Agencies Resources Agency; Department of Fish and Game, Region 2; Office of Historic Preservation; Department of Parks and Recreation; Department of Water Resources; California Highway Patrol; Caltrans, District 3; CA Department of Public Health; State Water Resources Control Board, Division of Financial Assistance; Regional Water Quality Control Bd., Region 5 (Sacramento); Department of Toxic Substances Control; Native American Heritage Commission

Date Received 04/13/2011 **Start of Review** 04/13/2011 **End of Review** 05/12/2011

DEPARTMENT OF TRANSPORTATION
DISTRICT 3 – SACRAMENTO AREA OFFICE
2379 GATEWAY OAKS DRIVE,
SUITE 150
SACRAMENTO, CA 95833
PHONE (916) 274-0627
FAX (916) 263-1796
TTY 711

Shasta Park Reservoir MND
Comment Letter #2



*Flex your power!
Be energy efficient!*

May 9, 2011

03-2011-SAC0021
03-SAC-99/PM 15.50
Shasta Park Water Reservoir Project
Draft Mitigated Negative Declaration
SCH # 2011042039

Mr. Scott Johnson
Associate Planner
300 Richards Boulevard, 3rd Floor
Sacramento, CA 95811

Dear Mr. Johnson,

Thank you for the opportunity to review and comment on the Shasta Park Water Reservoir Project Draft Mitigated Negative Declaration.

The project proposes to construct a ground water well and water reservoir on a two acre parcel. The parcel is located in south Sacramento, southwest of the State Route (SR) 99 and Cosumnes River Boulevard/Calvine Road interchange, east of Bruceville Road, and north of Imagination Way. The reservoir would have a capacity of approximately 4 million gallons, and the groundwater well would have a capacity of 2 million gallons per day. The site would also have a treatment facility with a two million gallon per day capacity and a pump station with a 15 million gallon per day capacity.

Our comments are as follows:

- The operation of the proposed facility is not anticipated to result in impacts to the State system. However, Caltrans recommends that the City of Sacramento inquire of the applicant how many employees are expected to be operating the site on a daily basis. If the work force is small, the majority of the anticipated work force does not travel on SR 99, or the work force travels opposite the peak hour commute direction, then the impacts to the SR 99 may be minimal.
- If construction of the proposed project utilizes State facilities, Caltrans recommends that the City prepare and submit for our review a Traffic Management Plan. We also recommend that trips to the project site during

Mr. Scott Johnson
May 9, 2011
Page 2

construction, i.e., truck hauls, be conducted at off-peak times.

If you have any questions about these comments please contact Larry Brohman at (916) 274-0627 or larry_brohman@dot.ca.gov.

Sincerely,

A handwritten signature in cursive script, appearing to read "Eric Fredricks".

ERIC FREDRICKS, Chief
Office of Transportation Planning – South

Shasta Park Reservoir MND
Comment Letter #3

From: Eck, Darrell (MSA)
To: Scott Johnson
Cc: Jim Peifer; Schmitz, Kerry (MSA)
Subject: Comments to the Draft Mitigated Negative Declaration for the Shasta Park Reservoir Project
Date: Thursday, May 12, 2011 3:52:27 PM

Thank you for the opportunity to comment on the Draft Mitigated Negative Declaration for the Shasta Park Reservoir Project.

The Notice of Availability/Intent to Adopt, Mitigated Negative Declaration and Initial Study indicate that the project intends to pump two (2) acre-feet per year from the groundwater basin. This amount of production is inconsistent with the size of production and storage facilities identified for the project.

Question B under Hydrology and Water Quality (p. 28) asks if the project would substantially deplete groundwater supplies... such that there would be a net deficit in aquifer volume or lowering of the local groundwater table level. The response to this question (pp. 32-33) best addresses the issue of lowering the local groundwater table through the use of the "Theis equation." In order to address the question of net deficit in aquifer volume the City should equip the proposed well in such a way to allow for regular measurements of aquifer levels by the groundwater basin management authority as part of the overall groundwater management plan for the basin.

Darrell K. Eck
Executive Director
Sacramento Central Groundwater Authority
Telephone (916) 874-5039
Fax (916) 874-5698

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Attachment F

Groundwater Impacts and Water Supply Assessments – Shasta Park



CITY OF SACRAMENTO

**GROUNDWATER IMPACTS AND WATER
SUPPLY ASSESSMENT –
SHASTA PARK**

JULY 10, 2017

PREPARED BY
WOOD RODGERS, INC.
3301 C STREET, BUILDING 100-B
SACRAMENTO, CA 95816

Lawrence H. Ernst

Lawrence H. Ernst, PG, CEG, CHG
Principal Hydrogeologist



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Table 5. Theis Equation: Projected Drawdown by Distance in Deep Mehrten Aquifer One Year of Continuous Pumping of Shasta Park Well

