APPENDIX M1

Water Supply Assessment and Master Plan

CITY OF FOLSOM

FOLSOM SPECIFIC PLAN AREA SB 610 WATER SUPPLY ASSESSMENT

Folsom Specific Plan Area
Water Supply Assessment

PREPARED FOR CITY OF FOLSOM

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DRAFT

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GLOSSARY OF ABBREVIATIONS

AW	Applied Water
BMP	Best Management Practices
CCR	California Code of Regulations
CEQA	California Environmental Quality Act
CUWCC	California Urban Water Conservation Council
CWC	California Water Code
CFD	Community Facilities District
EID	El Dorado Irrigation District
EIR/EIS	Environmental Impact Report/Environmental Impact Statement
ETo	Reference Evapotranpiration
FRWA	Freeport Regional Water Authority
IE	Irrigation Efficiency
LAFCO	Local Agency Formation Commission
MWELO	Model Water Efficient Landscape Ordinance
NCMWC	Natomas Central Mutual Water Company
NEPA	National Environmental Policy Act
PCWA	Placer County Water Agency
PF	Plant Factor
SBX7 7	Extraordinary Session Seven, Senate Bill 7
SCWA	Sacramento Couny Water Agency
SFP	South Folsom Properties
SPA	Specific Plan Area
SPA - RHA	Specific Plan Area - Reduce Hillside Development Alternative
SPA WSA	Specific Plan Area Water Supply Assessment
USBR	United States Bureau of Reclamation
UWMP	Urban Water Management Plan
WFA	Water Forum Agreement
WSA	Specific Plan Area - Proposed Project Alternative

INTRODUCTION

The City of Folsom and the U.S. Army Corps of Engineers are preparing an Environmental Impact Report/Environmental Impact Statement for the proposed Folsom Specific Plan Area (Folsom SPA) development south of U.S. Highway 50.[1] The Folsom SPA qualifies as a "project" under California Water Code (CWC) § 10912 because it is a proposed residential development project of more than 500 units.[2] Pursuant to CWC § 10910 (b), the City of Folsom has identified two public water systems that will serve the project – the City of Folsom and El Dorado Irrigation District (EID).[3] Both the City of Folsom and EID are public water systems under CWC § 10912 because they both operate systems for providing piped water for public consumption to more than 3,000 service connections. Procedurally, the City of Folsom, as the land-use agency responsible for the Folsom SPA, and has prepared the Folsom SPA Water Supply Assessment (Folsom SPA WSA) for approval by both the Folsom City Council and EID's Board of Directors as the respective governing body of each public water system that will provide water to the project.[4]

Because the City of Folsom and EID are public water systems that may provide water service to the Folsom SPA and neither included the Folsom SPA in their respective 2005 UWMPs, the City of Folsom and EID have prepared this Folsom SPA WSA.[5] This Folsom SPA WSA determines whether the total projected water supplies for the Folsom SPA during normal, single dry, and multiple dry water years during a 20-year time period, will meet the projected Folsom SPA water demand.[6] As discussed in more detail, this

[1] Section 21151.9 of the Public Resources Code requires that any proposed "project" comply with California Water Code (CWC) sections 10910, et seq. Specifically, CWC § 10910(a) provides that "Any city or county that determines that a project, as defined in Section 10912, is subject to the California Environmental Quality Act … shall comply with this part." CWC § 10912(a)(1) defines a "project" as "A proposed residential development of more than 500 dwelling units."

[2] As explained in Section 1.1, there are two project alternatives analyzed in the Folsom SPA WSA – the Proposed Project Alternative (Folsom SPA – PPA) and the Reduced Hillside Development Alternative (Folsom SPA – RHA). Both exceed the 500 unit threshold and therefore both qualify as a "project" pursuant to CWC § 10912.

[3] CWC § 10910(b) provides that "The city or county, at the time that it determines whether an environmental impact report … is required for any project subject to the California Environmental Quality Act …, shall identify any water system that is, …, a public water system, as defined in Section 10912, that may supply water for the project.

[4] Pursuant to CWC § 10910(g)(1) "The governing body of each public water system, or the city or county if either is required to comply with this act pursuant to subdivision [10910] (b), shall approve the assessment prepared pursuant to this section at a regular or special meeting."

[5] Both the City of Folsom and EID are public water systems that may serve the project and would therefore be responsible for preparation of a water supply assessment.

[6] CWC § 10910(c)(4) provides that "If the projected water demand associated with the proposed project was not accounted for in the most recently adopted urban water management plan, …, the water supply assessment for the project shall include a discussion with regard to whether the public water system's total projected water supplies

WSA concludes that the total projected water supplies for the Folsom SPA are sufficient to meet the SPA's projected water demand, for both the Folsom SPA Proposed Project Alternative (Folsom SPA – PPA) and the Folsom SPA Reduced Hillside Development Alternative (Folsom SPA – RHA), during normal, single dry and multiple dry water years during a 20-year time period.

