24

REPORT TO COUNCIL
City of Sacramento

915 I Street, Sacramento, CA 95814-2604
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Consent
October 17, 2006

Honorable Mayor and
Members of the City Council

Title: Water Supply Assessment (SB 610) – Proposed Panhandle Planned Unit Development Project

Location/Council District: North Natomas, District 1

Recommendation: Adopt a **Resolution** approving the Water Supply Assessment for the proposed Panhandle Planned Unit Development Project.

Contact: Scot Mende, New Growth Manager (916) 808-4756; Carol Shearly, Director of Planning, (916) 808-5893

Presenters: Not applicable

Department: Planning

Division: New Growth

Organization No: 4913

Description/Analysis

Issue: Under Senate Bill 610, which added new provisions to California Environmental Quality Act (CEQA) and the State Water Code in 2002, a Water Supply Assessment ("WSA") is required to be prepared for the Panhandle Planned Unit Development Project. The WSA must be approved by the City Council as the governing body of the City's Utilities Department, which is the public water supplier that would serve the project.

Approval of a WSA is not approval of the development project for which the WSA is prepared. A WSA is an informational document required to be prepared for use in the City's environmental review of a project under CEQA. It assesses the adequacy of water supplies to serve the proposed project and cumulative demand.

The content of a WSA is specified by the Water Code and includes identification of any existing water supply entitlements or contracts, and detailed information

about groundwater supplies. If the project was included as part of the projected water demand accounted for in the most recently adopted Urban Water Management Plan (UWMP), the water supplier may incorporate information from the UWMP in preparing the assessment. In this instance, the City's existing UWMP does not account for the project. An updated UWMP, which does account for the project, is currently in draft form, but has not yet been approved.

The Panhandle WSA concludes that

- The City has adequate water supplies to meet Project demands and cumulative demands through 2030;
- Additional treatment capacity will be needed to meet anticipated cumulative maximum day demand as early as 2017; and,
- Construction of the diversion and water treatment facilities included in the Sacramento River Water Reliability Study would provide adequate capacity to meet anticipated cumulative demands through 2030 and beyond.

A copy of the WSA for the proposed Panhandle Planned Unit Development Project is attached as Attachment 3.

Policy Considerations: Approving the Water Supply Assessment is consistent with the Council focus area of Economic Development. Specifically, the assessment identifies that sufficient water entitlements and existing and planned infrastructure are available to serve the development.

Environmental Considerations: Approval of the WSA is a preliminary step in the CEQA process. No decisions concerning project approval are made until a later date, after approval of the project's CEQA documents.

Commission/Committee Action: None.

Rationale for Recommendation: Under CEQA and the Water Code, the City is required to prepare and approve a WSA for the Panhandle Annexation and PUD project. The WSA analyzes the sufficiency of water supplies to serve the proposed project and cumulative development.

Financial Considerations: None

Emerging Small Business Development (ESBD): Not applicable, as no goods or services are being obtained.

Respectfully Submitted by: _____
Scot Mende
New Growth Manager

Approved by: _____
Carol Shearly
Director of Planning

Recommendation Approved:

_____
for Ray Kerridge
City Manager

Table of Contents:

	Report	pg. 1
Attachments		
1	Background	pg. 4
2	Resolution	pg. 5
3	Water Supply Assessment	pg. 6

Attachment 1

Background

Water Code Section 10910 requires the City of Sacramento to prepare and approve a Water Supply Assessment ("WSA") for the proposed Panhandle Planned Unit Development Project.

The Project site encompasses 594.7 gross acres of land located south of Elkhorn Boulevard and north of Del Paso Road in unincorporated Sacramento County. The Project site is located immediately west of the Natomas East Main Drainage Canal, Sorento Road and East Levee Road and immediately east of the Natomas Park subdivisions. The Project site is located in unincorporated Sacramento County within the City of Sacramento's Sphere Of Influence. The Project consists of residential, commercial and mixed uses, open space, parks, an elementary school and joint middle school/high school site. The Project proposes 3,075 dwelling units in a mix of residential unit types, lot sizes and densities.

The Project would potentially increase water use within the City by 2,045 acre feet per year or an average daily demand of 1.88 million gallons per day. Maximum day demands are projected to increase by 3.4 million gallons per day at buildout.

The project will connect to the City water system. The assessment indicates that the City has sufficient water entitlements and sufficient existing and planned water infrastructure capacity to serve the project. Furthermore, the water supply assessment indicates that the City's water system's projected supplies will be available during normal, dry, and multiple dry water years during the next 20-years to meet projected water demands.

Attachment 2

RESOLUTION NO.

ADOPTED BY THE SACRAMENTO CITY COUNCIL

APPROVAL OF WATER SUPPLY ASSESSMENT FOR THE PROPOSED PANHANDLE PLANNED UNIT DEVELOPMENT PROJECT

BACKGROUND

A. Water Code Section 10910 requires the City of Sacramento to prepare and approve a Water Supply Assessment ("WSA") for the proposed Panhandle Planned Unit Development Project.

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

Section 1. The Water Supply Assessment for the proposed Panhandle Planned Unit Development Project, dated October 2006, is approved.

City of Sacramento

Final

Water Supply Assessment

for the Proposed

Panhandle Planned Unit Development Project

October 2006

Prepared by:

EIP

WATER RESOURCES GROUP

A division of

PBSJ

An employee-owned company

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TABLE OF CONTENTS

1.0 INTRODUCTION 1-1
1.1. Project Description 1-2
1.2. Water Supply Planning Under SB 610 and SB 221 1-2
1.2.1. SB 610 Water Supply Assessment 1-5
2.0 WATER SUPPLY 2-1
2.1. Water Rights and Contracts 2-1
2.2. Reliability of Water Supplies 2-4
2.2.1. Surface Water Supply and Reliability 2-4
2.2.2. Groundwater Supply and Reliability 2-6
3.0 WATER DEMAND ANALYSIS 3-1
3.1. Project Water Demand 3-1
3.2. System Demand 3-1
3.3. Comparison of Available Water Supplies versus Demand 3-4
3.3.1. Annual Supply and Demand 3-4
3.3.2. Maximum Day Supply and Demand 3-5
4.0 CONCLUSION 4-1

APPENDIX A DRAFT City of Sacramento Water Supply Masterplan Projections
APPENDIX B Executive Summary, Initial Alternatives Report, Final Version. Sacramento River Water Reliability Study, March 2005

LIST OF TABLES

TABLE 2-1 Surface Water Entitlements 2-3
TABLE 2-2 USBR Maximum Contracted Annual Surface Water Diversion (AFA) 2-3
TABLE 2-3 Restricted American River Diversion Rates 2-5
TABLE 2-4 Maximum Day Production 2-6
TABLE 2-5 2006 Annual Surface Water Supply (AFA) 2-6
TABLE 3-1 Proposed Panhandle Project Water Demands 3-2
TABLE 3-2 Projected Annual and Maximum Day Demand for Sacramento 2030 3-3
TABLE 3-3 Supply and Demand Comparison During Normal Years with Groundwater (AFA) 3-4
TABLE 3-4 Supply and Demand Comparison during "Conference Years" (AFA)a 3-5
TABLE 3-5 Peak Day Surface Water Supply Capacity (Existing Facilities) and Demand Comparison during Normal Flow Conditions (mgd) 3-6
TABLE 3-6 Peak Day Surface Water Supply Capacity (Existing Facilities) and Demand Comparison during Hodge Flow Conditions (mgd) 3-6

LIST OF FIGURES

FIGURE 1-1 Project Vicinity Map – Panhandle PUD Project 1-3
FIGURE 1-2 Panhandle PUD Schematic Plan 1-4
FIGURE 2-1 USBR Maximum Contracted Annual Surface Water Diversion 2-3
FIGURE 2-2 City of Sacramento Groundwater Wells and Groundwater Management Areas 2-8

1.0 INTRODUCTION

The proposed Panhandle Planned Unit Development (PUD) Project (Project) area is approximately 595 acres between Elkhorn Boulevard and Del Paso Road within the City of Sacramento's sphere of influence. The Panhandle is a 1,430-acre area with a 595-acre Northern Portion and an 835-acre Southern Portion, both of which are proposed to be annexed into the City of Sacramento. The Southern Portion is already substantially developed and water supplies are served by the Sacramento County Water Agency (SCWA) through the Northgate system; hence, water demands within the Southern Portion are not analyzed in this document. This Water Supply Assessment evaluates the water supply for the Northern Portion of the Panhandle. The Project is bordered on the east and west by existing development within the City of Sacramento. The proposed Panhandle PUD project is a residential mixed-use community with two school sites proposed within the North Natomas Community Plan (NNCP) area.

The Project would require a General Plan Amendment, North Natomas Community Plan (NNCP) Amendment, Pre-zone, Planned Unit Development (PUD) Designation, establishment of a PUD schematic plan and PUD guidelines, three tentative master parcel maps, three tentative subdivision maps, special permits and development agreements between the applicants (Dunmore Homes and Vaquero Land Holdings) and the City. The project area is within the NNCP area and within the City's sphere of influence. The project area would require annexation to the City.

Del Paso Road forms the southern boundary of the Project area. Light industrial commercial/office buildings are located south of Del Paso Road. The area west of the Project site is completely developed within the NNCP with residential uses in the Regency Park and Natomas Park communities. Natomas Charter School is located immediately west of the Project site, on Del Paso Road.

The Project is a residential mixed-use community proposed within the NNCP. The goal of the Project is to create a variety of residential neighborhoods with a nearby open space parkway that extends the entire length of the Project. The Panhandle PUD consists of residential, commercial, mixed use, open space, parks, with an elementary and a high school-middle school on 595 acres. The Project proposes 3,075 dwelling units in a mix of residential unit types, lot sizes and densities in three tentative maps[1].

The City is conducting environmental review under the requirements of the California Environmental Quality Act (CEQA) for the Project. This Water Supply Assessment (WSA) will provide information for use in the CEQA analysis for this project. The environmental review for the Project includes the need for an assessment of the available water supply to serve the project. The requirements for such a WSA are described in the sections of the California Water Code (Water Code) amended by the enactment of Senate Bill 610 (SB 610) in 2002 [Public Resources Code 21151.9]. This WSA addresses the Panhandle PUD located between Elkhorn Boulevard and Del Paso Road. Separate water supply assessments would be required for other future projects located south of Del Paso Road in the Southern Portion of the Panhandle Annexation area.

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1 Water Demands were based on 3,237 residential units and remains consistent with Panhandle Water Supply Master Plan (MacKay & Somps)

SB 610 and SB 221 provide a nexus between the regional land use planning process and the environmental review process. These laws also reflect the growing awareness of the need to incorporate water supply and demand analysis at the earliest possible stage in the land use planning process. The core of these laws is to provide an assessment of whether available water supplies are sufficient to serve the demand generated by a project, as well as the reasonably foreseeable cumulative demand in the region over the next 20 years under a range of hydrologic conditions.

This WSA provides information on the available water supply to serve the Project, based on the sections of the Public Resources Code and Water Code amended by SB 610. In addition, this information can be used as part of the written verification of water supplies, as required under SB 221.

This document is divided into four sections: Introduction, Water Supply, Demand Analysis, and Conclusion. The Introduction describes the project and water supply planning under SB 610 and SB 221.

1.1. Project Description

The Project site encompasses 594.7 acres (gross) of land located south of Elkhorn Boulevard and north of Del Paso Road in unincorporated Sacramento County. The Project site is located immediately west of the Natomas East Main Drainage Canal, Sorento Road and East Levee Road and immediately east of the Natomas Park subdivisions. The Project site is located in unincorporated Sacramento County within the City of Sacramento's sphere of influence. The site is bound on the east and west by lands that are within the City's limits. The Project location (Northern Portion) is shown in FIGURE 1-1. Again, for purposes of this WSA, the Southern Portion of the Project area described in the EIR is excluded since this area is substantially developed and is already being served with water by SCWA.

The Project consists of residential, commercial, mixed use, open space, parks, an elementary school and joint middle school/high school site on 595 acres. The Project proposes 3,075 dwelling units in a mix of residential unit types, lot sizes and densities, as shown in FIGURE 1-2. The high school/middle school site is within the Panhandle PUD is proposed by Grant Joint Union High School District and was the subject of a separate environmental document (Grant Joint Union High School District New High School/Middle School Environmental Impact Report, May 2006; SCH# 2004102018).

1.2. Water Supply Planning Under SB 610 and SB 221

SB 610 and SB 221 were passed into law on January 1, 2002. These laws reflect the need to incorporate water supply and demand analysis at the earliest possible stage in the planning process. SB 610 added Section 21151.9 to CEQA (Public Resources Code) and amended portions of the Water Code, including Section 10631, which contains the Urban Water Management Planning Act, as well as adding Sections 10910, 10911, 10912, 10913, and 10915, which describe the required elements of a WSA. SB 221 amended Section 65867.5 and added Sections 66455.3 and 66473.7 to the Government Code. SB 610 is designed to build on the information that is typically contained in an Urban Water Management Plan (UWMP). The amendments to Water Code Section 10631 were designed to make WSAs and UWMPs consistent. A key difference between the WSA's and UWMPs is that UWMPs are required to be revised every five years, in years ending with either zero or five, while WSAs are required as part of the environmental review process for each individually qualifying project. As a result, the 20-year planning