APPENDIX

- Appendix A Groundwater Impact Analysis to Support the Shasta Park Water Reservoir Project Initial Study, Prepared by MWH (March 2011)

EXECUTIVE SUMMARY

Wood Rodgers, Inc. (Wood Rodgers) has prepared this Groundwater Impacts and Water Supply Assessment (WSA) to support the City of Sacramento's (City's) planned well site and water reservoir at the Shasta Park site (Site), located in the southeastern portion of the City (Figure 1). The City has stated that this project is part of an overall conjunctive use program for groundwater and surface water along with an opportunity to improve system pressure and fire flow capabilities in the southerly portion of their system. The major components of the project include: groundwater wells, above grade storage, booster pump station, and treatment. This report is an update to the Groundwater Impact Analysis to Support the Shasta Park Water Reservoir Project Initial Study, prepared by Montgomery Watson Harza (MWH) in March 2011. The 2011 report discusses the local and regional groundwater resources setting, groundwater quality, groundwater elevations, impacts to nearby wells, and the potential to develop long-term groundwater supply at this site, based on the initial production well design for completion in a shallow aquifer. This WSA was revised in June 2017 to include a discussion of hydrogeologic data derived from the construction and testing of a deep well at the Site, Shasta Well 165, in addition to the hydrogeologic and groundwater quality conditions in the vicinity of Shasta Park, potential impacts to nearby production wells, and a water supply assessment.

In 2012, Wood Rodgers conducted exploratory drilling at the Site and constructed shallow (225 feet) and deep (1,230 feet) monitoring wells to characterize depth-specific water quality. Results indicated that a well constructed in the shallow aquifers would exceed the State of California Water Resources Control Board – Division of Drinking Water (DDW) primary drinking water standard for arsenic. Water quality results from the deep monitoring well and from other deep wells in the area indicate that a well constructed in the deep aquifers will likely meet all DDW primary drinking water standards. Wood Rodgers recommended that a groundwater well be completed in the deep aquifer at the Shasta Park site. The Wood Rodgers' production well design specified a total completion depth of 1,203 feet and 18-inch diameter well screen from 1,063 to 1,183 feet below ground surface (bgs). The City approved Wood Rodgers' deep production well design and constructed the well (Well 165) in 2014. Well 165 originally had an expected design capacity of 1,500 to 2,200 gallons per minute (gpm); however, the well yield was much higher than expected. The Well 165 pump station was designed for 2,800 gpm. While Well 165 meets all DDW drinking water standards, the City has selected to remove low concentrations of manganese and methane to help maintain the excellent quality of the water served to its customers.

In the course of drilling the production well borehole for Well 165, the City evaluated the water quality of the intermediate aquifers with temporary zone sampling to determine the feasibility of constructing a second well at this location. The water quality of the intermediate aquifers indicate it meets all DDW primary drinking water standards, with the exception of elevated concentrations of manganese, above the DDW secondary maximum contaminant level (MCL). Based on the water quality data from the intermediate aquifers, the pump station design will also include manganese removal for the intermediate well (Well 166). In 2017, the City made the determination it would be advantageous to construct Well 166 while the reservoir and pump station were still under construction. Well 166 will be constructed in the intermediate aquifers, between depths of 800 and 1,000 feet, with an estimated design capacity of 2,200 gpm.

1 - INTRODUCTION

City of Sacramento's Water System

The City's water system (Public Water System No. 3410020) serves a population of approximately 400,000 with a mix of surface water and groundwater. The City provides approximately 4,600 million gallons of water per year and has approximately 132,000 service connections. The City diverts surface water from the American and Sacramento Rivers and utilizes the underlying groundwater system to meet its potable water demand. The City's municipal supply well field currently consists of 33 wells that are permitted by DDW; however, only 26 of these municipal wells are currently operational meeting all water quality requirements capable of supplying groundwater to the City's potable water system. MWH reported that the City's wells provide a total capacity of 20 million gallons per day (2011). Of these 26 wells, 24 wells are located in the North American Subbasin, while two are located in the South American Subbasin within two miles of Shasta Park (Wells 83 and 107).

The City is signatory to the Water Forum Agreement (WFA) adopted by the region in 2000. The co-equal objectives of the WFA are: 1) to provide a reliable and safe water supply for the region's economic health and planned development to the year 2030; and 2) to preserve the fishery, wildlife, recreational, and aesthetic values of the Lower American River (<http://www.waterforum.org>). Groundwater management is one of the seven elements of the WFA. Several recommendations were designed to protect groundwater resources in the Sacramento region, including recommendations on sustainable yields and groundwater management governance structures for the north, central, and south basins of the region. The recognized sustainable yields for the north, central, and south basins are 131,000 acre-feet per year, 273,000 acre-feet per year, and 115,000 acre-feet per year, respectively. Additionally, the 40 signatories to the WFA created the Water Forum Successor Effort as one of the seven elements to ensure implementation of the Agreement.