Under CWC sections 10910(a) and 10912(a), the project to be analyzed in a WSA is the project that is subject to review under the California Environmental Quality Act (Public Resources Code sections 21100-21177 (CEQA)). Under CEQA, project alternatives are not equivalent to the proposed project. (See Public Resources Code § 21100(b).)[7]

The EIR/EIS that this WSA supports is subject to the National Environmental Policy Act (42 USC 4321 et seq. (NEPA)), as well as CEQA. The EIR/EIS therefore analyzes project alternatives in the level of detail required by NEPA. (See 40 CFR § 1502.14.), The Folsom SPA – RHA would involve more residential units than the Folsom SPA. Because of this fact and because the EIR/EIS analyzes that alternative in the level of detail required by NEPA, out of an abundance of caution, the City in this WSA analyzes the Folsom SPA – RHA's water demands in comparison to the City's proposed water supplies even though CWC sections 10910(a) and 10912(a) do not require the City to prepare a WSA for the Folsom SPA – RHA or for the other land-use alternatives that the EIR/EIS considers. The other land-use alternatives considered by the EIR/EIS involve an equal or lower number of residential units and greater number of acres of non-irrigated open space than the Folsom SPA – PPA and therefore do not raise the same water-supply issues as the Folsom SPA – RHA.

Section 1 provides a description of the planned land uses for the Folsom SPA - PPA. **Section 2** provides a water demand projection methodology for both the Folsom SPA – PPA and the Folsom SPA – RHA and the water demand projection for the Folsom SPA – PPA. **Section 3** analyzes the water supply proposed for the Folsom SPA, assuming the same supply will be available regardless of the ultimate land-use alternative selected. **Section 4** presents a sufficiency analysis for the Folsom SPA – PPA. **Section 5** describes the Folsom SPA – RHA land-use plan. **Section 6** contains a unique water demand projection for the Folsom SPA – RHA. **Section 7** summarizes the water supply

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."

[7] Public Resources Code § 21100(b) provides, in relevant part: "The environmental impact report shall include a detailed statement setting forth all of the following . . . (4) Alternatives to the proposed project."

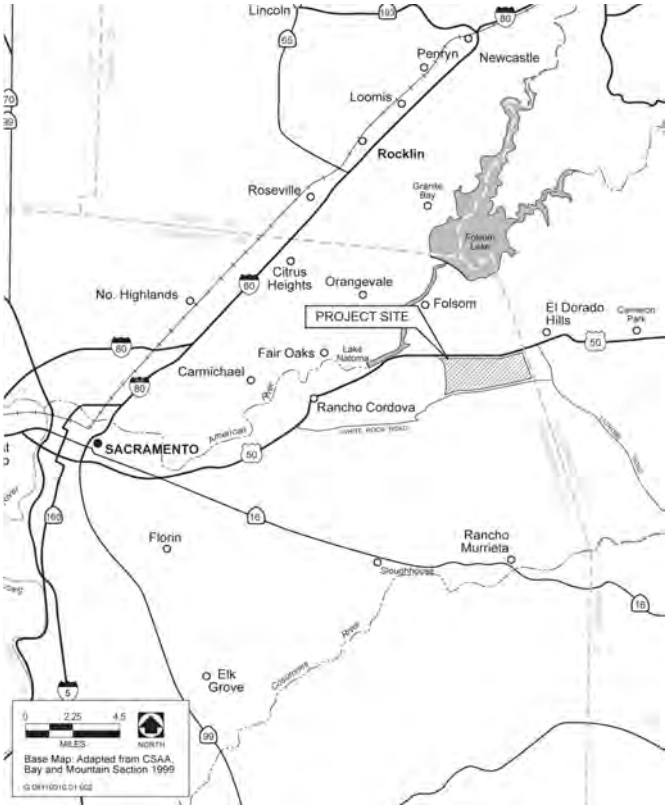
availability conclusions from **Section 3**. **Section 8** provides a sufficiency analysis for the Folsom SPA – RHA.

SECTION 1 – PROJECT DESCRIPTION

As shown in **Figure 1**, the Folsom SPA is located in eastern Sacramento County south of U.S. Highway 50.[8] Currently, the land in the Folsom SPA is comprised of open non-irrigated natural grass hills with some native oak stands. Alder Creek runs through the project site along a portion of the site's northern boundary. The project site is surrounded by agricultural and rural residential land uses to the south. West of the project site is land which is owned by the Aerojet-General Corporation that the company plans to develop for residential and commercial uses. The eastern boundary is the El Dorado County line. The project site is located within the City of Folsom's sphere of influence and planning area boundary.

[8] General project land-use description as provided in Notice of Preparation of a Joint Draft Environmental Impact Report/Environmental Impact Statement for the Folsom South of U.S. Highway 50 Specific Plan Project, September 12, 2008. (Folsom SPA NOP)

Figure 1[9]
Folsom Specific Plan Area
Regional Location Map



1.1 PROJECT LAND USES

Generally, at buildout, both the Folsom SPA – PPA and Folsom SPA – RHA envision a significant mixed-use project on approximately 3,500 acres, including approximately 1,500 acres of residential land uses, 1,000 acres of non-residential development, and 1,000 acres of open space. The City of Folsom will consider applying to the Sacramento County Local Agency Formation Commission (LAFCO) to annex the Folsom SPA to the City. But as indicated in the Introduction, the Folsom SPA lies within two separate retail water service jurisdictions. Most of the total Folsom SPA is within the City of Folsom's

[9] Exhibit 1, Folsom SPA NOP.

water service area and a portion is within the El Dorado Irrigation District's (EID) water service area.[10]

1.1.1 Folsom SPA - PPA Land Uses

The Folsom SPA - PPA land uses are presented in **Table 1-1**, and the land-use areas are depicted graphically in **Appendix B**. Total project acreage will be 3,510 acres, including a maximum of 10,210 dwelling units.