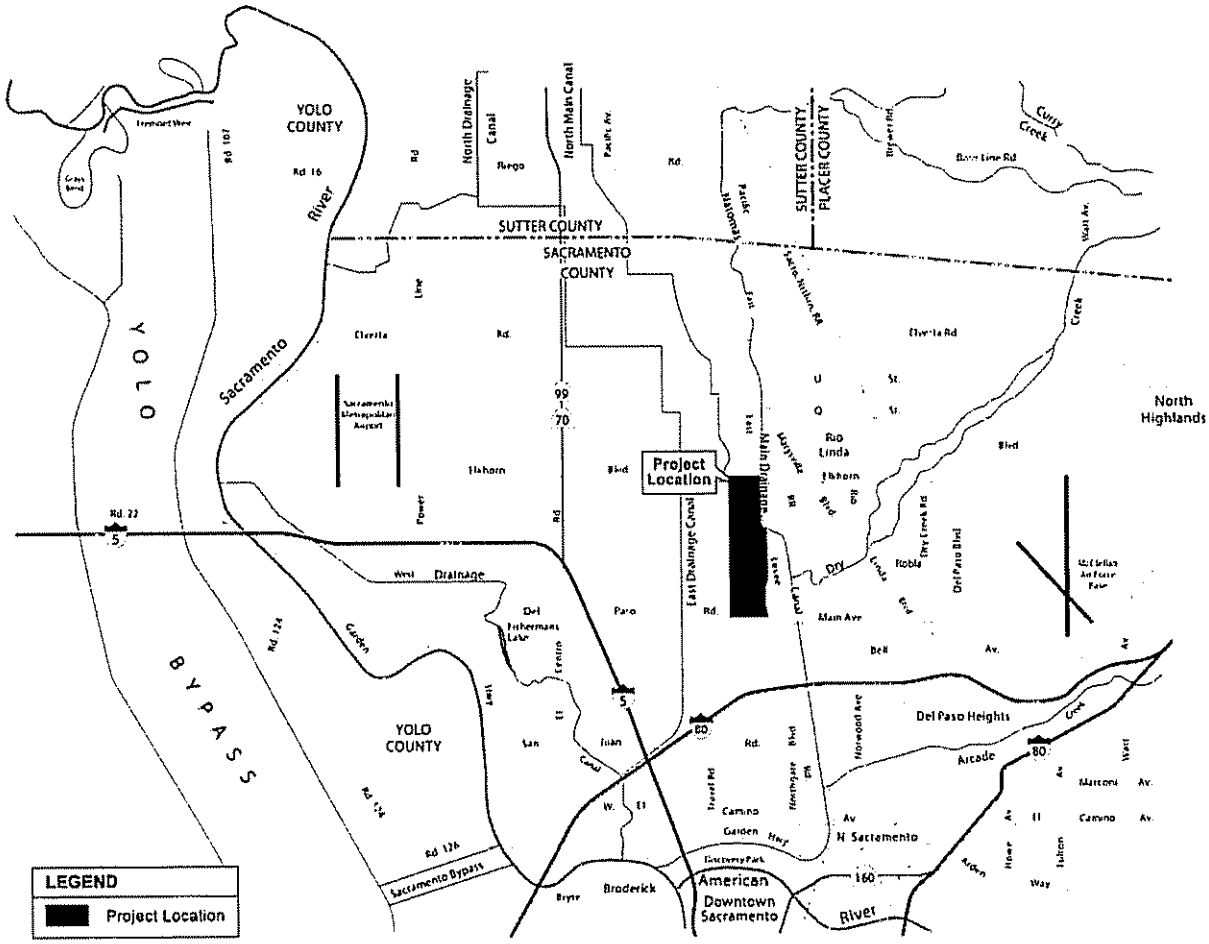
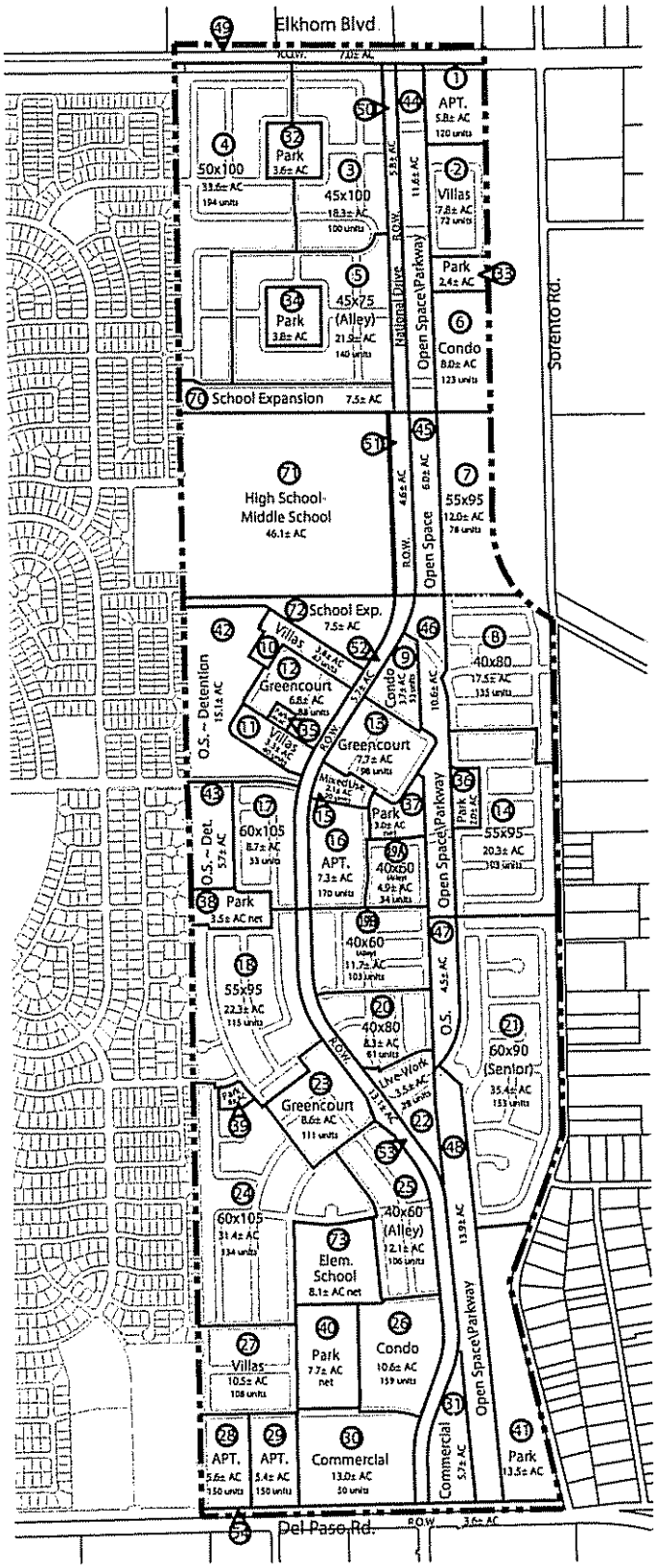


FIGURE 1-1 Project Vicinity Map – Panhandle PUD Project

horizons for each type of document may cover slightly different planning periods than other WSAs or the current UWMP. Additionally, not all water providers who must prepare a WSA under SB 610 are required to prepare an UWMP.

1.2.1. Water Supply Planning Under SB 610 and SB 221

SB 610 and SB 221 were passed into law on January 1, 2002. These laws reflect the need to incorporate water supply and demand analysis at the earliest possible stage in the planning process. SB 610 added Section 21151.9 to CEQA (Public Resources Code) and amended portions of the Water Code, including Section 10631, which contains the Urban Water Management Planning Act, as well as adding Sections 10910, 10911, 10912, 10913, and 10915, which describe the required elements of a WSA. SB 221 amended Section 65867.5 and added Sections 66455.3 and 66473.7 to the Government Code. SB 610



Source: MacKay & Somps. 2006

EIP

A Division of PBSJ

FIGURE 1-2

Panhandle Planned Unit Development Schematic Plan

D51238.00

Panhandle

is designed to build on the information that is typically contained in an Urban Water Management Plan (UWMP). The amendments to Water Code Section 10631 were designed to make WSAs and UWMPs consistent. A key difference between the WSA's and UWMPs is that UWMPs are required to be revised every five years, in years ending with either zero or five, while WSAs are required as part of the environmental review process for each individually qualifying project. As a result, the 20-year planning horizons for each type of document may cover slightly different planning periods than other WSAs or the current UWMP. Additionally, not all water providers who must prepare a WSA under SB 610 are required to prepare an UWMP.

Under SB 221, approval by a city or county of certain residential subdivisions, as defined by California Government Code Section 66473.7(a) (1), requires an affirmative written verification of sufficient water supply. SB 221 is designed as a "fail-safe" mechanism to ensure that collaboration on finding the needed water supplies to serve a new large subdivision occurs early in the planning process. The Project would require written verification under SB 221, because it includes three (3) tentative subdivision maps with more than 500 residential units each. The Project would total 3,075 units.

1.2.2. SB 610 Water Supply Assessment

The SB 610 WSA process involves answering the following questions:

- Is the project subject to CEQA?
- Is it a project under SB 610?
- Is there a public water system?
- Is there a current UWMP that accounts for the project demand?
- Is groundwater a component of the supplies for the project?
- Are there sufficient supplies available to serve the project over the next 20 years?

1.2.2.1. "Is the Project Subject to CEQA?"

The first step in the SB 610 process is determining whether the project is subject to CEQA. SB 610 amended Public Resources Code Section 21151.9 to read: "Whenever a city or county determines that a project, as defined in Section 10912 of the Water Code, is subject to this division [i.e., CEQA], it shall comply with part 2.10 (commencing with Section 10910) of Division 6 of the Water Code." The Project is currently under environmental review pursuant to the requirements of CEQA; therefore, the information contained in this assessment will be used to support the Environmental Impact Report (EIR) at the project-level analysis.

1.2.2.2. "Is It a Project Under SB 610?"

The second step in the SB 610 process is to determine if a project meets the definition of a "Project" under Water Code Section 10912 (a). Under this section, a "Project" is defined as meeting any of the following criteria:

1. A proposed residential development of more than 500 dwelling units;
2. A proposed shopping center or business establishment employing more than 1,000 persons or having more than 500,000 square feet (ft^2) of floor space;
3. A commercial building employing more than 1,000 persons or having more than 250,000 ft^2 of floor space;
4. A hotel or motel with more than 500 rooms;

5. A proposed industrial, manufacturing, or processing plant, or industrial park, planned to house more than 1,000 persons, occupying more than 40 acres of land, or having more than 650,000 ft^2 of floor area;
6. A mixed-use project that includes one or more of these elements; or
7. A project creating the equivalent demand of 500 residential units.

Alternately, if a public water system has less than 5,000 service connections, the definition of a "Project" also includes any proposed residential, business, commercial, hotel or motel, or industrial development that would account for an increase of ten percent or more in the number of service connections for the public water system. Because the Project is a mixed-use development that includes 3,075 dwelling units and commercial uses, it meets the requirements as a "Project" under the Water Code.

1.2.2.3. "Is There a Public Water System?"

The third step in the SB 610 process is determining if there is a "public water system" to serve the project. Section 10912 (c) of the California Water Code (Water Code) states: "[A] public water system means a system for the provision of piped water to the public for human consumption that has 3,000 or more service connections."

The Project site would be served by the City's Utilities Department, which is a public water provider (agency) that served 131,745 connections in June 2004. The City operates two water treatment plants (WTP). The Sacramento River WTP is located on the east bank of the Sacramento River, about a half mile downstream of the confluence of the Sacramento and American Rivers. The E. A. Fairbairn WTP (formally American River WTP) is located adjacent to the American River between the H Street and Howe Avenue bridges, approximately seven miles upstream of the confluence. The City also has 32 municipal drinking water wells; of these 23 are currently active, and nine are on standby.[2]

1.2.2.4. "Is There a Current UWMP That Accounts for the Project Demand?"

Step four in the SB 610 process involves determining if there is a current UWMP that considers the projected water demand for the project area. The Water Code requires that all public water systems providing water for municipal purposes to more than 3,000 customers, or supplying more than 3,000 acre-feet per annum (AFA), must prepare an UWMP, and this plan must be updated at least every five years on or before December 31, in years ending in five and zero.

Water Code Section 10910(c)(2) states, "If the projected water demand associated with the Project was accounted for in the most recently adopted urban water management plan, the public water system may incorporate the requested information from the urban water management plan in preparing the elements of the assessment required to comply with subdivisions (d),(e),(f), and (g) [i.e., the WSA]." The City's most recent UWMP was released in 2000, but did not include water demand that would be generated by the Project. Presently, the City is working on an updated UWMP for adoption and release this fall 2006. This UWMP will explicitly account for the water demands generated by this Project[3] The project site was formerly used as agricultural grazing land, but is currently vacant. The Project would develop a currently undeveloped site, and thus water use is expected to be substantially greater than existing conditions.

2 Dan Sherry, City of Sacramento, Utilities Department. Status of groundwater wells. June 23, 2005.
3 Jim Peifer, City of Sacramento, Utilities Department. Personal communication on September 11, 2006

1.2.2.5. "Is Groundwater a Component of the Supplies for the Project?"

The requirements of Water Code Section 10910(f), parts 1 through 5, apply if groundwater is a source of supply for a Project. The City maintains 32 wells for potable and non-potable use; 23 wells are actively used to supply drinking water.[4] The total capacity of the wells is 33 million gallons per day (mgd) which produces up to 33,600 acre-year annually (AFA). The wells are located over both the North American Subbasin and the South American Subbasin as described by the Department of Water Resources. An expanded groundwater discussion is presented in the Water Supply section 2.2.2.

1.2.2.6. "Are There Sufficient Supplies to Serve the Project Over the Next Twenty Years?"

The next step in the SB 610 process is to prepare the actual assessment of the available water supplies, including the availability of these supplies in all water-year conditions over a 20-year planning horizon, and an assessment of how these supplies relate to project-specific and cumulative demands over that same 20-year period. The buildout of City of Sacramento's General Plan is anticipated in 2030; therefore, this WSA assumed a longer planning horizon, which covers years 2000 to 2030.

Water Code Section 10910 (c)(4) states: "If the city or county is required to comply with this part pursuant to subdivision (b), the water assessment for the project shall include a discussion with regard to whether the total projected water supplies, determined to be available by the city or county for the project during normal, single dry and multiple dry water years during a 20-year projection, will meet the projected water demand associated with the Project, in addition to existing and planned future uses, including agricultural and manufacturing uses."

There are three primary areas to be addressed in a WSA:

- relevant water supply entitlements, water rights, and water contracts;
- a description of the available water supplies;
- analysis of the demand placed on those supplies, both by the Project and on a cumulative basis.

Water entitlements are addressed in Section 2 and the analysis of the demand is discussed in Section 3. Section 4 contains results and conclusions.

4 Dan Sherry, City of Sacramento, Utilities Department. Status of groundwater wells. June 23, 2005. Comments are applicable to Panhandle Planned Unit Development Project WSA because both projects rely on same public water system

2.0 WATER SUPPLY

This section reviews the City's water supply entitlements and water rights.

Water Code Section 10910(d)(1) states: "The assessment required by this section shall include an identification of any existing water supply entitlements, water rights, or water service contracts relevant to the identified water supply for the Project, and a description of the quantities of water received in prior years by the public water system, or the city or county if either is required to comply with this part pursuant to subdivision (b), under the existing water supply entitlements, water rights, or water service contracts."

2.1. Water Rights and Contracts

Water rights are a historically important means of securing water use in California. These rights date back to the Gold Rush days of the 1850s, whereby water claims were made by "first in time, first in right"; this established a water user's right to divert water from a specific point on a stream for a specific use. Since 1914, the State Water Rights Board, and its successor agency, the State Water Resources Control Board (SWRCB), has been charged with issuing and administrating water rights permits in California. Under this process, an application is filed and the SWRCB issues a permit for surface water diversion, including the approved place of use (POU) for that water.

2.1.1.1. Surface Water Entitlements

The City has surface water entitlements, consisting of five appropriative water right permits issued by the State Water Resources Control Board, pre-1914 rights and a water rights settlement contract with the Bureau of Reclamation (USBR). Surface water is currently diverted at two locations, the Sacramento River WTP and the Fairbairn WTP. The City's current authorized place of use (POU) for water diverted from the Sacramento River includes all the land within the City Limits, while the POU for water diverted from the American River includes not only the City limits, but also portions of service areas of several other water purveyors. These entitlements are discussed in more detail below.[5]

2.1.1.2. Sacramento River Water Rights

The City has pre-1914 and post-1914 appropriative rights for water from the Sacramento River. The City has used Sacramento River water since 1854 and claims a pre-1914 appropriative right to divert 75 cubic feet per second (cfs) from the Sacramento River.

The City's post-1914 Sacramento River permit (Permit 992) authorizes the City to take water from the Sacramento River by direct diversion, and has a priority date of March 30, 1920. Permit 992 authorizes

5 The descriptions and discussion in this Water Supply Assessment of the City's water rights and water right settlement contract are provided solely for informational purposes, and nothing herein is intended to, nor shall any provision of this Water Supply Assessment be interpreted, to modify or affect in any way such rights and contract.

the City to divert up to 81,800 acre-feet annually (AFA) with a maximum flow of 225 cubic-feet per second (cfs). Permit 992 allows the City to use water diverted from the Sacramento River within the city limits of the City of Sacramento, as this area changes from time to time through annexations. The project site will be included in this POU upon annexation.

2.1.1.3. American River Water Rights

The City holds four water right permits authorizing diversions of American River water. American River Permits 11358 and 11361 authorize the City to divert water from the American River by direct diversion, with a combined maximum allowable rate of diversion of 675 cfs, with priority dates of October 29, 1947, and September 22, 1954, respectively. No direct diversions under these two permits are allowed in August, September, or October. The POU for both permits is 79,500 acres within and adjacent to the City. The other two American River permits (Permits 11359 and 11360) authorize re-diversion for consumptive uses of American River tributary water previously diverted by the Sacramento Municipal Utility District's (SMUD's) Upper American River Project (UARP). Permits 11359 and 11360 have priority dates of February 13, 1948, and July 29, 1948, respectively, and the POU for both permits is 96,000 acres within and adjacent to the City. The combined maximum allowable diversion under these permits includes rediversion of up to 1,510 cfs of UARP direct diversion water and up to 589,000 AFA of UARP stored water.