City of Sacramento 2035 General Plan

The policies of the 2035 General Plan (adopted in March 2015) that are directly relevant to the proposed well project at Shasta Park are provided below and include:

UTILITIES (U)

Citywide Utilities

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 1.1.3 Sustainable Facilities and Services. The City shall continue to provide sustainable utility services and infrastructure in a cost-efficient manner.

U 1.1.12 Impacts to Environmentally Sensitive Lands. The city shall locate and design utilities to avoid or minimize impacts to environmentally-sensitive areas and habitats.

Water Systems

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 2.1.2 Increase Water Supply Sustainability. The City shall maintain a surface water/groundwater conjunctive use program, which uses more surface water when it is available and more groundwater when surface water is limited.

U 2.1.3 Water Treatment Capacity and Infrastructure. The City shall plan, secure funding for, and procure sufficient water treatment capacity and infrastructure to meet projects water demands.

2 - REGIONAL AND LOCAL HYDROGEOLOGY

The City of Sacramento overlies the North American and South American Subbasins of the Sacramento Valley Groundwater Basin. The American River separates the two subbasins, with the North American Subbasin on the north and the South American Subbasin on the south. The Shasta Park proposed well site and two of the City's active wells are located in the South American Subbasin. The freshwater-bearing sediments underlying the City's southern service area consist of various shallow alluvial deposits, the Laguna Formation, and the Mehrten Formation.

The various shallow deposits in this area include valley alluvium, floodplain deposits, basin deposits, and the Victor Formation. These deposits outcrop at the ground surface in the vicinity of the City's well field and are generally less than 50 feet thick. The valley alluvium is present along current stream channels, and consists of sand, gravel, silt, and clay. The floodplain and basin deposits exist in the flood zones along streams and rivers and consist primarily of fine-grained materials such as silt and clay. Because of their shallow depth, these deposits are not a practical source for municipal groundwater development. The Victor Formation consists of a heterogeneous assemblage of silt, sand, gravel, and clay that were deposited during shifting of streams from the Sierra Nevada and Cascade Range (Olmsted and Davis 1961). The Victor Formation is generally found at depths shallower than 100 feet in the vicinity of the City's well field.

The Laguna Formation is a freshwater-bearing aquifer in the South American Subbasin and consists of interbedded layers of sand, gravel, silt, and clay. The thickness of the Laguna Formation can be upwards of up to approximately 650 feet thick near the axis of the Sacramento

Valley. The California Department of Water Resources (DWR) indicates that specific yield is approximately 7 percent in these older alluvium deposits (2004).

In the South American Subbasin, the Mehrten Formation underlies the Laguna Formation and consists of two groups of materials. The first group contains distinctive black sands, interbedded with gravel and blue or brown clay and represents the primary water-bearing portion of the Mehrten Formation. Wells completed in the sand and gravel intervals can have high yields (DWR 2004). The second group is a cemented tan or gray tuff-breccia, which can have significant secondary porosity and water-bearing capability.

3 - GROUNDWATER CONDITIONS

This section provides an overview of historic and recent groundwater elevations and groundwater quality within the vicinity of Shasta Park.

Groundwater Elevation

Groundwater recharge for the aquifers under the City comes from the Sacramento River and American River, from deep percolation of precipitation and applied water, and from percolation into outcrops of the aquifers to the east near the foothills. Groundwater elevations have been recorded on a regular basis in Sacramento County by DWR since the early 1950s. For the City's 2010 Water Master Plan (WMP), Wood Rodgers analyzed groundwater elevation trends within Sacramento County based on groundwater elevation contour maps created by Sacramento County Department of Water Resources and groundwater elevation data from DWR monitored wells.

The Sacramento County DWR generated spring and fall 2007 (most recent available) groundwater elevation contour maps indicate that there were two groundwater pumping depressions located in the South American Subbasin near the towns of Elk Grove and Galt. Shasta Park is located near the northwestern flank of the groundwater depression that is centralized over Elk Grove. California DWR generated groundwater elevation contours from fall of 2015 indicate the depression is still located near Elk Grove, as illustrated by the fall 2015 contours of equal groundwater elevation in Figure 2. The groundwater contours indicate that the direction of groundwater flow near Shasta Park is primarily to the southeast towards a groundwater pumping depression near Galt. Data used to generate the contours of equal groundwater elevation are composite measurements of all groundwater elevation in the area and are not well depth-specific or representative of a unique aquifer. Groundwater elevation data for the deeper aquifers in the vicinity of Shasta Park is limited. In order to accurately generate a groundwater elevation contour map representative of the deep aquifers, more data would be required.