Table 1-1
Folsom SPA - PPA
Land Uses[11]

Land Use ID	Area, acres	Dwelling Unit Density DU/acre	Dwelling Units
Residential			
Single-Family (SF)	557.8	3.0	1,687
Single-Family; High Density (SFHD)	532.5	5.5	2,933
Multi-Family; Low Density (MFLD)	266.7	9.1	2,434
Multi-Family; Med. Density (MFMD)	67.0	18.3	1,224
Multi-Family; High Density (MFHD)	49.9	25.1	1,251
Mixed Use - Res. (MU-R)	35.5	11.5	681
Non-Residential			
Mixed Use - Non. Res. (MU-NR)	23.6	--	--
Office Park (OP)	89.2	--	--
Community Commercial (CC)	38.8	--	--
General Commercial (GC)	212.9	--	--
Regional Commercial (RC)	110.8		
Park	118.2	--	--
Local Park (LP)	3.5	--	--
School (SCH)	179.3	--	--
Open Space (OS)	1,053.1	--	--
Major Circulation (MAJ CIRC)	171.6	--	--
Total Residential	**1,509.4**		**10,210**
Total Non-Res	**2,001.0**		**0**
Total:	**3,510.4**		**10,210**

For the purpose of understanding the extent of the water that the Folsom SPA - PPA could demand from EID, **Table 1-2** provides the land use assumptions for the portion of the Folsom SPA - PPA located in the EID service area. EID's service area portion of the Folsom SPA - PPA encompasses approximately 172 acres and is projected to realize

[10] Sacramento LAFCO approved the City of Folsom Sphere of Influence Amendment Application in 2001 by adopting Resolution No. LAFC 1196. A copy of Resolution No. LAFC 1196 is attached as **Appendix A**.
[11] From MacKay and Somps, Land Use Summary, May 20, 2009. A copy of the Land Use Summary is attached as **Appendix C**. This is an update from the Specific Plan Land Uses presented in Table 1 of the Folsom SPA NOP.

construction of 530 dwelling units. For comparison, **Table 1-3** provides the land uses and associated dwelling units planned for the City of Folsom's water service area. This Folsom SPA WSA identifies a source of water and conveyance facilities that will be used to deliver water supplies to both service areas. The water supply identified for the entire project is an entirely new source for both service areas and will therefore not impact any existing water supplies in the City of Folsom or EID service areas.

Table 1-2
Folsom SPA – PPA
EID Service Area Land Uses

Land Use ID	Area (Acres)	Dwelling Unit Density DU/acre)	Dwelling Units
Residential			
Single-Family (SF)	33.8	3.1	106
Single-Family; High Density (SFHD)	31.0	5.5	171
Multi-Family; Low Density (MFLD)	27.9	9.1	253
Non-Residential			
General Commercial (GC)	29.5	--	--
Open Space (OS)	43.1	--	--
Major Circulation (MAJ CIRC)	6.8	--	--
Total Residential	**92.7**		**530**
Total Non-Res	**79.4**		**0**
Total	**172.1**		**530**

Table 1-3
Folsom SPA - PPA
Folsom Water Service Area Land Uses

Land Use ID	Area (Acres)	Dwelling Unit Density (DU/acre)	Dwelling Units
Residential			
Single-Family (SF)	524.0	3.0	1,581
Single-Family; High Density (SFHD)	501.5	5.5	2,762
Multi-Family; Low Density (MFLD)	238.8	9.1	2,181
Multi-Family; Med. Density (MFMD)	67.0	18.3	1,224
Multi-Family; High Density (MFHD)	49.9	25.1	1,251
Mixed Use - Res. (MU-R)	35.5	19.2	681
Non-Residential			
Mixed Use - Non. Res. (MU-NR)	23.6	--	--
Office Park (OP)	89.2	--	--
Community Commercial (CC)	38.8	--	--
General Commercial (GC)	183.4	--	--
Regional Commercial (RC)	110.8		
Park	118.2	--	--
Local Park (LP)	3.5	--	--
School (SCH)	179.3	--	--
Open Space (OS)	1,010.0	--	--
Major Circulation (MAJ CIRC)	164.8	--	--
Total Residential	**1,416.7**		**9,680**
Total Non-Res	**1,921.6**		**0**
Total:	**3,338.3**		**9,680**

As mentioned above, the planned water supply for the Folsom SPA is separate from the water supplies currently serving the City of Folsom's and EID's existing service areas. Under the Folsom SPA WSA, the City of Folsom will control the wholesale water supply for the entire Folsom SPA. It will also control the retail water supply and associated infrastructure in the City of Folsom's portion of the Folsom SPA. All water facilities and retail water supplies delivered in EID's portion of the Folsom SPA will be controlled by EID.

Water Code section 10910 requires the sufficiency of water demands to be assessed during a twenty year period. Accordingly, the Folsom SPA WSA assumes construction of the necessary water infrastructure will be completed by 2013 in time to meet water demands for the Folsom SPA – PPA. Full water demand in the Folsom SPA – PPA will be achieved by 2033 upon project completion.