The project site is included in the POUs for the American River water right permits. The City's diversions of American River water to the City's Fairbairn Water Treatment Plant (FWTP) also are subject to limitations during certain time periods specified in the Water Forum Agreement, as discussed later in this Water Supply Assessment.

2.1.1.4. Bureau of Reclamation Settlement Contract

The City also has a water rights settlement contract entered into in 1957 by the City and the USBR. At that time, the State Water Rights Board was deciding how to allocate water rights on the American River among numerous competing applicants, including the City and the Bureau. The City and the USBR had protested each others' applications. This contract settled their differences and enabled both parties to drop their protests, to the benefit of both parties.

Under the City/USBR settlement contract, the City agreed to limit its combined rate of diversion under its American River water rights permits to a maximum of 675 cfs. The City also agreed to cap its annual diversions under its American River water rights permits according to a build-up scale up reaching 245,000 AFA in the year 2030. The City agreed to limit its rate of diversion under its Sacramento River water rights Permit 992 to a maximum of 225 cfs and a maximum amount of 81,800 AFA. This limits the City's total diversions of Sacramento and American River water under its Sacramento and American River water rights to 326,800 AFA in the year 2030.

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

2.1.1.5. Summary of Surface Water Entitlements

As discussed above, the City holds five permits to divert or redivert water from the Sacramento and American Rivers. The 1957 settlement contract with the USBR sets forth a diversion schedule that assures, as well as limits, the total diversion available to City from the Sacramento and American Rivers. The maximum total annual diversion specified under the contract for the year 2030 is 326,800 AFA, as shown in TABLE 2-1. The annual build-up specified in the contract for 2005 to 2030 is shown in FIGURE 2-1 and TABLE 2-2.

TABLE 2-1
Surface Water Entitlements

Permit	Authorized Diversion	Maximum Permitted Diversion	
		AFA	cfs
1957 USBR 2030 Contractual Maximum	American River	245,000	675
	Sacramento River	81,800	225
	Total Combined Diversion	326,800	900

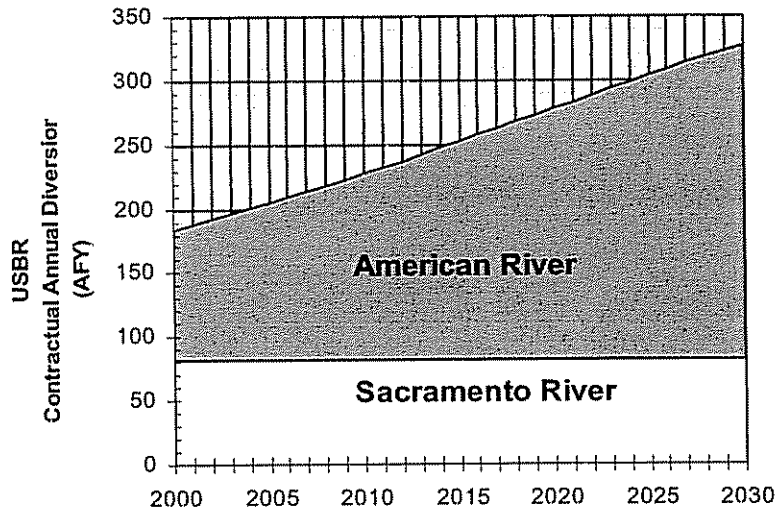


FIGURE 2-1 USBR Maximum Contracted Annual Surface Water Diversion

TABLE 2-2
USBR Maximum Contracted Annual Surface Water Diversion (AFA)

Source	2005	2010	2015	2020	2025	2030
American River	123,200	145,700	170,200	196,200	222,200	245,000
Sacramento River	81,800	81,800	81,800	81,800	81,800	81,800
TOTAL	**205,000**	**227,500**	**252,000**	**278,000**	**304,000**	**326,800**

Source: U.S. Bureau of Reclamation and City of Sacramento 1957 Operating Contract.

2.2. Reliability of Water Supplies

2.2.1. Surface Water Supply and Reliability

Since first diverting Sacramento River water in 1854, the City has constructed facilities as needed to meet the City's steadily increasing water demands. As noted above, the City currently operates two water treatment plants, and also has 32 municipal drinking water wells, of which 23 are currently active. Continuing its long-standing practice of constructing facilities that will be used to meet increasing water demands, the City is planning to construct a new water diversion facility and water treatment plant in the future. Present plans call for construction of such facilities as part of the Sacramento River Water Reliability Study Project (SRWRS).

The SRWRS was authorized by Public Law 106-554, with the goal of developing a water supply plan that is consistent with the Water Forum Agreement objective of pursuing a new Sacramento River diversion to meet water supply needs of the Placer-Sacramento region, so that such water does not need to be diverted from the American River[6]. The SRWRS includes development of alternatives, an environmental evaluation, and consultation with federal and State agencies regarding potential impacts. The environmental document for the alternatives analysis is scheduled to be completed in 2007[7]. The USBR is the lead agency for federal review, and Placer County Water Agency is the lead agency for local review. Sacramento Suburban Water District, City of Roseville and the City of Sacramento are cost-sharing partners.

The Water Forum Agreement (WFA) is an agreement between multiple stakeholders of the Sacramento metropolitan area and lower foothill regions. After seven years of meetings, sub-committee negotiations and small group operations, the Water Forum members reached agreement on a plan to meet the WFA's coequal goals to (1) provide a reliable and safe water supply for the region's economic health and planned development through to the year 2030, and (2) preserve the fishery, wildlife, recreational, and aesthetic values of the Lower American River.[8] From these coequal goals, the Water Forum signatories determined seven major elements that must be implemented during the next 30 years if the plan is to be successful. The four (4) elements specific to water supply reliability include:

- Increased Surface Water Diversions,
- Actions to Meet Customers' Needs While Reducing Diversion Impacts in Drier Years,
- Water Conservation,
- Groundwater Management and the Water Forum Successor Effort.

As part of the WFA, the City agreed, within its Purveyor Specific Agreement, to restrict its diversions of American River water to the Fairbairn WTP during periods when flows in the Lower American River are less than the so-called Hodge Flow Criteria (defined in the WFA). The Hodge Flow periods occur when flows in the American River are less than 2,000 cfs from October 15 through February; 3,000 cfs from March through June; and 1,750 cfs from July to October 14. The diversion limits change seasonally and are listed in TABLE 2-3. Based on CALSIM II analysis of the 1922 to 1994 climate data, 59 percent of the years will experience Hodge flow conditions at some time during the peak months of June through August.

6 Sacramento River Water Reliability Study Initial Alternatives Report, Final Version. March 2005. page ES-1.
7 Sacramento River Water Reliability Study, Initial Alternatives Report. Final Version. March 2005. Updated as Personal Communication with David Stevens of MWH, April 18. 2006
8 Water Forum Agreement 2000, page 29

TABLE 2-3
Restricted American River Diversion Rates

Month	Diversion Limit[a]	
	cfs	AF
January	120	7,400
February	120	6,700
March	120	7,400
April	120	7,100
May	120	7,400
June	155	9,200
July	155	9,500
August	155	9,500
September	120	7,100
October	100	6,100
November	100	6,000
December	100	6,100

Notes:
a: Restriction occurs when the flow passing the WTP is below the Hodge flow condition
Source: 2000 Water Forum Agreement.

The Sacramento River WTP has a capacity of 160 mgd (250 cfs). Fairbairn WTP has a treatment capacity of 200 mgd (310 cfs). If both plants operated at their maximum production, the combined theoretical output would be approximately 360 mgd. The total maximum capacity that can be used by the City when Hodge flow conditions are present during peak months is 260 mgd.

The alternatives being evaluated in the Sacramento River Water Reliability Study would provide both redundancy and increased capacity. One alternative is a new 145 mgd (225 cfs) WTP on the Sacramento River near Elverta Road, north of the Sacramento International Airport in the North Natomas area. The City anticipates the potential completion date of a new Sacramento WTP is within the next six to ten years.[9] The addition of a new Sacramento River WTP, would bring the combined maximum surface water production capacity to 505 mgd (405 mgd during below-Hodge conditions). Maximum day production before and after completion of a 145 mgd Sacramento WTP is shown in TABLE 2-4.

During years when the projected unimpaired inflow to Folsom Reservoir is less than 400,000 acre-feet, the City's WFA Purveyor Specific Agreement limits diversion from the Fairbairn WTP to 50,000 AFA. The WFA has labeled these extremely low flow conditions as a "conference year" where signatories will meet to discuss water management strategies. A conference year scenario has a 1.8 percent probability of occurring, based the hydrologic record. Although the occurrence of such a drought condition is significantly less frequent than a typical "dry year," the conference year condition is used for purposes of this water supply assessment's dry year and multiple dry year analysis, because the conference year limitation that applies to the City's Fairbairn WTP diversions represents the most restrictive condition. The WFA does not restrict diversion of the City's American River entitlements from a downstream Sacramento River diversion point; therefore, normal year and dry year supplies are identical for the City as shown in TABLE 2-5. However, annual surface water diversions are limited by the diversion capacity from the Sacramento River.

9 Dan Sherry, City of Sacramento, Utilities Department. June 23, 2005

TABLE 2-4 Maximum Day Production		
Source	**Capacity Above Hodge Flows (mgd)**	**Capacity Below Hodge Flows (mgd)**
Fairbairn WTP	200	100
Sacramento WTP	160	160
Groundwater	30	30
TOTAL without new WTP **without groundwater**	**390** **360**	**290** **260**
New Sacramento WTP	145	145
TOTAL with new WTP **without groundwater**	**535** **505**	**435** **405**

TABLE 2-5 2006 Annual Surface Water Supply (AFA)				
	2006 USBR Contracted Supply	**2006 to 2008 Dry Year Supply[a]**		
Source		**First Dry Year 2006**	**Second Dry Year 2007**	**Third Dry Year 2008**
American River	127.7	50,000	50,000	50,000
American River diverted from the Sacramento River	--	77,700	82,200	86,700
Sacramento River	81,800	81,800	81,800	81,800
TOTAL[b]	**209,500**	**209,500**	**214,000**	**218,500**

Notes:
a: Current diversion capacity from the Sacramento River is 180,000 AFA, allowing a drought year production of 230,000 AFA.
b: Total increases during multiple years according to build-up schedule in USBR contract.

For a "conference year" scenario, assuming 50,000 AFA from the Fairbairn WTP and a maximum production from the Sacramento WTP of 180,000 AFA, the current drought limiting scenario still allows for a theoretical maximum production of 230,000 AFA (the additional 145 mgd Sacramento River WTP would increase the total annual production to 311,800 AFA). The theoretical maximum "conference year" production of 230,000 AFA overestimates the current drought year production, because the Sacramento WTP does not operate at maximum capacity of 160 mgd (180,000 AFA) when the maximum demand is below that treatment capacity, as is the case in winter months when, for example, outdoor irrigation demands are reduced. In other words, water treatment is directly proportional to customer demands; the City does not treat and store water beyond what is necessary for emergency requirements. Average day demand is not expected to exceed 160 mgd until after 2015; therefore, the Sacramento WTP will operate below annual maximum production capacity at least until after 2015. The most appropriate approach to addressing the diversion limitations is by analyzing maximum day demand; consequently, reference to total annual production capacity is for discussion purposes and does not appropriately reflect daily system operations.

2.2.2. Groundwater Supply and Reliability

Water Code Section 10910 (f), states that if groundwater is a source of supply for a Project, the water supply assessment must include an analysis of the groundwater sources, and specifically address (f) parts 1 through 5 of 10910(f).

The City maintains 32 wells for potable use; 23 wells are actively used to supply drinking water.[10] The total capacity of the wells is 33 mgd, with a sustainable capacity of approximately 30 mgd and produces up to 33,600 AFA. The 2000 to 2005 annual average groundwater pumping was 22,992 acre-ft.[11] The wells are shown in FIGURE 2-2 and pump primarily from the Department of Water Resources (DWR) North American Subbasin (5-21.64), with two active drinking water wells pumping from the South American subbasin (5-21.65).

The North and South American Subbasins are described in the 2003 update to the DWR Bulletin 118-3. The underlying geology or hydrostratigraphy of the both basins consists of a variety of geologic formations that make up the water bearing units. There are two aquifer systems: an upper unconfined system consisting of the Victor, Fair Oaks, Laguna, Modesto Formations, and a lower, semi-confined system in the Mehrten Formation. These geologic formations are composed of lenses and layers of inter-bedded sand, silt, and clay with coarse-grained stream channel deposits. The groundwater contained in the upper aquifer system of the Victor, Fair Oaks, Laguna, Modesto, Riverbank, and Turlock Lake Formations along with Arroyo Seco and South Fork Gravels[12] is of superior quality compared to that in the lower semi-confined system, mainly because the water in the Mehrten Formation is higher in iron and manganese, and requires more treatment. The upper unconfined system only requires chlorination treatment to be potable.[13]

For the South American Subbasin, DWR Bulletin 118 references a 1993 Montgomery Watson study that estimates groundwater withdrawals are in balance with recharge for the Subbasin. The conclusion is supported by groundwater levels which have stabilized after recorded declines since the 1960's. As a result of the Water Forum Successor Effort, the Central Sacramento County Groundwater Forum (CSCGF) has developed the Central Sacramento County Groundwater Management Plan (CSCGMP).[14]

The North American Subbasin includes the Project area; DWR Bulletin 118 references a 1990 land-use based water balance for the subbasin which estimated groundwater withdrawals in excess of 285,000 AFA above annual recharge. The Sacramento Groundwater Authority (SGA) prepared a groundwater management plan (GMP) in 2003 for that portion of the Subbasin north of the American River and up to the Sacramento County line. Placer County Water Agency (PCWA) prepared a groundwater storage study for the northern half of the North American Subbasin. The groundwater reports by PCWA and SGA document declining groundwater levels prior to 1992. Since 1992 a reduction of groundwater pumping has resulted in stabilized groundwater levels.[15-16]

The CSCGF and the SGA were developed in a consensus-based process, and these included stakeholders throughout both basins. The City utilizes both basins for their groundwater supplies. GMPs are adaptive management tools and represent a critical step in establishing a framework for maintaining a sustainable groundwater resource for the various users overlying the basins. The GMPs are consistent with the provisions of California Water Code sections 10750 et seq. Within these programs the SGA and the CSCGF will continually assess the status of the groundwater basin and make appropriate management decisions to sustain the basin.

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10 Dan Sherry, City of Sacramento, Utilities Department. Status of groundwater wells. June 23, 2005.
11 Calculated from the City of Sacramento. Department of Utilities, Operational Statistics Annual Reports.
12 Department of Water Resources. Bulletin 118 Updated 2003, Sacramento Valley Groundwater Basin http://www.dpla2 water.ca.gov/publications/groundwater/bulletin118/basins/pdfs_desc/5-21.65.pdf http://www dpla2 water.ca gov/publications/groundwater/bulletin118/basins/pdfs_desc/5-21.64 pdf.
13 Sacramento Groundwater Authority, *Groundwater Management Plan*, 2003. page 7. http://www.sgah2o.org/ sga/programs/ groundwater/.
14 Central Sacramento County Groundwater Management Plan 2006. http://www.waterforum.org/CSCGWF/CSCGMP_FINAL _02_27_06.pdf
15 Western Placer County Groundwater Storage Study. Final Report. December 2005. page 3-9
16 Sacramento Groundwater Authority, *Groundwater Management Plan*. 2003, page 17.