Historic groundwater level data from the DWR Water Data Library (WDL) and the California Statewide Groundwater Elevation Monitoring (CASGEM) program indicate that groundwater elevations decreased from the early 1960's until the early 1980's, as shown on the hydrographs in Figure 2. Groundwater elevations were relatively stable from 1982 to 1998 and then have rebounded to approximately 5 to 10 feet above the earliest available groundwater measurement recorded from each hydrograph, with the exception of DWR monitored well 7N/05E-26C1. This monitored well has experienced groundwater rebound since the early 1990s, but has current

spring measurements that are approximately 25 feet lower than the earliest record in spring of 1963. Generally, groundwater levels seasonally fluctuate approximately 5 to 15 feet between spring and fall measurements within this portion of Sacramento County. Groundwater elevations in the southeastern corner of the City, as depicted by are currently between -50 to -60 feet mean sea level, or approximately 80 and 90 feet bgs. The static water level is expected to be approximately 75 to 85 feet bgs at Shasta Park. Increased conjunctive use of surface water and groundwater near Shasta Park has resulted in gradual increases in groundwater levels over the past 25 years.

Groundwater Quality

The quality of groundwater varies throughout the City not only with respect to depth, but also laterally within the various aquifers. Arsenic and manganese are the most widely spread naturally occurring contaminants of concern found in the City's groundwater. The City identified additional constituents for assessment including: chromium, hexavalent chromium, nitrates (as N), specific conductance, iron, and radon.

In 2012, two monitoring wells were installed at the Shasta Park site. The shallow monitoring well was constructed in the Laguna/Mehrten transition to a total depth of 225 feet and has perforations from 205 to 215 feet bgs. Water quality results indicate that water produced from this portion of the shallow aquifer has an arsenic concentration of 38 micrograms per liter ($\mu\text{g/L}$), which exceeds the DDW primary Maximum Contaminant Level (MCL) of 10 $\mu\text{g/L}$ for arsenic. Additionally, water produced from this portion of the shallow aquifer exceeds the secondary MCL of 50 $\mu\text{g/L}$ for manganese, with a reported concentration of 180 $\mu\text{g/L}$. These water quality results indicate that a production well completed in this shallow aquifer would require both arsenic and manganese removal treatment to meet all DDW primary and secondary drinking water requirements.

In 2014, the intermediate aquifers of the Mehrten Formation were assessed with temporary zone sampling during the drilling and construction of Well 165. Water samples were collected from the 965-foot aquifer and the 855-foot aquifer. Water quality data from both aquifers indicate concentrations of manganese are above the DDW MCL of 50 $\mu\text{g/L}$ and below the detection limit (2 $\mu\text{g/L}$) for arsenic. Water produced from the aquifers between 965 and 955 feet had total dissolved solids of 170 milligrams per liter (mg/L), manganese concentration of 69 $\mu\text{g/L}$, boron concentration of 310 $\mu\text{g/L}$, methane concentration of 2.0 mg/L , and a specific conductance of 220 micromhos per centimeter ($\mu\text{mh}/\text{cm}$). The water produced from the aquifers between 855 and 845 feet had total dissolved solids of 190 mg/L , manganese concentration of 86 $\mu\text{g/L}$, boron concentration of 360 $\mu\text{g/L}$, methane concentration of 4.8 mg/L , and a specific conductance of 240 $\mu\text{mh}/\text{cm}$. A well constructed in the intermediate aquifers would require treatment for manganese to meet DDW secondary drinking water standards.

The deep monitoring well was constructed in the deep Mehrten Formation to a depth of 1,201 feet and has perforations from 1,080 to 1,100 feet, 1,130 to 1,150 feet, and 1,160 to 1,180 feet bgs. Water quality results indicate that water produced from these zones meet all DDW primary drinking water requirements with non-detectable levels of arsenic and hexavalent chromium (less than 1 $\mu\text{g/L}$). Additionally, water produced from these deep aquifers meet the secondary MCL

for manganese, with a concentration of 15 µg/L. Methane gas was detected at 5.1 mg/L will be removed prior to the distribution system.

4 – POTENTIAL PUMPING IMPACTS

Nearby Wells

There are several water purveyors in the vicinity of Shasta Park which pump groundwater, including the City, California American Water Company (Cal Am), Fruitridge Vista Water Company (FVWC), Elk Grove Water District (EGWD), and Sacramento County Water Agency (SCWA). The locations of known nearby active public supply wells are illustrated in Figure 1. This map does not include all municipal wells and the location of wells are approximate in many cases due to past confidentiality of well logs and approximate locations reported by water districts because of security concerns.