SECTION 2 – FOLSOM SPA - PPA WATER DEMAND ESTIMATE

2.1 FOLSOM SPA DEMAND PROJECTION METHODOLOGY

Section 2 provides a water demand projection methodology for both the Folsom SPA – PPA and Folsom SPA – RHA and the water demand projection for the Folsom SPA - PPA.[12] **Section 2.1** provides a basis for the unit demand factors for the water demand estimates by reviewing the unit water demand factors of both the City of Folsom and other water purveyors in the region, as well as additional conservation drivers. Both the historic demand factor assessment and the conservation drivers provide a foundation for the water demand projection for the Folsom SPA – PPA contained in **Section 2.2** and the Folsom SPA – RHA projection contained in **Section 6.1**. **Section 2.3** identifies potential Folsom SPA – PPA demands that could be served by a non-potable supply. Neither the City of Folsom nor EID has developed a non-potable supply to deliver to the Folsom SPA. As such, this water supply assessment does not rely on a non-potable supply to meet any portion of the water demand projected for either the Folsom SPA – PPA.[13] **Section 2.4** provides the water demand projection for the Folsom SPA – PPA used for the sufficiency analysis in **Section 4**.

2.1.1 Historic Demand Factors

The demand projections for the Folsom SPA – PPA and Folsom SPA - RHA are based upon review of historic City of Folsom meter data, evaluation of meter data in neighboring water service jurisdictions and pending conservation mandates. The City of Folsom's 2005 Urban Water Management Plan (2005 UWMP) contains the most current unit water demand factors used by the City of Folsom to project land-use water demands. The unit demand factors used in the 2005 UWMP represent historic conditions with a range of housing ages, plumbing fixtures, and irrigation systems, and therefore do not reflect demand conditions for completely new construction. Since the 2005 UWMP was adopted, the City of Folsom has completed a five-year single-family residential meter reading project that has validated the unit demand factors used in the 2005 UWMP for the City's existing service areas. Specifically, in the 2005 UWMP, the

[12] CWC § 10910(c)(4) provides that "If the city or county is required to comply with this part pursuant to subdivision (b), the water supply 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 proposed project, in addition to existing and planned future uses, including agricultural and manufacturing uses."

[13] This does not preclude, however, an additional future non potable supply being made available to the project in the City's or EID's service area.

"Low Density Residential" land-use category was assigned a unit demand factor of 0.65 acre-feet per dwelling unit per year (af/du/yr), while the "Very Low Density Residential" category was assigned a unit demand factor of 0.59 af/du/yr.[14] The results of the 2003-2008 meter reading study support the use of 0.59 and 0.65 af/du/yr for the City's existing service area. The 2003-2008 meter-reading project entailed reading the meters of 3,909 single-family homes in August 2003 and again in July 2008 and calculating an annual average based upon the cumulative total. The average annual unit demand was 0.67 af/du/yr for all samples and 0.63 af/du/yr when the highest and lowest ten percent of samples were removed. These figures therefore support use of a historic figure between 0.60 and 0.70 af/du/yr as a basis for further refinement of the unit demand factors for both the Folsom SPA – PPA and Folsom SPA - RHA.

While the division between indoor and outdoor unit demands in the City of Folsom's meter study is not certain because dedicated irrigation meters did not exist on the accounts used for the study, it is possible to derive both indoor and outdoor unit demands using the meter data. The outdoor component calculation uses reference evapotranspiration (ETo), plant factor, and irrigation efficiency numbers that are appropriate for the City of Folsom's geography and climate.[15] In the City of Folsom, ETo is 53 inches per year, the average plant factor throughout a residential landscape is 0.7 and irrigation efficiency is about 70%.[16] Thus, total average applied water use to meet outdoor demand is calculated at 4.30 acre-feet per acre (af/ac).[17] As shown in **Table 2-**

[14] In the 2005 UWMP, the unit demand factor for the "Low Density" Residential category was comprised of an indoor factor of 0.20 af/du/yr and an outdoor factor of 0.45 af/du/yr. For the "Very Low Density" Residential category the unit demand factor was comprised of an indoor factor of 0.20 af/du/yr and an outdoor factor of 0.39 af/du/yr. These factors do not account for system losses.

[15] "Reference evapotranspiration" (ETo) is a standard measure of the environmental conditions, which affect the water use of plants. It is typically derived by measuring the evapotranspiration of cool-season grass and is expressed in inches over a specific period of time. A "plant factor" is used to determine plant water use relative to ETo. "Plant factors" are assigned to low, moderate and high water use plants. "Irrigation efficiency" (IE) is the measurement of the amount of water used by a plant divided by the amount of water applied.

[16] ETo is measured at the California Irrigation Management Information System (CIMIS) station located in Fair Oaks, California. The plant factor of 0.7 reflects the fact that the predominant landscape planting in the residential sector is cool-season grass, which has a plant factor of 0.8. A slight reduction is made to 0.7 to account for trees, shrubs, native landscapes, and non-living landscape cover. An irrigation efficiency of 70% was selected because, according to UC Cooperative Extension and the Department of Water Resources, "A representative range of efficiencies for landscape systems is proposed … to be from 65% to 90%," and "A system which is well designed and operated can have an efficiency range of 80% to 90%." Because historic residential unit demand was estimated for homes built no later than 2003, it is unlikely the systems would be considered "well designed and operated" seven years later. Therefore, an irrigation efficiency rate on the lower end of the range was selected. *A Guide to Estimating Irrigation Water Needs from Landscape Plants in California*, University of California Cooperative Extension and California Department of Water Resources, August, 2000.