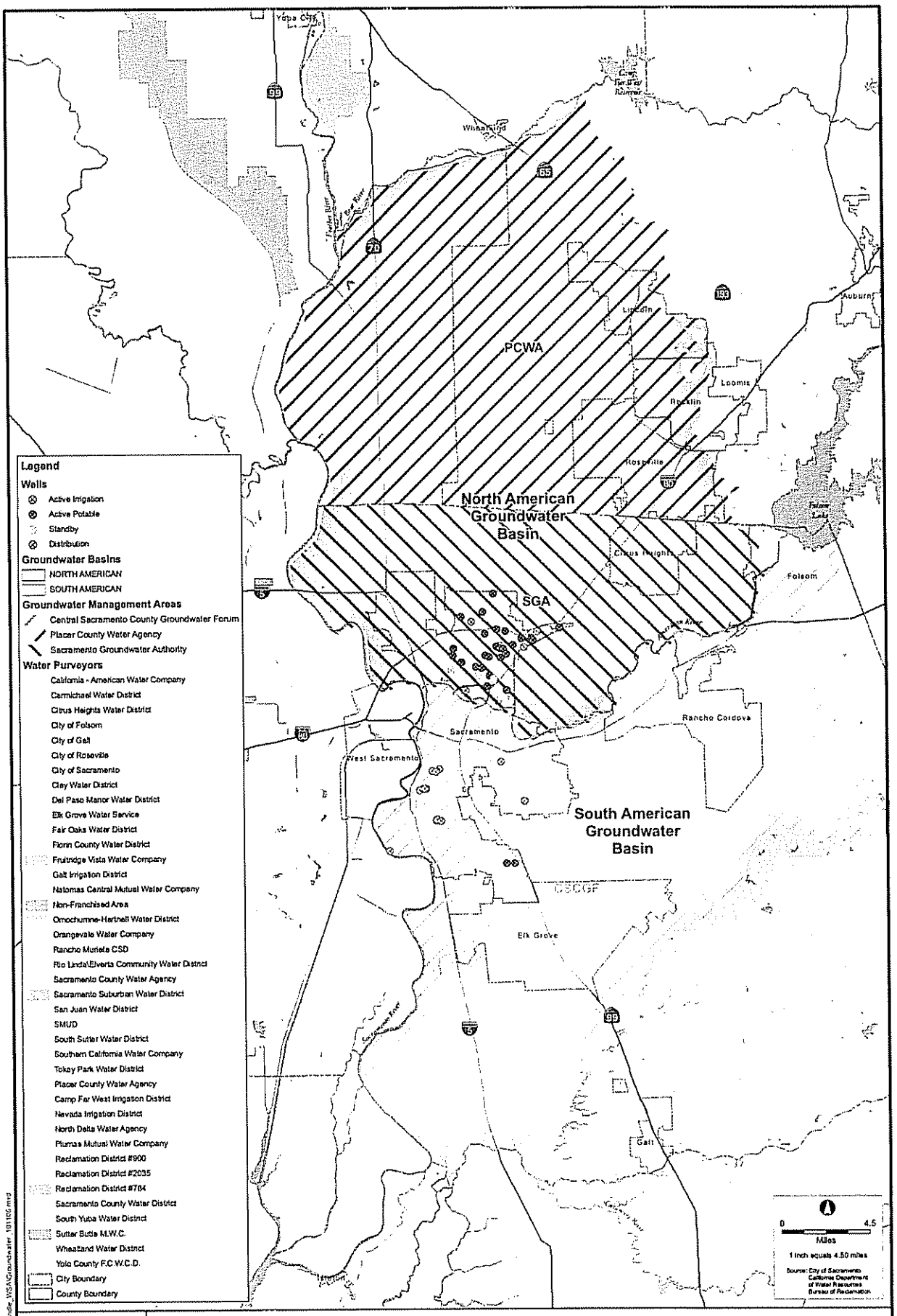

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FIGURE 2-2

City of Sacramento Well Locations and Groundwater Management Areas

D51238.00

Panhandle PUD Project

H:\GIS\Project\051238_Panhandle_WSA\Groundwater_191106.mxd

The City is a member of both the SGA and CSCGF. The SGA and CSCGF share a common goal of the responsible management of the groundwater basin through a commitment to not exceed the long-term sustainable yield of the Subbasins. The SGA sustainable yield is estimated to be approximately 131,000 AFA and the CSCGF sustainable yield is estimated to be approximately 273,000 AFA according to the WFA and GMPs. The sustainable yields determined through the WFA provide for sufficient groundwater pumping to meet the projected level of groundwater demand through 2030.[17] The process to determine the sustainable yield took into account future pumping by the various groundwater users within the applicable subbasin, water quality, dewatering of wells, groundwater pumping costs, and ground subsidence.

SGA and CSCGF members, in accordance with the WFA, are proceeding with a conjunctive use program to responsibly manage and use the groundwater systems. This conjunctive use effort is part of the WFA 30-year agenda. A conjunctive use program accounts for the annual climatic variability of the region, whereby in normal or wet years of precipitation the water providers will divert more surface water and reduce or eliminate groundwater use, allowing the groundwater systems to recharge. In dry years when the in-stream flows must be maintained in the lower American River, groundwater pumping will be increased to supplement the reduced diversions from the river systems.

As part of this groundwater management strategy the SGA recently released a Basin Management Report (BMR) for 2004-2005 that updates the current SGA uses of the North American Subbasin. The BMR calculated groundwater pumping by SGA signatories at 91,096 AFA; this is below the agreed-upon sustainable yield of 131,000 AFA. Notably, the BMR shows that between 1997 and 2004 a cone of depression near the central part of the SGA area has rebounded by approximately five feet as a result of less groundwater pumping and utilizing more surface water by the members of the SGA.

Based on the information above, the supply of groundwater in the Subbasins from which the City's wells pump groundwater is sufficient to meet cumulative groundwater demands projected through 2030, and this is consistent with the sustainable yields determined for these areas by the WFA.

17 Central Sacramento County Groundwater Management Plan. 2006 p. 1-4

3.0 WATER DEMAND ANALYSIS

This section shows the calculated water demand for the Project as well as projected demand for the entire system and then compares the demand to the supply.

3.1. Project Water Demand

The expected water use of the Project was determined by analyzing each land use and assigning a demand factor to each use. To determine the water demand factors of the Project, water use demand factors were formulated based on data from the *1994 Proposed Water Demand/Wastewater Generation Factors Report* by Nolte Engineering and West Yost & Associates, the City of Sacramento, the General Plan Implementation Chapter, climate data, current and historical uses at similar facilities, as well as personal communications with the City's Department of Utilities staff[18]. As shown in TABLE 3-1, the Project would potentially use 2,045 AFA or an annual average demand of 1.88 mgd. The calculated demand represents the upper range of the potential demand. As it currently exists, the project site is considered to have a negligible annual demand because it is vacant. Thus, the projected demand would result in an increase in water demand above the current uses.

3.2. System Demand

The Sacramento historical demand over the last five years is shown in Table 3-2. The total water supplied by the City from June 2003 to July 2004 was 143,784 acre-feet. Over the last seven years, 17 percent of the delivered water has been met with groundwater. In the last four years the City has reduced total groundwater extractions by 15 percent.

The City recently completed a 2030 demand analysis for the Sacramento River Water Reliability Study (March 2005) including water delivery within the POU outside the City limits (via present and anticipated future wholesale and/or wheeling water service agreements) and in-City demand (including pending annexation areas). The 2030 projected demands within the present City limits were calculated as 156,766 AFA with a maximum day demand of 251 mgd as seen in TABLE 3-3. The total 2030 demands for the entire POU and pending annexation areas were calculated as 239,804 AFA with a peak demand of 402 mgd. TABLE 3-3 summarizes these calculated estimates. The projected demands are from the WFA and include a 25.6 percent conservation factor.[19] Supporting calculations, including population projections, are included in Appendix B.

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18 Calculated demands are based upon published water demand studies and actual meter readings at a variety of facilities in Northern California and other Western states. The calculated demands have been generally accepted as a reliable means to forecast water usage per connection; moreover, these values are constantly being re-evaluated as new data becomes available and new fixtures are installed

19 2000 Urban Water Management Plan, City of Sacramento, page 7-1. The Water Conservation Element of the Water Forum Plan is based on full implementation of the statewide Memorandum of Understanding (MOU). The City has committed to implementing the Water Conservation Element consistent with the terms of the Water Forum Plan. It is expected that implementation of the Water Conservation Element will result in a projected water savings of up to 25.6 percent over the City's baseline water use.

TABLE 3-1
Proposed Panhandle Project Water Demands

Proposed Site Plan Land Uses	Acres	Land Use	Density	Demand Factor	Average Day Demand (gpd)	Average Acre-Feet/Annum
Residential Uses						
Low Density (3-10)	232.2	1276 Residential DU	5.5 DU/Acre	520 gpd[i]	663,520	743
Medium Density (7-21)	109.9	1273 Residential DU	11.6 DU/Acre	350 gpd[i]	445,550	499
High Density (11-29)	24.0	590 Residential DU	24.6 DU/Acre	230 gpd[i]	135,700	152
Subtotal	366.1				1,799,240	2,789
Commercial/Mixed Uses						
Mixed Use/Live-Work[a]	5.5	48 Residential DU	8.7 DU/Acre	230 gpd[i]	11,040	12
Lot 30[b]	13.0	50 Residential DU	3.8 DU/Acre	230 gpd[i]	11,500	13
		10.4[d] Acres Commercial		2759 gpd/ac[d]	35,867	40
Lot 31	5.7	4.6[d] Acres Commercial		2759 gpd/ac[d]	12,581	14
Subtotal	24.2				70,988	80
Public/Quasi-Public Uses						
Elementary School	10.0					
Middle School/High School	46.2					
Total School Property	56.2	22.48[f] Acres Outdoor Uses		4.29 af/ac/yr[e]	86,095	96
		33.72[g] Acres Indoor Uses		2.5 af/ac/yr[c]	137,346	84
Open Space						
Parks	90.9	Irrigated Acres		4.29 af/ac/yr[e]	348,135	390
Open Space	17.8	Acres of Detention Basin – No Irrigation				
Rights of Way	39.5	No Water Demands				
Totals	**594.7**	**3,237 Residential DU[h]**			**1,887,334**	**2,045**
		24.2 Acres Commercial				
		56.2 Acres School Sites				
		108.7 Acres Open Space				

Notes:
Dwelling Units (DU)
a: Calculated with higher residential demand.
b: Lot 30 with 50 dwelling units residential only
c: Jim Peifer, Senior Engineer, City of Sacramento Department of Utilities Memorandum to PMC Consultants. December 21. 2005.
d: Assumes 80% of gross acreage developed for commercial uses (5.7 acres and 10.4) corresponding water demand was assumed for net acreages; Placer County Water Agency (PCWA), Draft Integrated Water Resources Plan. (Brown and Caldwell, 2005).
e: Sacramento Water Balance, Western Regional Climate Center; CIMIS Station 131; leaching fraction of 5% and distribution uniformity of 90%.
f: 40% of schools property irrigated areas; PCWA Draft Integrated Water Resources Plan. (Brown and Caldwell. 2005)
g: 60% of total school area water demand; PCWA Draft Integrated Water Resources Plan, (Brown and Caldwell, 2005).
h: Project now consists of 3,075 DU. Water demands were based on 3,237 DU, consistent with Panhandle PUD Water Supply Master Plan (MacKay & Somps)
i: Water demand factors from Nolte Engineering with West Yost & Associates, Proposed Water Demand/Wastewater Generation Report, 1994; high density residential (21+ DU/acre) from Placer County Water Agency IRWP, October 2005.

TABLE 3-2
Historical Water Deliveries

	Surface Water and Groundwater Supplies			Total Water Delivered				
Year	Population[a]	Annual Surface Water Delivered (AFA)	Annual Groundwater Delivered (AFA)	Maximum Day Water Delivered (mgd)	Maximum Day to Average Day Ratio	Total Annual Water Delivery (AFA)	Average (mgd)	Percent Increase
1998	392,800	93,131	22,692	212.7	2.06	115,822	107.5	
1999	396,200	109,695	23,694	219.7	1.85	133,389	112.3	15.2%
2000	405,963	110,150	24,130	213.0	1.78	134,280	103.4	0.7%
2001	418,711	115,984	24,156	214.5	1.71	140,140	119.1	4.4%
2002	426,013	115,628	23,236	226.8	1.83	138,864	119.9	-0.9%
2003	433,400	114,674	25,607	223.2	1.78	140,281	125.2	1.0%
2004	441,000	128,903	17,924	NA	NA	146,827	131.1	4.7%
2005	452,959	116,452	22,521	NA	NA	138,974	124.1	-5.3

Notes:
a: Operational Statistics 2004/2005.
b: Other data from corresponding annual report.
N/A = Not yet available.
Source: Adapted from City of Sacramento, Department of Utilities Operational Statistics 2004/2005.

TABLE 3-3
Projected Annual and Maximum Day Demand for Sacramento 2030

Area	Annual Demand (AFA)	Maximum Day Demand[a] (mgd)
City of Sacramento	156,766	251
Area "D"	30,222	50
Cal-American (Rosemont)	12,129	20
Cal-American (Parkway)	10,551	17
Florin County Water District	2,296	4
Unincorporated Area (Zone 40)	10,644	19
Fruitridge Vista Water Company	4,734	8
Tokay Park Water District	119	1
Pending Annexation[b]	5,208	8
Sacramento Wastewater Treatment Plant	520	1
Wheeling Demand	6,616	23
TOTAL	**239,805**	**402**

Notes:
a: Demand based on estimates in USBR Sacramento River Water Reliability Study (March 2005) City of Sacramento General Plan buildout is understood to be year 2030.
b: Pending annexations include the Panhandle area (including the area currently served by the Sacramento County Water Agency) and the Greenbriar area.
Source: Sacramento River Water Reliability Study, March 2005, Appendix A, Table A-27.

The 2030 demand estimates include the demands from the Project, which are calculated at 2,045 AFA. These demands are part of the Pending Annexation by the City shown in TABLE 3-3. The City intends on serving the Project area with surface water supplies.[20] The maximum day demands may increase by 3.4 mgd.

3.3. Comparison of Available Water Supplies versus Demand

Section 10910 (c)(3) of the Water Code states, "the water supply assessment for the project shall include a discussion with regard to whether the public water system's total projected water supplies available for normal, dry, and multiple dry water years during a 20-year projection will meet the projected water demand associated with the Project, in addition to the public water system's existing and planned future uses, including agricultural and manufacturing uses."

3.3.1. Annual Supply and Demand

The 2004 demand of 143,764 AFA was well below the maximum of 200,500 AFA specified in the City's USBR water rights settlement contract for that year. The projected annual demand remains approximately 70 percent of this maximum when using a constant 2.0 percent per year growth rate to achieve the 2030[21] projected demand of 239,805 AFA (which includes the net increase in demand from the Project) as shown in TABLE 3-4. TABLE 3-5 shows annual surface water supply and demand for "conference years".

TABLE 3-4
Supply and Demand Comparison During Normal Years with Groundwater (AFA)

	2005	2010	2015	2020	2025	2030
American River	123,200	145,700	170,200	196,200	222,200	245,000
Sacramento River	81,800	81,800	81,800	81,800	81,800	81,800
Total Surface Water Supply[c]	**205,000**	**227,500**	**252,000**	**278,000**	**304,000**	**326,800**
Groundwater Supply[b]	33,600	33,600	33,600	33,600	33,600	33,600
TOTAL WATER SUPPLIES	**238,600**	**261,100**	**285,600**	**312,600**	**337,600**	**360,400**
City Demand and Wholesale/Wheeling Demand	146,647	161,401	178,253	196,759	217,182	239,805
Project Demand[c]	–	2,045	2,045	2,045	2,045	2,045
TOTAL WATER DEMAND	**146,647**	**161,401**	**178,253**	**196,759**	**217,182**	**239,805**
AVAILABLE SUPPLY	**91,953**	**99,699**	**107,347**	**115,841**	**120,418**	**120,595**

Notes:
a: Total Surface water supply is based on maximum amounts specified in City's USBR settlement contract. see TABLE 2-2.
b: Based on City's current groundwater production, see Section 2.2.2.
c: Project demand is already included in City's calculated demands years 2010-2030.