To assess the significance of potential impacts from groundwater pumping at Shasta Park, the location of the nearest active wells were included in this groundwater impacts analysis. For the purposes of this study, wells completed at depths less than 500 feet are referred to as “shallow,” wells completed between 500 and 1,000 feet depth are considered to be “intermediate,” and wells completed deeper than 1,000 feet are categorized as “deep.” Private domestic wells in this area are normally shallow and thus will not be impacted by this project due to the hydraulic isolation between aquifers.

Wells completed in shallow and unconfined aquifer zones were determined to be insusceptible to groundwater impacts from pumping of intermediate and deep aquifers and were not included in this pumping impacts analysis due to significant confining clay layers which provide hydraulic isolation from the deeper aquifers.

A shallow well services the mobile home park one-half mile southeast of the Shasta Park Site. There are no other municipal supply wells constructed within one mile of the Site. Within two miles, Cal Am operates four wells, SCWA operates four shallow wells, and the City operates two shallow wells. Within three miles of Shasta Park, SCWA operates 17 shallow wells. Within four miles of Shasta Park, SCWA operates seven deep wells, one intermediate well, and two shallow wells. EGWD operates six intermediate wells within three to five miles of Shasta Park.

Groundwater and Aquifer Characteristics

Geophysical data for the deep test hole at Shasta Park and known hydrogeology in the area suggests that intermediate aquifers of the Mehrten Formation have similar aquifer parameters as the deep aquifers of the Mehrten Formation, such as specific capacity, transmissivity, and storativity. SCWA’s Waterman Road well (W-67) is located just over 3 miles east from Shasta Park and has well screen from approximately 980 to 1,080 feet depth. For the purposes of this study, the aquifer parameters from SCWA’s W-67 (intermediate well) were used as an analogy for the intermediate Mehrten Formation aquifer and site-specific data from Well 165 (deep well) were used to calculate expected groundwater level drawdown by distance from Shasta Park.

Data from a 10-hour constant rate pumping test conducted in 1995 following construction of SCWA’s W-67 well indicate the well had a reported specific capacity of approximately 35 gpm/ft of drawdown, with an aquifer transmissivity of 52,000 gallons per day per foot (gpd/ft).

A 10-hour constant rate pumping test conducted in 2014 after Well 165 was constructed indicates the deep Mehrten Formation aquifer has a specific capacity of 56 gpm/ft of drawdown and an estimated aquifer transmissivity of 157,000 gpd/ft.

An analytical model (model) using the Theis Equation was used to quantify approximate drawdown that may occur in the intermediate and deep aquifers from pumping of a new deep (Well 165) and intermediate well (Well 166) at Shasta Park. Assumptions used with the Theis Equation include that the aquifer is confined, uniform, and extends infinitely. As shown in Table 1, for an intermediate well the model uses an aquifer transmissivity of 52,000 gpd/ft, and storativity of 0.0005; for a deep well, the model uses an aquifer transmissivity of 157,000 gpd/ft, and a storativity of 0.0005.

Table 1
Aquifer Characteristics

	Mehrten Formation (Intermediate)		Mehrten Formation (Deep)	
	Transmissivity (gpd/ft)	Storativity	Transmissivity (gpd/ft)	Storativity
Approximate Value	52,000	5×10^{-4}	157,000	5×10^{-4}

Aquifer Analysis and Pumping Impacts of the Intermediate Mehrten Aquifer

The Theis Equation was used to calculate estimated drawdown in the Intermediate Mehrten Aquifer. The model in Table 2 assumes that the intermediate well (Well 166) will be pumping at a rate of 2,200 gpm for various time durations. The estimated drawdown (rounded to the nearest foot) that may be expected radially from Shasta Park is shown in Table 2 below.

Table 2
Theis Equation: Projected Drawdown of Intermediate Aquifer by Distance

Days of Pumping	Gallons per Minute (GPM)	Pumping Well	Distance from Shasta Park Well				Projected Drawdown (feet)
			0.5 mi	1 mi	2 mi	3 mi	
1	2,200	84	8	3	0.2	0	
7	2,200	93	17	10	5	2	
30	2,200	100	24	17	11	7	
182	2,200	109	33	26	19	15	
365	2,200	112	36	29	22	19	

In Table 3, the model assumes that the intermediate well will be pumping continuously at a rate of 2,200 gpm for one year. The estimated drawdown (rounded to the nearest foot) that may be expected radially from Shasta Park in the intermediate aquifer is shown in Table 3 below.

In addition to seasonal groundwater fluctuations, drawdown will likely occur for the four Cal Am wells located approximately 1.5 to 2 miles north and east of Shasta Park. The two City wells located northwest of Shasta Park are shallow wells and will not be impacted. The estimated drawdown will likely not have a significant impact to overall groundwater levels for intermediate wells located greater than three miles from Shasta Park (less than 20 feet).