[17] Applied Water (AW) = (ETo * Plant Factor)/IE. To convert ETo from inches to cubic feet, divide by 12. To convert cubic feet to gallons multiply by 7.481 gallons/cubic foot. To convert to gallons per acre, multiply by 43,560 ft/ac. To

1, assuming four units per acre (the mid range between the "Very Low" and "Low Density" categories), up to 35% building coverage, 15% for roads and right of ways, and about 10% for hardscapes, then landscape area would be about 40% per unit.[18] Total landscape demand per unit would be approximately 0.39 acre-feet per unit per year (af/unit/year).

Table 2-1
Outdoor Unit Demand Validation

Outdoor Unit Demand Derivation	
Parcel Area (sf)	10890
Landscape Area (sf)	3920
Landscape Area (ac)	0.09
Landscape Water Demand (af/yr)	0.39

If total annual unit demand is 0.61 af/unit/yr, the indoor demand component of total demand is approximately 0.22 af/unit/year after subtracting the outdoor demand component shown in **Table 2-1**. If there are 2.83 persons per unit per the 2005 UWMP, the indoor demand per person would be about 70 gallons/day, as shown in **Table 2-2**.

Table 2-2
Indoor Unit Demand Validation

Baseline Indoor Unit Demand	
Indoor Unit Demand (af/unit/yr)	0.22
Persons Per Unit	2.83
Indoor Per Capita Demand (gpcd)	69.4

Thus, 70 gallons/day will be used as the base indoor per capita demand for the Folsom SPA – PPA and Folsom SPA – RHA, with refinements as explained in **Section 2.2.1.1** and **Section 6.1**.[19]

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convert from gallons to acre-feet, divide by 325,851. (((((53/12)*7.481)*43560)/325851)*.7)/.7= 4.3 af/ac. This method does not account for "effective precipitation," (where effective precipitation is defined as the portion of annual rainfall that contributes to the outdoor demand) which may further reduce applied water. This constitutes a conservative estimate of applied water demand. For comparison, EID data provided by EID Staff indicates much lower outdoor unit demand factors (e.g. reported use of recycled water for recreational turf areas is about 2.2 acre-feet/acre). For purposes of the Folsom SBA – PPA outdoor demands, the higher outdoor factor is used as a baseline. The conservative estimate identified here is used for planning purposes.

[18] The estimate of landscaped area assumes the single-family lots in the meter study are similar to the City of Folsom's *Single Family Dwelling, Medium Lot District* category, which requires 10,000 square foot lots and maximum building coverage of 35%.

[19] This indoor baseline per capita demand value is further supported by EID's historic data for "Single-Family Dual Potable" water use as reported in its annual Water Resources & Services Reliability Report (2006 through 2009, see Appendix Table A). In these annual reports, the estimated indoor use averages less than 0.20 acre-feet per dwelling unit.

2.1.2 Regional Residential Unit Demand Factors

Dwelling unit demand factors for the Folsom SPA – PPA and Folsom SPA – RHA water demand estimates are also based on regional unit demand figures. Regional residential unit demand factors are presented in **Table 2-3** for comparison with unit demand factors used by the City of Folsom in its 2005 UWMP. Notably, EID, the City of Roseville and the Placer County Water Agency (PCWA) provide metered water service and Sacramento County Water Agency (SCWA) is a partially metered jurisdiction.[20] Much of the housing product mix in the El Dorado Hills portion of EID's service area, the City of Roseville, PCWA and SCWA service areas is similar to that in the City of Folsom. Overall, average unit demand for these jurisdictions are comparable to the City of Folsom's historic unit demand. Instances where demand factors are lower could be partially due to volumetrically billing in the residential sector, effective precipitation, smaller percentages of system losses, and other factors affecting demand variability. Because the City of Folsom plans to provide metered water service to single-family residential units in the Folsom SPA, unit demand factors below the unit demands factors used in the City of Folsom's 2005 UWMP are appropriate. Also, the fact that the average figures were developed based upon water use across a wide mix of housing ages and product types provides support for the case that a more modern uniform housing product with current conservation infrastructure - such as that which will exist in the Folsom SPA - should have lower unit water demand factors for each respective residential density category than the unit water demands used in the City of Folsom's 2005 UWMP.

[20] The PCWA service area is the geographic boundary in Placer County throughout which PCWA carries out a broad range of responsibilities including water resource planning and management, retail and wholesale supply of irrigation water and drinking water and production of hydroelectric energy. The SCWA service area includes eight zones of benefit. Each zone encompasses a unique geographic area of benefit to achieve SCWA's desired water management goals, including storm and flood water control, diversion, storage and delivery of surface water, and regulation, production and distribution of groundwater. EID values are from Appendix Table A from recent Water Resources & Services Reliability Reports available on EID's website.