20 Jim Peifer, City of Sacramento, Utilities Department. Personal communication on September 11, 2006
21 City of Sacramento General Plan buildout is understood to be year 2030.

TABLE 3-5
Supply and Demand Comparison during "Conference Years" (AFA)[a]

	2005	2010	2015	2020	2025	2030
American River	50,000	50,000	50,000	50,000	50,000	50,000
American River, diverted from the Sacramento River	73,200	95,700	98,200[b]	98,200[b]	98,200[b]	98,200[b]
Sacramento River	81,800	81,800	81,800	81,800	81,800	81,800
Total Surface Water Supply	**205,000[c]**	**227,500[c]**	**230,000**	**230,000**	**230,000**	**230,000**
Groundwater Supply[d]	33,600	33,600	33,600	33,600	33,600	33,600
TOTAL WATER SUPPLIES	**238,600**	**261,100**	**263,600**	**263,600**	**263,600**	**263,600**
City Demand and Wholesale/Wheeling Demand[e]	146,647	154,785	171,637	190,143	210,566	233,189
Project Demand[f]	--	2,045	2,045	2,045	2,045	2,045
TOTAL WATER DEMAND	**146,647**	**154,785**	**171,637**	**190,143**	**210,566**	**233,189**
AVAILABLE SUPPLY	**91,953**	**106,315**	**91,963**	**73,457**	**53,034**	**30,411**

Notes:
a: "Conference Year". defined by the WFA, when the projected unimpaired inflow to Folsom Reservoir is less than 400.000 acre-feet.
b: Limited by present Sacramento River WTP capacity not WFA agreement.
c: Total Surface water supply is based on maximum amounts specified in the City's USBR settlement contract and not based on the maximum conference year treatment and diversion capacity of 230,00 AFA.
d: Based on City's current groundwater production, see Section 2.2.2
e: Demands during Hodge Flow and Conference Years are reduced by 6,616 AFA as no sales from the City to Sacramento Suburban are required
f: Project demand is already included in City's calculated demands years 2010-2030.

3.3.2. Maximum Day Supply and Demand

Because of diversion limitations during Hodge flow conditions, the maximum peak day demand should also be considered during the supply and demand analysis. TABLE 3-6 shows the maximum day surface water supply and demand under normal flow conditions. TABLE 3-7 shows a reduction of the Fairbairn WTP capacity from 200 mgd to 100 mgd during Hodge flow conditions, resulting in a total treatment capacity of 260 mgd. Assuming a 2.2 percent growth rate for maximum day demand, and assuming no groundwater use whatsoever, Hodge flow conditions will result in a deficit of surface water production capacity in 2013 without a new Sacramento River diversion and WTP. Assuming use of the current sustainable groundwater supply of 30 mgd, during Hodge flow conditions the capacity deficit will occur in 2017 without a new Sacramento River diversion and WTP. In 2030, during Hodge flow conditions the projected capacity deficit is 92 mgd without a new Sacramento River diversion and WTP and 122 mgd deficient without groundwater. A new 145 mgd Sacramento River diversion and WTP would provide redundant diversion and treatment capacity and would meet the anticipated peak day capacity deficit in 2030 under all conditions.

TABLE 3-6
Peak Day Surface Water Supply Capacity (Existing Facilities) and Demand Comparison during Normal Flow Conditions (mgd)

	2005	2010	2015	2020	2025	2030
American River	200	200	200	200	200	200
Sacramento River	160	160	160	160	160	160
Total Surface Water Supply[a]	**360**	**360**	**360**	**360**	**360**	**360**
Groundwater Supply	30	30	30	30	30	30
TOTAL WATER SUPPLIES	**390**	**390**	**390**	**390**	**390**	**390**
City Demand and Wholesale/Wheeling Demand[b]	235.7	261.9	291.5	324.5	361.2	402.0
Project Demand[c]	–	1.88	1.88	1.88	1.88	1.88
TOTAL WATER DEMAND		**261.9**	**291.5**	**324.5**	**361.2**	**402.0**
AVAILABLE CAPACITY without new facilities	**130.3**	**128.1**	**98.5**	**65.5**	**28.8**	**-12.0**

Notes:
a: Surface supply is based on nominal plant capacity.
b: Based on a constant 2.2 percent annual growth rate between 2004 and 2030 demand
c: Project demand is already included in City's calculated demands years 2010-2030.

TABLE 3-7
Peak Day Surface Water Supply Capacity (Existing Facilities) and Demand Comparison during Hodge Flow Conditions (mgd)

	2005	2010	2015	2020	2025	2030
American River[a]	100	100	100	100	100	100
Sacramento River[b]	160	160	160	160	160	160
Total Surface Water Supply	**260**	**260**	**260**	**260**	**260**	**260**
Groundwater	30	30	30	30	30	30
TOTAL WATER SUPPLIES	**290**	**290**	**290**	**290**	**290**	**290**
Demand[c,d]	235.7	241.9	271.5	304.5	341.2	382.0
Project Demand[e]	–	1.88	1.88	1.88	1.88	1.88
TOTAL WATER DEMAND	**235.7**	**241.9**	**271.5**	**304.5**	**341.2**	**382.0**
AVAILABLE CAPACITY without new facilities	**54.3**	**48.1**	**18.5**	**-14.5**	**-51.2**	**-92.0**

Notes:
a: American River diversion is limited 100 mgd during Hodge flow conditions.
b: Sacramento WTP peak day supply is based on the nominal capacity of the plant.
c: Based on a constant 2.2 percent annual growth rate between 2004 and 2030 demand.
d: Reduced by 20 mgd during Hodge Flow or Conference Year when sales to Sacramento Suburban Water District are not required. A new Sacramento River diversion and WTP potentially could be used to make up this reduction during Hodge Flow or Conference Year conditions (not reflected in "Available Capacity without new facilities").
e: Project demand is already included in City's calculated demands years 2010-2030.

4.0 CONCLUSION

According to the requirements of Water Code Section 10910(c)(3) "the water supply assessment for the project shall include a discussion with regard to whether the public water system's total projected water supplies available during normal, single dry, and multiple dry water years during a 20-year projection will meet the projected water demand associated with the proposed project, in addition to the public water system's existing and planned future uses, including agricultural and manufacturing uses."

This analysis concludes that the City has adequate water supplies under the City's water rights and entitlements to meet Project demands and cumulative demand, but concludes that under maximum day demands additional diversion and treatment capacity may be needed as early as 2017.

The City is already a cost-sharing partner on the Sacramento River Water Reliability Study, which is investigating alternatives for an additional diversion on the Sacramento River. The environmental documents for the alternatives analysis is scheduled to be completed in 2007[22], providing ten years for the design and construction of a selected project before any potential peak demand shortfall might occur. The alternative of a 145 mgd diversion and WTP included in the Sacramento River Water Reliability Study would provide capacity to meet all demands through 2030.[23]

According to Water Code Section 10911(a), if the results of the assessment conclude that the water supplies are, or will be, insufficient, the water supply assessment shall include plans for acquiring additional water supplies. The results of this WSA do not trigger Section 10911(a) because this analysis shows that the City has adequate water supplies under the City's water rights and entitlements to meet Project demands and cumulative demand through the next 20 years and beyond.

22 Initial Alternatives Report. Final Version, March 2005 Sacramento River Water Reliability Study Updated: Personal Communication with David Stevens of MWH, April 18, 2006.

23 Executive Summary, Initial Alternatives Report, Final Version, March 2005. Sacramento River Water Reliability Study (attached as Appendix C)

APPENDICES

APPENDIX A

DRAFT CITY OF SACRAMENTO WATER SUPPLY MASTERPLAN PROJECTIONS

APPENDIX B

Sacramento Water Demands

Preliminary Draft

	Location	Area (Sq. Miles)	Area (Acres)	Average Annual Water Use (Ac-Ft)	Average Annual Water Use (MGD)	Max. Day Demand (MGD)	Other Water Use Calc?	Notes
A	HCP Ownership Land	2.31	1,478	n/a	n/a	n/a		
B	Agricultural Open Space/Permanent Land Habitat	1.79	1,146	n/a	n/a	n/a		
C	County Owned parcel	0.89	570	n/a	n/a	n/a		
D	Agricultural Open Space/Permanent Land Habitat	4.26	2,726	n/a	n/a	n/a		
E	County Owned parcel	0.52	333	n/a	n/a	n/a		
F	HCP Ownership Land	0.13	83	n/a	n/a	n/a		
G	Teal Bend Golf Course	0.4	256	n/a	n/a	n/a		
H	Sacramento International Airport			*1,420*	*1.3*	*2.2*	Yes	Demands from HDR
I	Metro Air Park	3.02	1,933	*5,197*	*4.6*	*9.3*	Yes	Demands from Stantec
J	Sphere of Influence	10.05	6,432	16,030	14.3	25.8		
K	County Owned parcel	0.54	346	n/a	n/a	n/a		
L	Agricultural Open Space/Permanent Land Habitat	4.09	2,618	n/a	n/a	n/a		
M	HCP Ownership Land	1.79	1,146	n/a	n/a	n/a		
N	Agricultural Open Space/Permanent Land Habitat	5.69	3,642	n/a	n/a	n/a		
O	County Owned parcel	0.22	141	351	0.3	0.6		
P	SCWA & Panhandel	2.14	1,370	3,413	3.0	5.5		
Q	Sphere of Influence	0.11	70	175	0.2	0.3		
R	Sphere of Influence	0.51	326	813	0.7	1.3		
	Sub Total	**38.46**	**24,614**	**27,400**	**24.5**	**44.9**		
S	Sacramento Suburban	16.97	10,861	*26,064*	*23.3*	*41.9*	Yes	Amount changed to reflect the contract
S-1	Sacramento Suburban - Northridge	4.21	2,694	6,715	6.0	10.8		
S-2	Charmichael	0.59	378	941	0.8	1.5		
T	Sac. Suburban/Cal American	7.37	4,717	11,755	10.5	18.9		
U	Fruitridge Vista WC	2.99	1,914	4,769	4.3	7.7		
V	Sacramento County - Zone 40	8.87	5,677	14,148	12.6	22.7		
W	Florin County WD	2.28	1,459	3,637	3.2	5.8		
X	California American	6.25	4,000	9,969	8.9	16.0		
Y	Freeport	1.16	742	1,850	1.7	3.0		
	Sub Total	**50.69**	**32,442**	**79,847**	**71.3**	**128.3**		
Z	City of Sacramento - North Natomas	10.9	6,976	17,386	15.5	27.9		
AA	City of Sacramento - w/o North Natomas	87.7	56,128	139,882	124.9	224.8		
AB	Swanston Estates/Ben Ali Neighborhoods	0.74	470	1,172	1.0	1.9		
	Sub Total	**99**	**63,574**	**158,439**	**141**	**255**		
	Total	**188.49**	**120,630**	**265,687**	**237.3**	**427.9**		

Water Use Calculation (unless noted otherwise in notes):
1. Average annual water usage factor: 1595 ac-ft/sq. mile
2. Maximum Day Demand is 1.8 times average annual water use

APPENDIX B

EXECUTIVE SUMMARY, INITIAL ALTERNATIVES REPORT, FINAL VERSION. SACRAMENTO RIVER WATER RELIABILITY STUDY, MARCH 2005

EXECUTIVE SUMMARY

The Bureau of Reclamation (Reclamation) and Placer County Water Agency (PCWA), on behalf of cost-sharing partners[1] (Sacramento Suburban Water District (SSWD), City of Roseville (Roseville), and City of Sacramento (Sacramento)), initiated the Sacramento River Water Reliability Study (SRWRS) in 2002 under the authorization of Public Law (PL) 106-554, Appendix D, Division B, Section 103. The goal of the SRWRS is to develop a water supply plan that is consistent with the Water Forum Agreement[2] (WFA) objectives of pursuing a Sacramento River diversion to meet water supply needs of the Placer-Sacramento region, and promoting ecosystem preservation along the lower American River. The SRWRS study area includes the region in Placer and Sacramento counties, north of the American River and east of the Sacramento River (see **Figure ES-1**).

To fully disclose the process and progress of study development, several interim documents were prepared under the SRWRS to disseminate preliminary findings to the public. An **Interim Report**, completed in June 2003, outlines identified resource problems and opportunities; goals, objectives, criteria, and constraints for study development; and a series of preliminary alternatives for scoping purposes. This **Initial Alternatives Report** documents refinements of the preliminary findings; the study process; results of initial analyses and screening of preliminary alternatives for further study; and next steps in the SRWRS. It is anticipated that the Initial Alternatives Report will provide the basis for a feasibility report, which includes a **Planning Report** (PR) and a joint **Environmental Impact Statement/ Environmental Impact Report** (EIS/EIR) for Federal and local decision-making.

BACKGROUND

The concept of a Sacramento River diversion can be found in two programmatic studies: the American River Water Resources Investigation (ARWRI) conducted by Reclamation and Sacramento Metropolitan Water Authority[3] (SMWA), and the Sacramento Area Water Forum (Water Forum) conducted by local interest parties in the Placer-Sacramento region. Each of these program-level studies was performed to develop a comprehensive plan to address a complex suite of problems that could not be resolved by an individual project. The ARWRI concluded that the region has sufficient water rights and contract entitlements to meet the projected 2030 water demand, and identified an environmentally preferred alternative for future water

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[1] The Reclamation Manual, Directives and Standards CMP 05-02, requires non-Federal cost-sharing for the SRWRS. On June 26, 2002, PCWA signed a Memorandum of Agreement (MOA) with Reclamation to share a minimum of 50 percent of the study cost. PCWA then entered into separate cost-sharing agreements with its third-party cost-sharing partners: SSWD, Roseville, and Sacramento.

[2] The Sacramento Area Water Forum, created in 1993, comprises business and agricultural leaders, citizens groups, environmentalists, water managers, and local governments in the Sacramento region who joined together to meet two co-equal objectives: (1) provide a reliable and safe water supply for the region's economic health and planned development to 2030, and (2) preserve the fishery, wildlife, recreational, and aesthetic values of the lower American River. In 2000, Water Forum members approved the WFA, which consists of seven integrated elements necessary to provide a regional solution to water shortages, environmental damage, groundwater contamination, and limited economic prosperity.

[3] SWMA, now the Regional Water Authority, was established in 1990 to represent water purveyors in Sacramento, Placer, and El Dorado counties for providing a unified voice on regional water issues.

supply needs that includes additional surface water diversions and regional conjunctive management. The WFA is a locally initiated, regional solution for developing a strategic plan that (1) provides a reliable and safe water supply for the region's economic health and planned development to 2030, and (2) preserves the fishery, wildlife, recreational, and aesthetic values of the lower American River. Both studies concluded that conjunctive use and groundwater management are supportable and sustainable alternatives for meeting future water supply needs.

WFA Water Management Actions for Environmental Purposes

For preserving the lower American River, WFA signatories are individually or collectively implementing and/or developing several water management actions stipulated in the WFA:

- Reducing future diversions from the American River in dry years to maintain flows in the lower American River. Diversion limitations would be observed by individual water purveyor according to their WFA Purveyor-Specific Agreements (PSA).

- Developing a Flow Management Standard (FMS) for the lower American River, which includes releasing supplemental flows from PCWA's Middle Fork Project[4] (MFP) storage in dry years to augment flows in the lower American River. The FMS is currently under development by Reclamation, the Water Forum, and the United States Fish and Wildlife Service (USFWS).

- Seeking diversions on the Sacramento River to reduce future diversions from the American River. The SRWRS is under development by Reclamation and the cost-sharing partners.

The first action imposes constraints on surface water supply to the Placer-Sacramento region; the other two actions require further Federal decisions for implementation.