Aquifer Analysis and Pumping Impacts of the Deep Mehrten Aquifer

The Theis Equation was used to calculate estimated drawdown in the Deep Mehrten Aquifer. The model in Table 3 assumes that the deep well will be pumping at a rate of 2,800 gpm for various time durations. The estimated drawdown (rounded to the nearest foot) that may be expected radially from Shasta Park is shown in Table 2 below.

Table 3
Theis Equation: Projected Drawdown of Deep Aquifer by Distance

Days of Pumping	Gallons per Minute (GPM)	Pumping Well	Distance from Shasta Park Well				Projected Drawdown (feet)
			0.5 mi	1 mi	2 mi	3 mi	
1	2,800	37	5	3	1	0	
7	2,800	42	9	7	4	2	
30	2,800	44	12	9	7	5	
182	2,800	48	16	13	10	9	
365	2,800	49	17	15	12	10	

In addition to seasonal groundwater fluctuations, groundwater level drawdown will likely occur for the two SCWA deep wells located near Waterman Road, approximately 3.3 miles east of Shasta Park, as well as the SCWA's Big Horn wells located approximately 3.3 miles to the south. The estimated drawdown will likely not have a significant impact to overall groundwater levels for deep wells located greater than three miles from Shasta Park (less than 15 feet).

5 - SUMMARY

Wood Rodgers has prepared this Groundwater Impacts and Water Supply Assessment report to support the City of Sacramento's planned well site and water reservoir at the Shasta Park site. The production well designs and plans for above-grade storage and a booster pump station meet the goals and policies for Citywide Utilities as set forth in the 2030 General Plan, including providing adequate water supply from a high-quality and reliable water source. The findings from the 2012 exploratory drilling at Shasta Park and the subsequent construction of Well 165

indicate that the deep portion of the Mehrten Formation aquifer will meet the City's water supply objectives and the DDW primary drinking water requirements. In addition, the intermediate Mehrten Formation aquifer will meet the City's water supply objectives and DDW primary drinking water requirements, with the exception of manganese removal which is a secondary drinking water requirement.

Anticipated drawdown in other wells due to the operation of Well 165 and Well 166 are shown in Tables 2 and 3. The amount of drawdown in offsite wells will vary in response to the well capacity, distance to offsite wells, and the duration of pumping cycles.

If Well 165 were to continuously operate at 2,800 gallons per minute for one year, approximately 4,500 acre-feet of groundwater would be extracted from the well. This corresponds to approximately two percent of the sustainable yield for the central area (273,000 acre-feet) as determined by the Water Forum Agreement. If Well 166 were to continuously operate at 2,200 gpm for one year, approximately 2,900 acre-feet of groundwater would be extracted from the well, corresponding to one percent of the sustainable yield. However, with the City's conjunctive use of groundwater and surface water, the Shasta Park well may only be pumping during critical dry years and summer months to meet peak demands.

Groundwater levels in the Subbasin have slightly recovered each year since the early 1990s due to conjunctive water use. This trend will likely continue as more surface water is delivered to the region in conjunction with local water conservation practices.