Table 2-3[21]
Regional Residential Unit Water Demand Comparison

Folsom SPA Land Use	Unit Density (units/ac)	Unit Water Demand Factors, AF/DU					
		Roseville	PCWA	SCWA	EID	Average	2005 UWMP
Residential							
Single Family	3.9	0.84	0.64	0.68	0.74	0.73	0.65
Single Family High Density	6.9	0.59	0.55	0.68	n/a	0.61	0.65
Multi Family Low Density	11.9	0.37	0.48	0.29	0.34	0.37	0.56
Multi Family Medium Density	17.9	0.33	0.35	0.29	0.34	0.33	0.40
Multi Family High Density	25	0.21	0.21	0.15	n/a	0.19	0.30
CCD-Residential	12	0.21	0.21	0.15	n/a	0.19	0.30

2.1.3 Current and Future Mandates

External forces may drive the City of Folsom to adopt policies that ensure future residential development in the City of Folsom achieves lower unit water demands than those seen historically in the City of Folsom. **Section 2.1.3** identifies and describes the key drivers that support use of unit demand factors that are lower than historically seen in the City of Folsom and either similar to or even more aggressive than those in neighboring jurisdictions.

[21] The unit water demands are the estimated end-use unit water demands only and do not include a non-revenue water component. Non-revenue water (NRW) is generally defined as water that has been produced (treated to accepted water quality standards for drinking water) and is "lost" before it reaches the customer. Losses can be real, through leaks, or apparent, through meter inaccuracies or unknown or unbilled connections and uses (e.g. fire hydrant flushing and construction water).

2.1.3.1 Water Conservation Objectives

On November 10, 2009, Governor Arnold Schwarzenegger signed SBX7 7 which now requires each urban water supplier to select one of four water conservation targets in California Water Code § 10608.20 with the statewide goal of achieving a 20-percent reduction in urban per capita water use by 2020. The City of Folsom is not yet required to state a water conservation target pursuant to SBX7 7, but will do so in its 2010 Urban Water Management Plan (2010 UWMP). Pursuant to SBX7 7, the City of Folsom's deadline for adopting its 2010 UWMP is July 1, 2011. (CWC § 10608.20(a)(1), (i)).

As required by SBX7 7, the city's ultimate target will require reductions in per capita urban water use from past levels. To reach its ultimate target under SBX7 7, the City of Folsom probably will need to institute water conservation measures in its existing service area, and also require new service areas to use efficient indoor infrastructure and landscape features. The state's intent is to achieve a statewide 20-percent reduction in urban per capita water use by 2020. SBX7 7's mandates to the City and the City's opportunity to help achieve the state's goal by requiring that development in the Folsom SPA incorporate state-of-the-art efficiency measures all indicate that per unit water demands under the Folsom SPA – PPA (and the Folsom SPA – RHA) will be at least 10% below historic per capita unit demand factors in the City's existing service area. The reduction will be reflected in the unit demand factors identified in **Section 2.2** and **Section 6.1**.

2.1.3.2 Indoor Infrastructure Requirements

In January, 2010, the California Building Standards Commission adopted the statewide mandatory Green Building Standards Code (CAL Green Code) which will require the installation of water-efficient indoor infrastructure for all new projects beginning on January 1, 2011. CAL Green Code is currently in draft form and will become law on January 1, 2011 when it is incorporated into Title 24 of the California Code of Regulations.[22] The CAL Green Code will apply to the planning, design, operation, construction, use and occupancy of every newly constructed building or structure. Because the Folsom SPA will be applying for building permits from the City of Folsom after January 1, 2011 and the project will include new "buildings and structures" under

[22] The CAL Green Code will appear as Part 11 in Title 24 on January 1, 2011. All references in this WSA will be to the Chapter and Section numbers that appear in the Draft document which may be obtained by visiting the California Building Standards Commission web site at: http://www.documents.dgs.ca.gov/bsc/documents/2010/Draft-2010-CALGreenCode.pdf.

the CAL Green Code, it will need to satisfy the indoor water use infrastructure standards necessary to meet the CAL Green Code.

The CAL Green Code requires residential and nonresidential water efficiency and conservation measures for new buildings and structures that will reduce the overall potable water use in the building by 20%. The 20% water savings can be achieved in one of the following ways: (1) installation of plumbing fixtures and fittings that meet the 20% reduced flow rate specified in the CAL Green Code, or (2) by demonstrating a 20% reduction in water use from the building "water use baseline."[23] This WSA assumes that the residential and nonresidential buildings constructed for the Folsom SPA will satisfy one of these two requirements. To be conservative, this WSA assumes that the water savings attributable to installation of the required infrastructure will provide indoor water savings of at least 10% compared to existing infrastructure standards – but not the full 20% considered above.

2.1.3.3 California Model Water Efficient Landscape Ordinance

In 2006, the California Legislature enacted, and the Governor signed, the Water Conservation in Landscaping Act (Gov. Code §§ 65591-65599), which requires the Department of Water Resources to update the Model Water Efficient Landscape Ordinance (MWELO). On September 10, 2009, the Office of Administrative Law (OAL) approved the updated MWELO, which requires that a local agency adopt the provisions of the MWELO. Because the City of Folsom is a "local agency" under the MWELO, it must require "project applicants" to prepare plans consistent with the requirements of MWELO for review and approval by the City of Folsom. The City of Folsom is in compliance with this state law.