Increasing Water Supply Demands in the Placer-Sacramento Region

According to a March 2001 projection by the Sacramento Area Council of Governments (SACOG), the population of the Placer-Sacramento region would increase by about 700,000 between 1999 and 2025, which is about a 50 percent increase from the 1999 population level. Along with Reclamation, Sacramento and PCWA are two major water rights holders in the American River basin. In addition to meeting their own water supply needs, water from the water rights of these two agencies has been contracted to local agencies to satisfy regional water supply needs.

The SRWRS cost-sharing partners have identified their long-term needs for additional water supplies to meet growing water supply demands and reliability objectives in their respective service areas. These demands are consistent with the WFA's projected demands, which reflect the General Plans of Placer and Sacramento counties and incorporated cities, and a 25.6 percent reduction in demand through implementation of best management practices (BMPs) for water conservation.

As water supply demands for the cost-sharing partners increase, WFA water management actions for the purpose of environmental preservation become major limiting factors for long-term water supply reliability.

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[4] The MFP is owned and operated by PCWA as a multipurpose project designed to conserve and control waters of the Middle Fork American River, the Rubicon River, and certain tributaries for irrigation, domestic, commercial, and recreational purposes and for generating electricity. The French Meadows and Hell Hole reservoirs are two major storage facilities of the MFP.

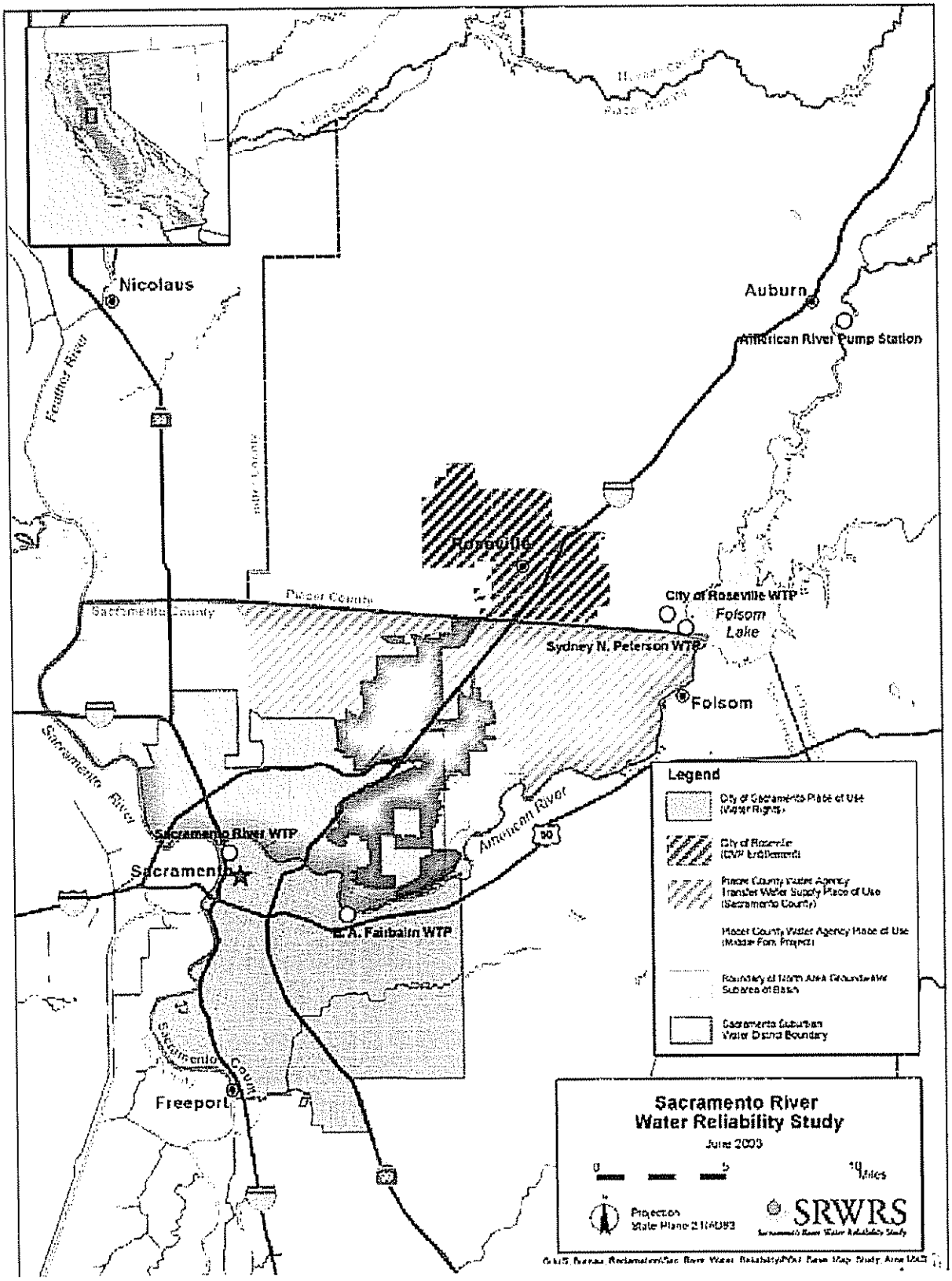

Figure ES-1. SRWRS Study Area

PROJECTED WATER SUPPLY RELIABILITY PROBLEM IN PLACER-SACRAMENTO REGION

Conjunctive use[5] is the strategy in the WFA for long-term water supply reliability. This strategy includes allowing water purveyors to divert surface water according to their surface water rights and contract entitlements in wet years, and in dry years, reduce their surface water diversions, increase use of groundwater and other supplemental water, and/or provide supplemental instream flow through storage release.

Challenges in Implementing WFA Conjunctive Management

While the programmatic concept of water management in the WFA has been accepted, individual water supply facility planning and construction is subject to project-specific evaluation and approval. Therefore, the problem of long-term water supply reliability in the Placer-Sacramento region remains because of lack of major infrastructure and the threat of groundwater contamination. With recent expansion of the Sacramento Fairbairn and Sacramento River water treatment plants (WTP), construction of the PCWA American River Pump Station (ARPS), and completion of the Freeport Regional Water Project environmental review process, the SRWRS is the only remaining major infrastructure plan to be completed for realizing the goals of surface water development and conjunctive use management envisioned by the WFA.

The WFA anticipated that all known groundwater contamination would be under control and remediated, resulting limited impacts on groundwater supply. However, the recent unexpected migration of a perchlorate plume from the Aerojet General Corporation across the American River indicates otherwise. Production wells have been shut down in Rancho Cordova, and groundwater supply could be further impacted because the perchlorate contamination is not contained and its migration pattern and extent are currently undefined. Therefore, the intensified threat of groundwater contamination in the Placer-Sacramento region has raised concerns among water purveyors who rely solely on groundwater for their water supply about loss of perceived groundwater availability in this region to support planned development and facilitate conjunctive management.

As a result, local water purveyors are seeking greater regional collaboration to improve planning and operational efficiency, diversify sources of water, and expand infrastructure interconnection and redundancy to ensure long-term water supply reliability. Purveyors with surface water rights and contract entitlements plan to use their available surface water consistent with their Water Forum commitments for to environmental preservation, and to further reduce their reliance on groundwater. Others without surface water rights and contract entitlements sought collaboration from holders of water rights and contract entitlements to diversify their portfolio of water sources without violating WFA principles. For example, purveyors in the Sacramento Place of Use (POU) are seeking opportunities for Sacramento to provide surface water to their service areas to take advantage of Sacramento's available surface water rights.

Potential Deficiency in Water Supply Reliability

Potential deficiencies in water supply reliability for the SRWRS cost-sharing partners are summarized in **Table ES-1.** The projection is based on a preliminary modeling simulation, which is subject to revision as the study progresses. Results show that WFA limitations on diversions from the American River would become a limiting factor for water supply in the Placer-Sacramento region under the assumed conditions and implementation of water management measures in each cost-sharing partner's WFA PSA.

[5] Conjunctive use is an operation that coordinates management of surface water and groundwater supplies to increase total water supplies and enhance water supply reliability.

PCWA and Roseville would have deficiencies of up to about 34,500 and 5,000 AF per year, respectively, in all Water Forum year-types.[6] For SSWD, surface water is a source of water supplemental to its groundwater resources and thus, no projected water supply deficiency would exist. However, with the threat of reduced groundwater availability due to contamination, reduced application of surface water entitlements could affect the long-term regional water supply reliability for this agency.

The quantity of potential deficiency for Sacramento is not easily defined because its WFA limitations on diversions from the American River are flow-based. The potential deficiency would be affected by hydrologic conditions in the American River basin and the operation of Folsom Dam by Reclamation. The Below Hodge Conditions[7] may become a controlling factor even in wet and average years. A preliminary assessment indicates that the Hodge Condition could occur about 50 percent of wet and average years, causing the depiction of potential water supply deficiency to be inaccurate if summarized by Water Forum year-type; thus, an average of all years is used. Preliminary monthly modeling results suggest an average deficiency of 17,000 AF per year in surface water supply; however, this may have been underestimated because the deficiency in facility capacity could be a greater control factor for Sacramento's real-time operation for water supply.

Table ES-2 compares maximum-day (max-day) demand[8] and total available (or allowable) surface water diversion and treatment capacity at Sacramento's existing WTPs. The significant deficiency in facility capacity would result in increased reliance on groundwater use and limited ability to assist neighboring purveyors who rely solely or heavily on groundwater; both would negatively affect conjunctive management and thus, long-term water supply reliability in the Placer-Sacramento region.

PLAN FORMULATION FOR IDENTIFIED WATER SUPPLY RELIABILITY PROBLEM

The SRWRS will be developed consistent with the programmatic ARWRI and WFA, and will conduct a project-specific analysis to evaluate the feasibility of a Sacramento River diversion that is consistent with WFA objectives.

Planning Objectives, Constraints, and Criteria

To address the identified water supply reliability problem and satisfy the study authorizing legislation, the following planning objectives for the SRWRS were identified:

- Provide additional water supply to PCWA to meet water demands resulting from planned urban growth

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[6] The WFA defines year types for the American River Basin based on March through November unimpaired inflow to Folsom Lake, as follows: wet (above 1,600,000 AF), normal (between 1,600,000 and 950,000 AF), drier (between 950,000 and 400,000 AF), and driest years (below 400,000 AF).

[7] A January 2, 1990, judgment of the Superior Court for the County of Alameda (*Environmental Defense Fund, Inc. v. East Bay Municipal Utility District*, Case No. 425955), known as the Hodge Decision, directed the East Bay Municipal Utility District (EBMUD) to divert from the lower American River based on its Central Valley Project (CVP) contractual entitlement only when specified flows would remain in the river, known as Hodge Flows. The Hodge Flows are 2,000 cubic feet per second (cfs) from October 15 through the end of February, 3,000 cfs from March 1 through June 30, and 1,750 cfs from July 1 through October 14. "Below Hodge Conditions" refers to conditions when bypassing flow at Sacramento's Fairbaim WTP is less than Hodge Flows. Although the Hodge Decision applies only to parties to that lawsuit, WFA signatories (such as Sacramento) volunteer to observe the flow requirements when reasonable and feasible alternatives exist to recover from the resulting loss of water supply reliability.

[8] The estimated maximum daily use in a year, which is commonly presented in million gallons per day (mgd) and used as the design capacity for water supply facilities.

Table ES-1. Potential Future Water Supply Deficiency for PCWA, SSWD, and Roseville

Water Forum Year-Type[1]	Water Purveyor	Type of Use	Demand (AF per year)	Supply (AF per year)			Unmet Demand (AF per year)
				Surface Water[2]	Groundwater	Others[3]	
Wet Years	PCWA	Ag	140,000	85,000	51,000	4,000	0
		M&I	85,400[1]	50,900	0	0	34,500[4]
	SSWD	M&I	92,227	55,064	37,163	0	0
	Roseville	M&I	64,020	58,900	0	2,773	2,347
Driest Years	PCWA	Ag	140,000	57,892	66,000	4,000	12,108[5]
		M&I	85,400[1]	50,900	0	0	34,500[4]
	SSWD	M&I	92,227	3,500	88,727	0	0
	Roseville	M&I	64,020	39,800	7,300	11,993	4,927

[1] Projection for wet and driest years only to bracket the water supply conditions because the corresponding limitations on diversions from the American River for these purveyors are Water Forum year-type dependent
[2] Surface water supply is limited by WFA when diverted from the American River Surface water allocation was based on monthly results from a preliminary CALSIM modeling study, which is subject to further refinements as the study progresses
[3] For PCWA, reclaimed water; for Roseville, reclaimed water and extra ordinary conservation
[4] Demand and unmet amounts are based on a slow-growth projection A future realized growth greater than the assumed slow-growth projection would result in additional unmet demand
[5] Agricultural deficiency in areas without groundwater accessibility

Table ES-2. Projected Future Water Supply Deficiency for Sacramento

(a) in Annual Average Volume

Water Forum Year Type	Water Purveyor	Type of Use	Demand (AF per year)	Supply (AF per year)			Unmet Demand (AF per year)
				Surface Water[1]	Groundwater	Others[2]	
All Years[3]	Sacramento	M&I	239,804	222,804[3]	7,136	0	17,000

[1] Surface water supply is limited by WFA when diverted from the American River Surface water allocation was based on monthly results from a preliminary CALSIM modeling study, which is subject to further refinements as the study progresses
[2] For Sacramento, no currently approved use exists for other sources of water
[3] Projection represents the average of all year-types because the corresponding limitations on diversions from the American River for Sacramento are flow-dependent The Hodge conditions trigger the diversion limitations from the American River, and could occur in all year-types

(b) in Max-Day Capacity

Water Forum Year-Type	Hydrologic Condition	Type of Use	Surface Water Demand (AF per year)	Capacity Needs (mgd)			Available Max-Day Supply[2] (mgd)	Unmet Max-Day Demand (mgd)
				Max-Day Demand	Wheeling for Sacramento County[1]	Total		
Driest Years	All	M&I	232,668	378	23	401	260	141
All Other Years	Above Hodge[3]	M&I	232,668	378	23	401	360	41
	Below Hodge[4]	M&I	232,668	378	23	401	260	141

[1] Wheeling for Zone 40 and Zone 50
[2] The installed capacity of the Sacramento River WTP is 160 mgd, and that of the Fairbairn WTP is 200 mgd The diversion rate at the Fairbairn WTP is subject to limitations in the WFA
[3] Above Hodge: The American River flow is above the flow thresholds set forth by the Hodge Decision
[4] Below Hodge: The American River flow is below the flow thresholds set forth by the Hodge Decision

- Provide additional water supply to SSWD to enhance the Groundwater Stabilization Project
- Provide additional water supply to Roseville to meet water demands resulting from planned urban growth and to facilitate a local conjunctive use program
- Provide additional water supply capacity for Sacramento to ensure water supply reliability and to provide retail and wholesale services within Sacramento's POU, and wheeling services to neighboring water purveyors to meet water demands and reduce groundwater reliance
- Maximize long-term water supply reliability in the Placer-Sacramento region through increased system interconnectivity, and source redundancy through conjunctive use of groundwater and the cost-sharing partners' existing surface water rights and contract entitlements

These objectives will be used for formulating alternatives and when considering the planning constraints and criteria discussed below.