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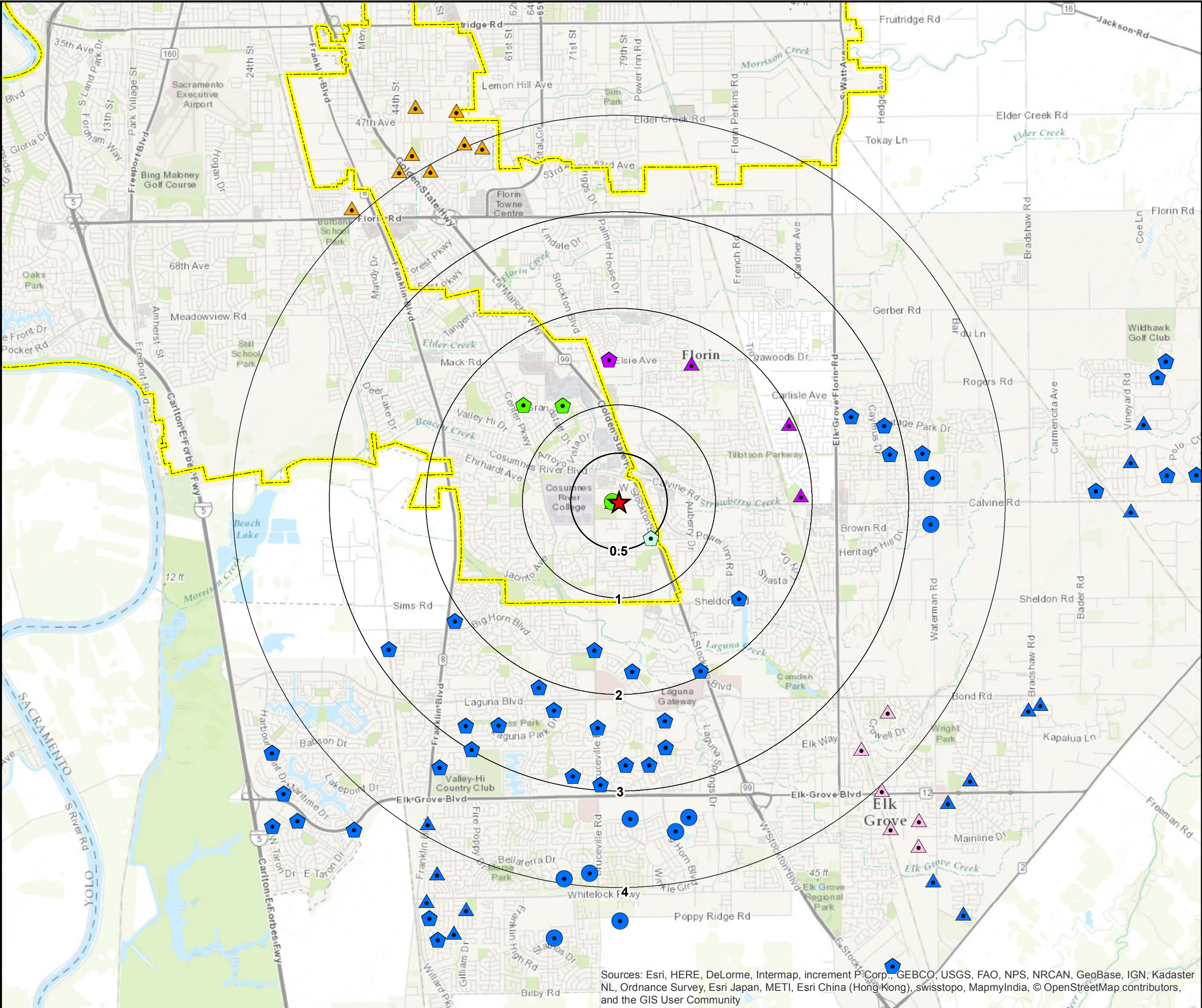
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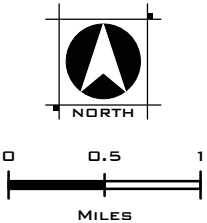
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PROJECT SITE AND WELL LOCATION MAP
CITY OF SACRAMENTO
WATER SUPPLY ASSESSMENTSITE
CITY/COUNTY, STATE
JUNE, 2017



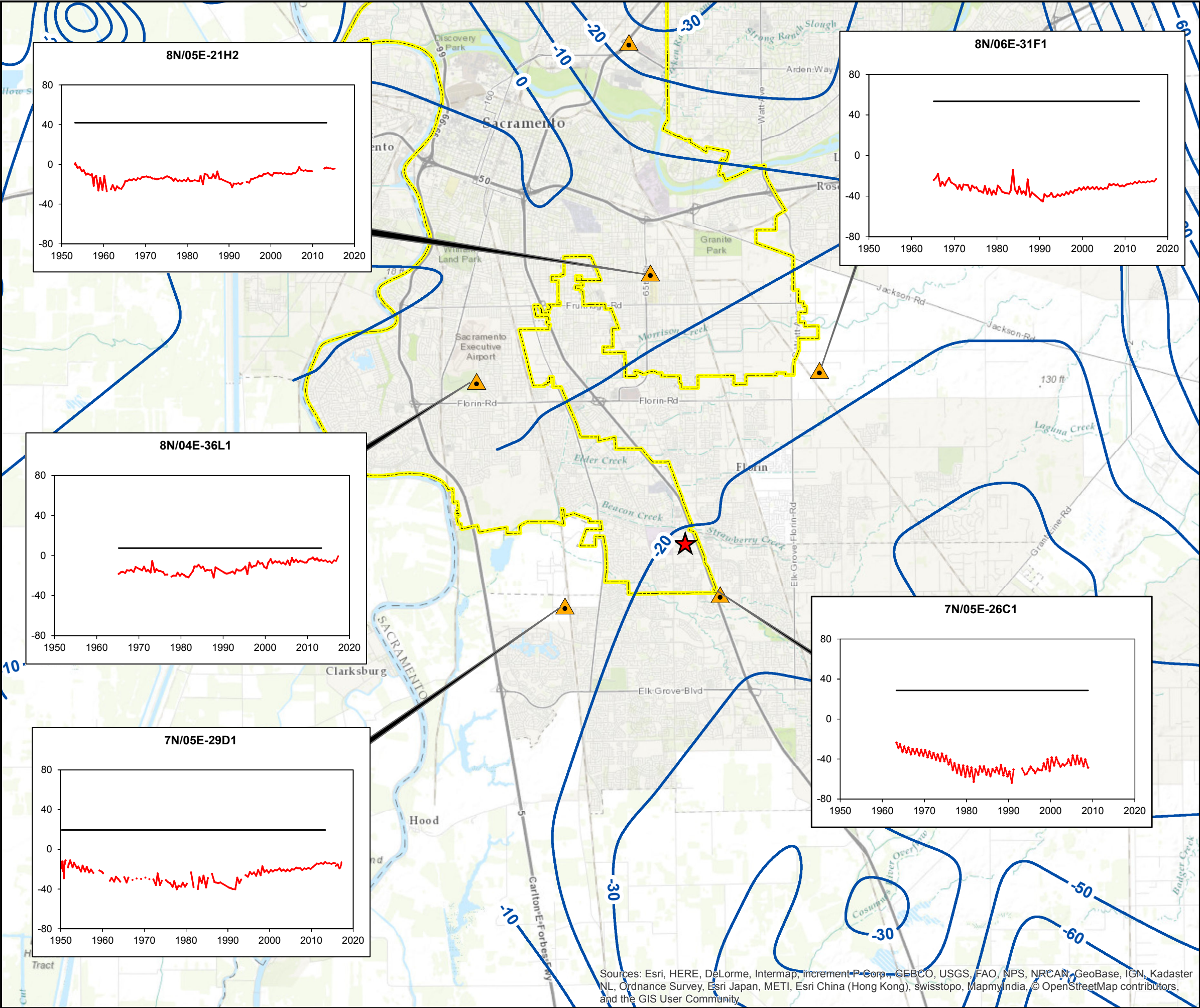
- ★ Shasta Park Site
- ▲ California American Water Company Shallow Well
- City of Sacramento Deep Well
- ▲ City of Sacramento Intermediate Well
- ▲ City of Sacramento Shallow Well
- ▲ Elk Grove Water District Intermediate Well
- ▲ Fruitridge Vista Water District Intermediate Well
- ▲ Small Community Water Sytem Shallow Well
- Sacramento County Water Agency Deep Well
- ▲ Sacramento County Water Agency Intermediate Well
- ▲ Sacramento County Water Agency Shallow Well
- City of Sacramento Boundary