The MWELO provisions likely to have a significant effect on the landscape design and resulting outdoor water demand include preparation of a Landscape Design Plan with a water budget that is 70% of reference evapotranspiration.[24] The provisions of the

[23] See **Appendix D** which contains Chapter 4 and Chapter 5 from the Draft CAL Green Code. For Residential construction, Section 4.303.1 provides the residential water conservation standard and Table 4.303.2 identifies the infrastructure requirements to meet this standard. Table 4.303.1 and Worksheets WS-1 and WS-2 are to be used in calculating the baseline and the reduced water use if Option 2 is selected. For non-residential construction, Section 5.303.2 provides the water conservation standard as well as the baseline and reduced flow rate infrastructure standards. Note that Worksheets WS-1 and WS-2 incorporate both residential and non-residential fixtures, yet the water use is still to be analyzed by "building or structure" as specified in Chapter 1, Section 101.3.

[24] California Code of Regulations (CCR), Tit. 23, Div. 2, Ch. 27, Sec. 492.4. The MWELO provides the local agency discretion to calculate the landscape water budget assuming a portion of landscape demand is met by precipitation, which would further reduce the outdoor water budget. For purposes of this WSA, precipitation is not assumed to satisfy a portion of the outdoor landscape requirement because the determination of an appropriate effective

MWELO are applicable to new construction with a landscape area greater than 2,500 square feet.[25] The MWELO "highly recommends" use of a dedicated landscape meter on landscape areas smaller than 5,000 square feet, and requires weather-based irrigation controllers or soil-moisture based controllers or other self-adjusting irrigation controllers for irrigation scheduling in all irrigation systems.[26] The MWELO provides a methodology to calculate total water use based upon a given plant factor and irrigation efficiency.[27] Finally, MWELO requires the landscape design plan to delineate hydrozones (based upon plant factor) and then assign a unique valve for each hydrozone (low, medium, high water use).[28]

It is difficult to predict the ultimate impact of the MWELO requirements on water demand. While the requirement is for development of a landscape design plan that uses plants and features that are estimated to use no more than 70% of ETo, some provision must be made for the inherent tendency to overwater even with irrigation controllers installed, piecemeal changes in landscape design, reductions in irrigation efficiency through product use, and limited resources for enforcement in the absence of dedicated irrigation meters.

For these reasons, outdoor water use is assumed to be about 85% ETo over a long-term period. 85% of ETo was selected based on a study that supports the assumption that customers tend to apply 16% more water to the landscape than it actually needs.[29] While weather-based irrigation controllers may reduce this number such that only about 2% more water is being applied than is needed, some consideration needs to be made for the factors described above that will impact water use, outside of a controlled study, even when using a weather-based irrigation controller. These factors will likely result in overuse somewhere between 2% and 16%. Given the uncertainty regarding these impacts, the "overuse" percentage of 16% was used to adjust the MWELO

precipitation factor is highly uncertain given the various landscape slopes, terrain composition, concurrent watering schedules, etc.

[25] CCR Tit. 23, Div. 2, Ch. 27, Sec. 490.1.

[26] CCR Tit. 23, Div. 2, Ch. 27, Sec. 492.7(a)(1)(A)-(B).

[27] In calculating Estimated Total Water Use, the MWELO requires use of at least a 71% irrigation efficiency factor. Assuming 71% irrigation efficiency, the average plant factor must be 0.50. It would be possible to stay within the water budget if the average plant factor were higher than 0.50 by designing a system with an irrigation efficiency higher than 71%. Again the relationship between a Plant Factor (PF) and Irrigation Efficiency (IE) in the Applied Water formula is: AW=(ETo*PF)/IE.

[28] CCR Tit. 23, Div. 2, Ch. 27, Secs. 492.3(a)(2)(A) and 492.7(a)(2).

[29] http://www.irwd.com/Conservation/FinalETRpt[1].pdf.

Landscape Plan requirement of 70% of ETo. Dividing 70% by 84% (difference between 1.0 and .16) results in an adjusted figure of approximately 85%.

2.1.3.4 Metering and Volumetric Pricing

In 2003, the California Legislature enacted, and the Governor signed, legislation that set in motion the requirement for the City of Folsom and other purveyors to install meters on all service connections to residential and nonagricultural commercial buildings constructed prior to January 1, 1992. As a result, Water Code § 526 now requires the City to charge for water based upon the actual volume of water delivered by March 1, 2013. Assuming construction of the Folsom SPA water infrastructure occurs in 2011, and water demand is realized in 2013, the City will be billing the Folsom SPA water users on a volumetric basis by the time water service commences, which could ultimately result in unit water demand factors less than those seen historically in the City of Folsom.

The California Urban Water Conservation Council (CUWCC) recommends assuming a 20% water savings for accounts with meter retrofits and volumetric rates.[30] Twenty percent is an appropriate level of water savings when these measures are applied to existing residential accounts. With new development such as that proposed by the Folsom SPA – PPA (and the Folsom SPA – RHA), however, metering and volumetric rates are unlikely to result in 20% reductions in demands that would otherwise occur in the affected units because those units would be built with more modern infrastructure and more efficient landscape design. Accordingly, based on the CUWCC's 20% standard and the difference between development analyzed in this WSA and existing communities to which the CUWCC's standard generally applies, this WSA conservatively assumes that per unit water demands for new units built in the Folsom SPA that are metered initially will be 10% lower than per unit demands in the existing City service area.