Development of the SRWRS will be consistent with the following constraints and criteria:

- Satisfying requirements stipulated in PL 106-554 to complete a feasibility study for a Sacramento River diversion that is consistent with the WFA and includes the following components: (1) development of a range of reasonable options, (2) an environmental evaluation, and (3) consultation with Federal and State resource management agencies regarding potential impacts and mitigation measures. Furthermore, Congress requires the SRWRS to be developed in coordination with the California Federal Bay-Delta Program (CALFED).
- Observing existing applicable laws, regulations, water rights, contracts and legal agreements, and Federal planning guidelines, including, but not limited to, Federal planning guidelines such as the Federal Water Resources Council's Economic and Environmental Principles and Guidelines for Water and Related Land Resources Implementation Studies, National Environmental Policy Act (NEPA), California Environmental Quality Act (CEQA), California water laws, and obligations of the cost-sharing partners in their charters and as defined in California laws.
- Minimizing overall impacts on the environment to the extent feasible, being cost-effective, and complementing and enhancing the overall reliability of the Placer-Sacramento region's water supply system through increased interconnectivity and source redundancy.

Table ES-3 summarizes requests for additional surface water diversion and treatment capacity to balance projected 2030 demand and supply and enhance water supply reliability.

Other Regional Opportunities the SRWRS May Contribute

The SRWRS will formulate solutions for the identified problems; however, these solutions could contribute to other regional opportunities, resulting in potential ancillary benefits.

Enhancement of CVP Operational Flexibility

The opportunity to enhance CVP operational flexibility could occur through implementation of WFA elements, which would result in reducing future diversions from the lower American River and supplementing dry-year inflows to Folsom Lake with upstream storage releases. The SRWRS could contribute to realizing these management actions, as well as to the highly related opportunity for promoting ecosystem preservation in the lower American River.

As an integral part of the CVP, Folsom Dam is operated for contract deliveries, flood management, instream flow needs in the lower American River, and water quality needs in the Delta. The operation of Folsom Dam is especially critical in meeting Delta water quality objectives in Decision 1641 (D-1641) issued by the State

Table ES-3. Water Delivery Quantities Considered in the SRWRS, by Cost-Sharing Partner

Water Purveyor	Maximum Additional Annual Water Deliveries (AF)	Source	Type of Use	Additional Treatment Capacities (mgd)	Purpose of Additional Treatment Capacities
PCWA	35,000	CVP	M&I	65	Max-day demand
SSWD	29,000[1]	MFP	M&I	15	Reliability and redundancy
Roseville	7,100[2]	MFP	M&I	10	Max-day demand
Sacramento	17,000[3]	Water rights, water wheeling requests	M&I	145	Max-day demand
Total	88,100			235	

[1] For Water Forum average, drier, and driest years only; the WFA allows SSWD to exercise this entitlement in Water Forum wet years using diversions from the American River.
[2] Roseville would only consider additional diversions from a river other than the American River.
[3] The WFA does not establish a volumetric limitation for Sacramento's total diversion; the estimated additional water supply to meet its projected demand is about 17,000 AF per year, based on the difference between the projected demand and the simulated average diversion for Sacramento that could be realized using then-existing diversion facilities on the American and Sacramento rivers. However, Sacramento could divert up to 81,800 AF per year under its water rights on the Sacramento River at a new diversion by reducing the diversion under its Sacramento River water rights at its existing Sacramento River WTP downstream of the confluence with the American River.

Water Resources Control Board (SWRCB) in 2000. D-1641 requires that the CVP and State Water Project (SWP) meet water quality flow objectives in the Sacramento-San Joaquin Delta (Delta), except for salinity objectives in the south Delta, until a settlement is reached with other Sacramento Valley water right holders. Since Folsom Reservoir is the closest water source to the Delta, releases from Folsom Dam often are used first to maintain Delta water quality standards when Delta conditions deteriorate. A release is reduced once standards are met or increased flows from other reservoirs arrive in the Delta.

This existing operational flexibility provided by Folsom Reservoir for D-1641 compliance would be further affected by increasing needs for water supply, flood control, and fishery management in the American River. The increased demand in the American River basin (especially in the upper basin) would reduce available water to the CVP for water supply purpose and flow management in the lower American River and in the Delta. The recently issued Biological Opinion (BO) by the National Marine Fisheries Service of National Oceanic and Atmospheric Administration (NOAA Fisheries) for the CVP Long-Term CVP Operations Criteria and Plan (OCAP) indicates that the ablity to fill Folsom Reservoir in May would be reduced from 50 percent to 40 percent between conditions today and conditions in the future as water demand in the American River basin increases from a total of 256 thousand acre-feet (TAF) at the 2001 level of development (LOD) to 688 TAF at a 2020 LOD. Since 1996, Reclamation implemented a dynamic allocation of flood control space from 400,000 to 670,000 AF; this action also may result in less storage in some hydrologic conditions such as those in 1997. Increasing needs for additional instream flow requirements and other fishery management goals in the American River also would compete for limited water and storage behind Folsom Dam, as explained in the following opportunity for promoting ecosystem preservation in the lower American River.

Promotion of Ecosystem Preservation in the Lower American River

The opportunity to promote ecosystem preservation in the lower American River could come from implementing projects contributing to the water supply reliability objective of the WFA and thus, facilitate progress in the other Water Forum co-equal objective of preserving the lower American River. This opportunity may accompany the opportunity for enhancing CVP operational efficiency, as described above.

Lower American River instream flow requirements were originally defined in SWRCB D-893. The SWRCB then increased the D-893 minimum release schedule through D-1400. This decision was applied to the water rights permit for Auburn Dam and does not apply to operation of Folsom and Nimbus dams. However, Reclamation voluntarily operates Folsom and Nimbus dams to meet a modified D-1400 for minimum fishery flows, and more recently has striven to meet recommended Anadromous Fish Restoration Program (AFRP) flows for the lower American River under the Central Valley Project Improvement Act (CVPIA).

Although Reclamation implemented AFRP flow objectives in the lower American River, temperature control problems still exist due to the relatively small coldwater pool available in Folsom Reservoir. To protect Central Valley spring-run Chinook salmon and steelhead, the 2002 BO on interim operations of the CVP and State Waer Project (SWP) sepecifies ramping criteria for releases from Nimbus Dam. The BO also requires Reclamation, to the extent possible, to control water temperatures in the lower American River between Nimbus Dam and the Watt Avenue Bridge (River Mile 9.4) from June 1 through November 30 to maintain a daily average temperature of less than or equal to 65 degrees Fahrenheit (°F) to protect juvenile steelhead from thermal stress and warmwater predator species. This BO resulted in a significant conflict for Folsom Dam operations due to the different life stages of these two targeted species at any given time. Also, the amount of cold water in Folsom Lake that could be released to meet temperature requirements for spawning and rearing of both fall-run Chinook salmon and steelhead is limited.

Currently, Reclamation receives recommendations from the interagency American River Workgroup (AROG) on seasonal fluctuations and ramping of stream flows in the lower American River. With input from AROG, Reclamation continues to adaptively manage lower American River temperatures through a combination of flow releases and intake shutter operations. The goal of this adaptive management is to provide suitable temperatures during the summer months for the Nimbus Fish Hatchery and rearing juvenile steelhead, while minimizing the loss of the coldwater pool remaining for spawning fall-run Chinook salmon.

The 2004 OCAP BO by NOAA Fisheries indicates that the impacts of CVP and SWP operation on the American River would increase with the predicted increase in water demand. Recognizing that Reclamation is adaptively managing river temperature in coordination with NOAA Fisheries staff and AROG, the OCAP BO indicates additional protection of endangered and threatened species through coordination with the WFA for implementing associated water management actions to reduce future diversions from the American River and to provide supplemental flow with releases from upstream storage.

Coordination with ABFSHIP for Potential Regional Benefits

The American Basin Fish Screen and Habitat Improvement Project (ABFSHIP), supported by funding from the Central Valley Project Improvement Act (CVPIA) Anadromous Fish Screen Program (AFSP) and CALFED Environmental Restoration Program (ERP), is to consolidate five existing diversions of Natomas Mutual Water Company (NMWC) and one other diversion of local riparian water right holders on the Sacramento River into one or two new diversion facilities with fish screens. The WFA recommends the consolidation and screening of these diversions to benefit the environment and Sacramento River fisheries.

NMWC completed a Feasibility Study Technical Report for ABFSHIP in 2000. Currently, NMWC, Reclamation (NEPA lead agency) and CDFG (California Environmental Quality Act (CEQA) lead agency) are preparing an EIS/EIR for ABFSHIP. As a project supported by CALFED funding, ABFSHIP is currently undergoing an environmental review process and is developing an Action Specific Implementation Plan (ASIP) for its proposed actions. All three action alternatives under consideration (Sankey/Elkhorn

Diversions, Sankey Diversion, and Prichard Diversion) include a total screened diversion capacity of 644[9] cfs, removal of a dam at the mouth of the Natomas Cross Canal (NCC), improvements to NMWC's canal distribution system, and corresponding revised operation for water delivery. The Sankey/Elkhorn Diversions alternative is the proposed action under the ASIP process. The final decision(s) on ABFSHIP will be made after lead agencies completing the environmental compliance process in late 2005.

The development of ABFSHIP is independent to SRWRS development. The opportunity for coordinating efforts of ABFSHIP and the SRWRS stems from potential reduction in overall environmental impacts that may be associated with having two major diversions in the less-than-2-mile reach of the Sacramento River, and increase in regional water management flexibility that may be realized through a collaborative approach in the urbanizing Natomas Basin. Local water purveyors (including NMWC and SRWRS cost-sharing partners) have been discussing issues of consolidating diversion needs for SRWRS cost-sharing partners and for NMWC's planned Elkhorn Diversion under the ABFSHIP Sankey/Elkhorn Diversions alternative. As suggested in NMWC's 2000 ABFSHIP Feasibility Study Technical Report, the Sankey/Elkhorn Diversions alternative is the most feasible alternative and allows more flexibility in water management to fulfill NMWC's commitments for providing landscape irrigation water to the Sacramento International Airport, and facilitate required service to M&I purveyors in the Natomas Basin if the projected land use change from agriculture to urban occurs.

Implementation of the SRWRS is anticipated by local agencies, but implementation of ABFSHIP will rely on Federal and State funding from the AFSP and CALFED program. Despite progress in the environmental process, potential delay in full installment of Federal funding may result in staging or delay in construction of one or both ABFSHIP diversions, creating the opportunity of coordination between ABFSHIP and the SRWRS to maximize the potential regional benefits without impacting the schedule of improvements for fishery protection. While a preliminary protocol was developed for coordinating these two projects through a multi-agency coordination meeting,[10] success in realizing this opportunity depends on the progress of the two projects and agreements among local water agencies.

Development of Preliminary Alternatives

Measures (partial solutions) ranging from surface water storage, groundwater, additional conservation and reclaimed water use, and surface water diversions were considered in the SRWRS for the identified water supply reliability needs. These measures were screened for their effectiveness and efficiency in addressing the identified planning objectives.

Five preliminary alternatives were developed by combining retained measures: (1) Elkhorn/Elverta Diversion Alternative, (2) Sankey Diversion Alternative, (3) Feather River Diversion Alternative, (4) American River Pump Station (ARPS) Alternative, and (5) Folsom Dam Alternative. Each alternative identified for the SRWRS includes a plan for operating a package of water supply infrastructure components to meet water supply needs of the cost-sharing partners, and satisfy the identified planning constraints and criteria. Infrastructure components include new or expanded diversion(s) from the Sacramento, Feather, or American rivers, and new or expanded water treatment and major transmission facilities.

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[9] The Sankey/Elkhorn Diversions alternative would include a 434-cfs diversion near Sankey Road and a 210-cfs diversion near existing NMWC's Elkhorn diversion; the Sankey Diversion alternative would have a 644-cfs diversion near Sankey Road; the Prichard Diversion alternative would have a 644-cfs diversion near Prichard Lake.

[10] Reclamation held this multi-agency coordination meeting on January 14, 2004. Participants include Reclamation, FWS, NOAA Fisheries, CALFED, CDFG, NMWC, and SRWRS cost-sharing partners. See Chapter 8 for detail.

Scoping Process

Preliminary alternatives were included in the Notice of Intent (NOI) and Notice of Preparation (NOP) issued for the SRWRS scoping process in July and August 2003, respectively. The alternatives were presented in briefings from July through October 2003, and scoping meetings in September 2003 were held to solicit public input on preliminary alternatives and study development. This public input will be taken into consideration as the SRWRS continues.

Alternatives for Further Evaluation

For further focused development of the SRWRS, a screening of these preliminary alternatives was performed to modify, combine, or remove alternatives based on initial analyses of institutional requirements, engineering challenges and cost, magnitudes of environmental effect, and public input received during the scoping process. The purpose of the screening was not to select a superior plan, but to remove less desirable plan(s).

Two preliminary action alternatives were retained for further study: Elkhorn/Elverta Diversion Alternative and ARPS Alternative. These two preliminary action alternatives were further refined into four alternatives to incorporate considerations for coordination with ABFSHIP on its Sankey/Elkhorn Diversions Alternative. These four retained alternatives are described below (the corresponding facility plans are summarized in **Table ES-4**):

- **SRWRS Elverta Diversion Alternative**. This alternative consists of the Elverta Diversion and associated facility plan to accommodate only the needs of the SRWRS cost-sharing partners. The infrastructure plan includes a raw water intake and pump station located on the Sacramento River with a total discharge capacity of 235 mgd, or 365 cfs, a new joint WTP of the same capacity, raw water pipelines, and treated water pipelines to the connecting point(s) of each cost-sharing partner's existing water distribution system. It is anticipated that the intake and WTP would be owned and operated by Sacramento. Under this alternative, it is assumed that NMWC would construct and operate its Elkhorn Diversion of 136 mgd (210 cfs), planned for ABFSHIP independent of the SRWRS, or continue to divert from its existing diversion.

- **Joint SRWRS-ABFSHIP Elverta Diversion Alternative** (see **Figure ES-2**). This alternative is the local proposed alternative, which consists of a consolidated diversion on the Sacramento River and associated facility plan to accommodate the needs of the SRWRS cost-sharing partners, and the needs of NMWC from its planned Elkhorn Diversion under ABFSHIP. In addition to facilities of the SRWRS Elverta Diversion Alternative, this alternative includes an additional diversion capacity of 165 mgd (210 cfs) and landside improvements for accommodating NMWC's needs from the planned Elkhorn Diversion, if the ABFSHIP lead agencies recommend the proposed Sankey/Elkhorn Diversions alternative in their final decision(s). Therefore, the Elkhorn Diversion planned in ABFSHIP would not be constructed.

  No implication about NMWC's existing water rights and contract entitlements was made by proposing a consolidated diversion for the Joint SRWRS-ABFSHIP Elverta Diversion Alternative, and this alternative is subject to agreement among local water purveyors. ABFSHIP would be maintained in a separate study pursued by NMWC to consolidate its existing five agricultural diversions into two for fishery protection and operational efficiency. The SRWRS would consider only facility components and their associated environmental impacts that are necessary to move the planned Elkhorn Diversion to the Elverta location for potential regional benefits.

- **ARPS-Elverta Diversion Alternative** — Under this alternative, PCWA would expand its ARPS near Auburn from a capacity of 100 cfs to 200 cfs; expand its Foothill Phase II WTP with an increment of like capacity; and expand its associated transmission facilities. SSWD would divert from SJWD's existing

diversion facilities at Folsom Dam using shoulder capacity. Roseville would increase use of groundwater to satisfy its needs under this alternative, but would have no additional surface water diversions. Sacramento would divert separately from the Sacramento River at the Elverta site through a new intake of 145 mgd (235 cfs), and construct its own treatment and transmission facilities to serve its needs. Under this alternative, NMWC would construct and operate its planned Elkhorn Diversion of 136 mgd (210 cfs) independent of the SRWRS, or continue to divert from its existing diversion.

- **ARPS-Joint Sacramento-ABFSHIP Elverta Diversion Alternative** — This alternative would have the same facilities as for the ARPS-Elverta Diversion Alternative, an additional diversion capacity of 165 mgd (210 cfs), and landside improvements for accommodating NMWC's needs from the planned Elkhorn Diversion, if the ABFSHIP lead agencies recommend the proposed Sankey/Elkhorn Diversions alternative in their final decision(s).