Well Depth Classification
Shallow: ≤ 500 feet
Intermediate: 500 to 1,000 feet
Deep: ≥ 1,000 feet

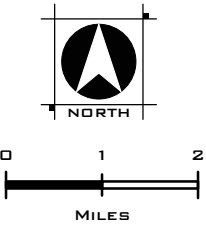
NOTE: Due to past well log confidentiality and subsequent redacting of owners:
1) Some municipal wells may be missing;
2) Well locations are approximate and may not accurately represent the depth of well;
3) Some wells on this map may be planned, not equipped, or destroyed and thus not operational.

Sources: Esri, HERE, DeLorme, Intermap, increment P Corp., GEBCO, USGS, FAO, NPS, NRCAN, GeoBase, IGN, Kadaster NL, Ordnance Survey, Esri Japan, METI, Esri China (Hong Kong), swisstopo, MapmyIndia, © OpenStreetMap contributors, and the GIS User Community



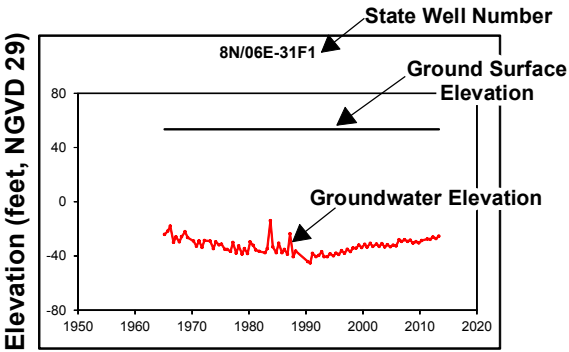


GROUNDWATER ELEVATION HYDROGRAPHS
AND FALL 2015 CONTOURS OF EQUAL
GROUNDWATER ELEVATION
CITY OF SACRAMENTO
SHASTA PARK WATER SUPPLY ASSESSMENT
CITY/COUNTY, STATE
JUNE, 2017



- ★ Shasta Park Well Site
- Fall 2015 Groundwater Elevation Contour (10 foot Interval)
- City of Sacramento Boundary

NOTES:



Notes:
Adapted from California DWR Water Data Library Contour Map;
Contour interval is 10 feet, relative to Mean Sea Level
Sources:
City of Sacramento, Sac. County Department of Water Resources, and California Department of Water Resources

Sources: Esri, HERE, DeLorme, Intermap, increment P Corp., GEBCO, USGS, FAO, NPS, NRCAN, GeoBase, IGN, Kadaster NL, Ordnance Survey, Esri Japan, METI, Esri China (Hong Kong), swisstopo, MapmyIndia, © OpenStreetMap contributors, and the GIS User Community