  Similar to the Joint SRWRS-ABFSHIP Elverta Diversion Alternative, no implication about NMWC's existing water rights and contract entitlements was made by proposing a consolidated diversion for Sacramento and ABFSHIP, and this alternative is subject to agreement among local water purveyors. ABFSHIP would be maintained in a separate study pursued by NMWC to consolidate its existing five agricultural diversions into two for fishery protection and operational efficiency. The SRWRS would consider only facility components and their associated environmental impacts that are necessary to move the planned Elkhorn Diversion to the Elverta location for potential regional benefits.

Note that the development of ABFSHIP is independent to SRWRS development. The final Federal decision(s) on ABFSHIP has not been made. The above description of retained alternatives with a consolidated diversion (Joint SRWRS-ABFSHIP Elverta Diversion Alternative and ARPS-Joint Sacramento-AFSHIP Elverta Diversion Alternative) assumes the condition of the ABFSHIP-proposed action under its ASIP process, which would allow the opportunity for a consolidated diversion. If the final decision(s) on ABFSHIP indicates otherwise, these alternatives would be reduced to their corresponding counterpart without the consolidation feature (i.e., SRWRS Elverta Diversion Alternative and ARPS-Elverta Diversion Alternative, respectively).

POTENTIAL FEDERAL ROLES IN PROJECT IMPLEMENTATION

The current study findings suggest that local water purveyors are potential beneficiaries of a Sacramento River diversion, and Reclamation's potential interest for a Sacramento River diversion is limited because this region has sufficient water rights and contract entitlements to meet projected future demand. However, a Sacramento River diversion could promote other Federal interests that could be realized in other ongoing programs and projects, as identified earlier in the Executive Summary: (1) enhancement of CVP operational flexibility, (2) preservation of the lower American River, and (3) coordination with ABFSHIP for potential regional benefits.

Considering limited Federal interest in water supply plans evaluated in the SRWRS, the cost-sharing partners have requested Reclamation to consider the following Federal administrative actions for implementing a Sacramento River diversion:

- Including an additional point of delivery at the selected Sacramento River location in PCWA's CVP contract for delivery of up to 35,000 AF per year

- Entering into an exchange agreement with PCWA to receive water released from the MFP to Folsom Lake, and to provide an equal amount of water for SSWD's and Roseville's diversions at the selected Sacramento River location

Note that constructing a Sacramento River diversion for Sacramento to divert its senior water rights on the Sacramento River does not require any Reclamation approval or actions.

The aforementioned Federal actions are within the delegated authority of a regional director and require no subsequent or additional authorization from Congress. However, if deemed beneficial, implementation of the joint SRWRS-ABFSHIP Elverta Diversion Alternative would require additional Federal decisions on consolidating diversion capacity of a Federally supported project with a local diversion project. This particular action may require additional congressional authorization. Therefore, it is recommended that Reclamation continue engaging in study development and considering potential Federal roles in project implementation of a joint SRWRS-ABFSHIP Elverta Diversion.

Table E-4. Summary of Facility Plans for Alternatives Retained for Further Study

Alternative	Purveyor	SRWRS Facility Plan for Diversions Under Consideration[1]						Corresponding ABFSHIP Elkhorn Diversion Capacity (listed for reference only)	
		Diversion			Treatment Capacity (mgd)	Transmission Pipelines	Canal Improvement		
		Location	Capacity Increment (cfs)	Capacity Increment (mgd)				(cfs)	(mgd)
SRWRS Elverta Diversion Alternative	PCWA	Elverta	101	65	65	Connecting to distribution systems	Relocation near diversion		
	SSWD	Elverta	23	15[2]	15[2]				
	Roseville	Elverta	16	10	10				
	Sacramento	Elverta	225	145	145				
	NMWC	-	-	-	-	-	-	210	136
	Subtotal for Elverta		**365**	**235**	**235**				
Joint SRWRS-ABFSHIP Elverta Diversion Alternative	PCWA	Elverta	101	65	65	Connecting to distribution systems	Relocation near diversion		
	SSWD	Elverta	23	15[2]	15[2]				
	Roseville	Elverta	16	10	10				
	Sacramento	Elverta	225	145	145				
	NMWC	Elverta	210	136	-	-	As needed for ensuring operation	-	-
	Subtotal for Elverta		**576**	**371**	**235**				
ARPS-Elverta Diversion Alternative	PCWA	ARPS	101	65	65	Connecting to distribution systems	-		
	SSWD	Folsom Dam	23	-[3]	-[3]				
	Roseville	—— *Use existing groundwater capacity* ——							
	Sacramento	Elverta	225	145	145		Relocation near diversion		
	NMWC	-	-	-	-	-	-	210	136
	Subtotal for Elverta		**226**	**146**	**146**				
ARPS-Joint Sacramento-ABFSHIP Elverta Diversion Alternative	PCWA	ARPS	101	65	65	Connecting to distribution systems	-		
	SSWD	Folsom Dam	23	-[3]	-[3]				
	Roseville	—— *Use existing groundwater capacity* ——							
	Sacramento	Elverta	225	145	145		Relocation near diversion		
	NMWC	Elverta	210	136	-		As needed for ensuring operation	-	-
	Subtotal for Elverta		**435**	**281**	**155**				

[1] All SRWRS facility plans would provide the following water rights and contract entitlements:

- PCWA's 35,000 AF per year of CVP contract entitlement
- SSWD's 29,000 AF per year of PCWA's MFP contract entitlement in Water Forum non-wet years
- Roseville's diversions of up to 7,100 AF per year of PCWA's MFP contract entitlement
- Sacramento's diversions from 245,000 AF per year American River water rights and 81,800 AF per year Sacramento River water rights beyond the capacity of the Sacramento River and Fairbairn WTPs, while observing WFA limitations on diversion at the Fairbairn WTP

[2] SSWD also would use additional shoulder capacity for delivery of up to 29,000 AF per year.

[3] SSWD also would use existing shoulder capacity at SJWD's Peterson WTP for delivery of up to 29,000 AF per year.

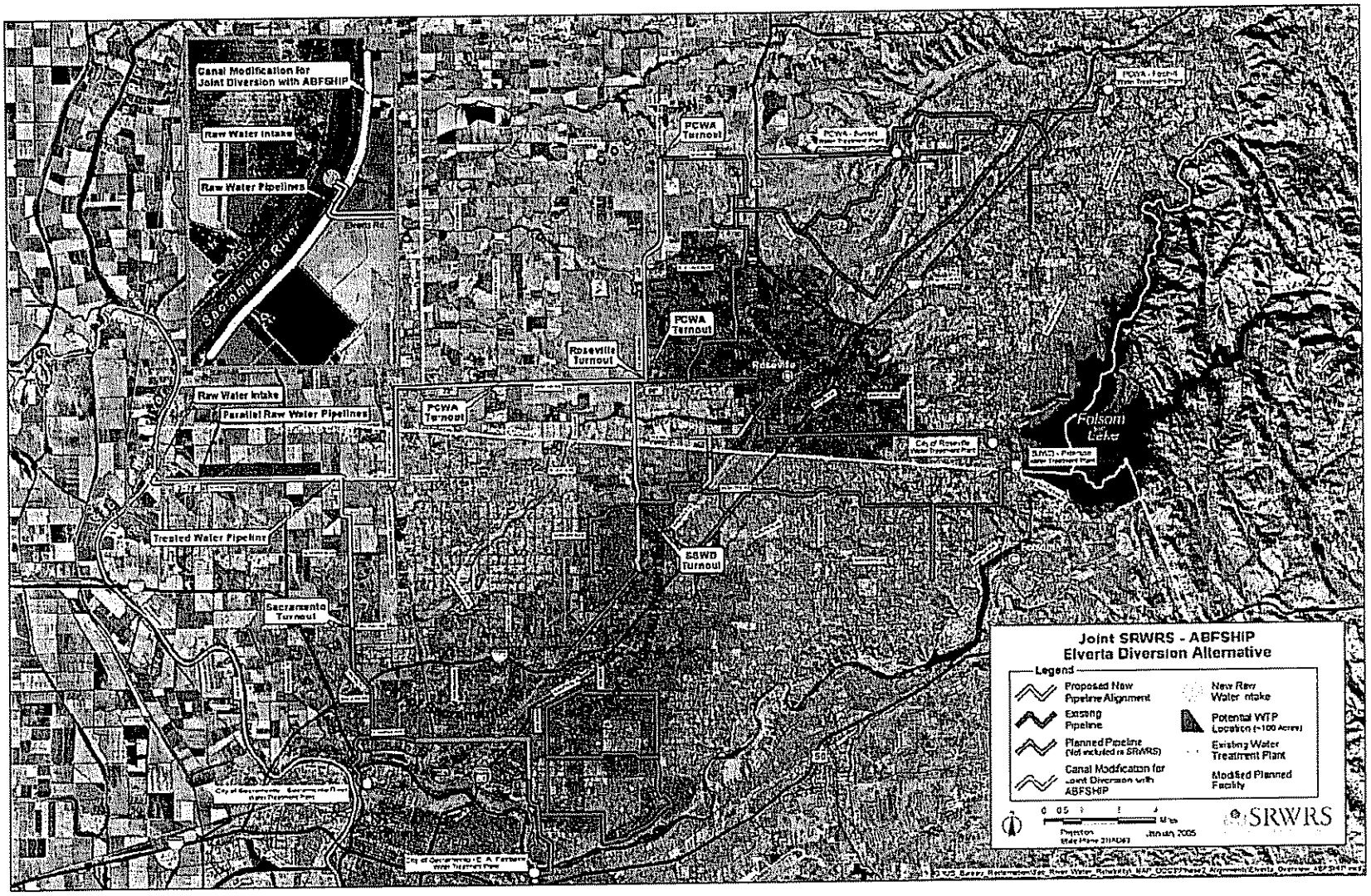

Figure ES-2. Joint SRWRS-ABFSHIP Elverta Diversion Alternative

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NEXT STEPS

SRWRS development includes four phases: (1) Initial Investigation Phase, (2) Initial Plans Phase, (3) Alternative Plans Phase, and (4) Recommended Plan Phase. This **Initial Alternatives Report** summarizes findings of the first two phases; the SRWRS is currently in the Alternative Plan Phase of study development. Tasks to be performed during this phase include the following:

- Evaluating alternatives for accomplishments in meeting the planning objectives
- Refining engineering design for each retained alternative
- Assessing environmental impacts and economic considerations for each retained alternative
- Preparing Biological Assessments (BA) and a draft PR/EIS/EIR
- Continuing public outreach through newsletters, briefings, workshops, and other activities
- Selecting a preferred plan and finalized PR/EIS/EIR with recommended actions

The four phases of SRWRS development are roughly divided into two study phases for administrative purposes. Phase 1 covers the Initial Investigation Phase and Initial Plans Phase, focusing on alternative development, preliminary screening, and public involvement and outreach strategies. Phase 2 covers the Alternative Plan Phase and Recommended Plan Phase, emphasizing preparation of the feasibility report and environmental documentation. A tentative study schedule is shown in **Figure ES-3**. SRWRS completion is currently expected to span more than 3 years with a tentative completion date in 2006. The schedule is subject to revision to reflect progress in study development and agency consultation.

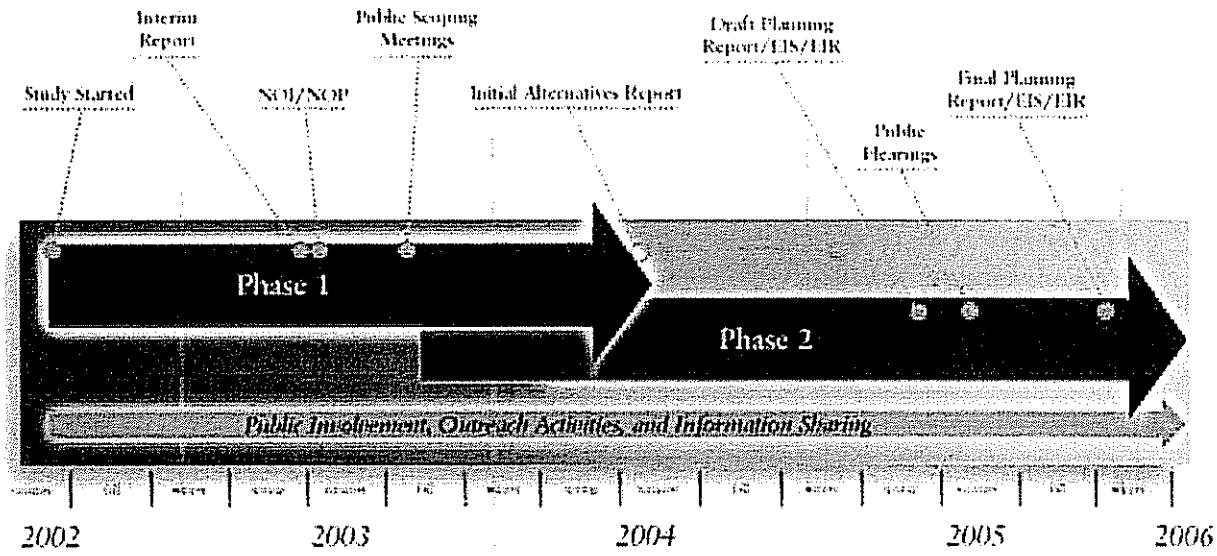

Figure ES-3. Tentative Schedule for SRWRS Development

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From: "Dawn Einwalter" <Dawn.Einwalter@edaw.com>
To: "Donna Ramos" <DRamos@cityofsacramento.org>
Date: 10/11/2006 11:33:09 AM
Subject: Re: Sac Form-Based Codes Pre-test

Donna,

Thanks for dropping off the applications yesterday.

I discussed the meeting scheduling with Jeff Goldman, the principal on this project. It's my understanding that the meetings you have been scheduling for the week of 10/30 were intended as neighborhood meetings. However, before we hold broader neighborhood meetings, we need to have focused stakeholder meetings for each of the three neighborhoods.

These stakeholder meetings could be scheduled in early November, using the previous list of dates (11/2, 11/4, 11/6-8). The 11/6, 11/7, and 11/8 would give us plenty of time to prepare and let stakeholders get it on their schedules.

I'm attaching a list of the stakeholders that should be invited to these meetings, taken from the applications that you provided.

I notice that there are no petitioners for Oak Park. Perhaps Alan Lehman, the Oak Park applicant, could shed some light on whether there is a petition that should have been attached? Otherwise, Oak Park would not be well-represented at the stakeholder meeting.

Give me a call if I can clarify anything.

Dawn

EDAW Inc.
2022 J Street
Sacramento, CA 95814
office 916-414-5869
cell 775-813-7932
fax 916-414-5850

CC: "Jeff Goldman" <Jeff.Goldman@edaw.aecom.com>

Sacramento Form-based Codes Pre-test
Stakeholder List

Alkali Flat

1. Dan Hood (applicant, pg. 1 of application)

2. All Petitioners (pg. 4 of application)

3. One representative from each of the following neighborhood groups:
   Alkali and Mansion Flats Historic Neighborhood Association
   Alkali Flat Neighborhood Improvement Association
   SHRA Alkali Flat Redevelopment Advisory Committee

Oak Park

1. Alan Lehman (applicant, pg. 1 of application)

2. Jon Marshack (Stakeholder Issues and Concerns Form; no petitioners listed)

3. One representative from each of the following neighborhood groups
   Oak Park Neighborhood Association
   Medical Center Neighborhood Association
   Oak Park Redevelopment Advisory Committee

East Sacramento

1. Emilie Kashtaw (applicant, pg. 1 of application)

2. All petitioners (pg. 4 of application)

3. One representative from each of the following neighborhood groups:
   McKinley Elvas Neighborhood Alliance
   East Sacramento Improvement Association
   Sacramento Preservation Task Force