2.1.3.5 California Urban Water Conservation Council and Water Forum Agreement Conservation Element Best Management Practices

The City of Folsom is a signatory to the CUWCC Best Management Practices (BMP) Memorandum of Understanding (MOU). The City is also a signatory to the Water Forum Agreement (WFA), under which the City of Folsom would implement the WFA Conservation Element. Both the CUWCC MOU and the WFA Conservation Element

[30] BMP 1.3, Memorandum of Understanding Regarding Urban Water Conservation in California, California Urban Water Conservation Council, December 10, 2008.

commit the City of Folsom to implementing best management practices designed to achieve water conservation across existing demand sectors. While many of the CUWCC BMPs are focused on retrofitting existing infrastructure, some of the BMPs could be valuable for the City of Folsom as they relate to water conservation efforts in new developments such as the Folsom SPA.

In 2009, the WFA updated the WFA Conservation Element. Under that revised Element, signatories would replace their respective WFA water conservation plans with the CUWCC MOU, including the CUWCC BMPs. Thus, for this Folsom SPA WSA, it is assumed that the City of Folsom will be implementing the CUWCC BMPs exclusively.

Some of the CUWCC BMPs that support using per unit demands in the Folsom SPA that are lower than such demands in the City's existing service area include Landscape Surveys (BMP 3), which could be designed for the Folsom SPA in such a way as to try to ensure the MWELO Landscape Design requirements remain in place in the field.[31] BMP 3 also requires interior surveys for Single and Multi-Family Residential customers, which could help determine whether customers are continuing to use water-efficient indoor appliances (e.g., those meeting the CAL Green Code specifications discussed in **Section 2.1.3.2**), and would also provide an opportunity for the City of Folsom to tailor its incentive programs to encourage continued use of water-efficient appliances.[32]

Also, the CUWCC recommends identifying opportunities for installation of dedicated irrigation meters, monitoring progress through billing, and then providing site-specific assistance for accounts 20% over budget. (CUWCC BMP 5) Taking the CUWCC recommendation one step further, the recently adopted CAL Green Code requires installation of separate meters or submeters in nonresidential construction landscapes that are between 1000 and 2500 square feet. Thus, irrigation submeters will be in place at many, if not all, nonresidential sites. The City of Folsom can use this meter data and provide site-specific assistance which should help maintain a level of water use consistent with its water use planning assumptions.

[31] CUWCC BMP 3 provides that MOU signatories should perform site-specific landscape water surveys that shall include checking the irrigation system and timers for maintenance and repairs; estimating landscaped area; and developing a customer irrigation schedule based on precipitation, climate and landscape conditions.

[32] CUWCC BMP 3 specifically provides that an MOU signatory should offer site-specific leak detection assistance, including a water conservation survey, water efficiency suggestions and/or an inspection, as well as providing WaterSense rated showerheads and faucet aerators.

Also, as a signatory to the CUWCC MOU, the City of Folsom conducts public information campaigns and school education programs.[33] These educational campaigns will help reinforce water conservation oriented behavior in the Folsom SPA which can help minimize year-round water use indoors and moderate outdoor use during the peak irrigation season.

Two additional BMPs that will help moderate water demands in the Folsom SPA are (1) the use of a water conservation coordinator, and (2) enactment and enforcement of a water waste prohibition.[34] The City of Folsom currently has both a water conservation coordinator and an adopted water waste ordinance.[35] Both will have an impact on the Folsom SPA, because upon the SPA's annexation, the coordinator will be assigned to manage water conservation programs and city staff will be authorized to enforce the ordinance.

The CUWCC BMPs should have a long-term impact on the City of Folsom's ability to manage water use throughout the Folsom SPA. Through targeted outreach the City of Folsom can encourage continued customer use of highly efficient appliances and irrigation systems, emphasize the need to retain efficient landscape plantings, and also minimize otherwise wasteful uses. The City of Folsom's commitment to implementing these agreements should help maintain water use efficiency. Implementation of the CUWCC BMPs in the Folsom SPA will ensure that the Folsom SPA maintains the lower than historic indoor and outdoor unit demand factors identified in **Section 2.2** and **Section 6.1**.

[33] CUWCC BMP 2.1 provides that a signatory should "Implement a public information program to promote water conservation, including providing speakers to employers and at public events, providing information on customers' bills showing use for the last billing period compared to the same period the year before." This BMP also requires a messaging campaign. BMP 2.2 requires implementation of a school education program to promote water conservation, including working with schools to provide instructional assistance, educational material and classroom presentations. Both of these BMPs provide for a regional agency to undertake the educational campaigns. The City of Folsom takes advantage of this provision by supporting the Regional Water Authority's efforts on behalf of purveyors in the Sacramento County region.

[34] CUWCC BMP 1.1(A) provides that a signatory shall designate a person as the agency's responsible conservation coordinator for program management. BMP 1.1(A) also requires a signatory to enact, enforce or support … ordinances … that (1) prohibit water waste … and (2) address irrigation, landscape, and industrial, commercial, and other design inefficiencies.

[35] The City of Folsom's water waste ordinance is codified in Chapter 13.26 of the Folsom Municipal Code.

2.2 FOLSOM SPA – PPA DEMAND FACTORS

2.2.1 Residential

Unit demand factors used to estimate demand for the Folsom SPA-PPA are developed by first estimating per capita use to generate an indoor unit demand factor and then considering landscaping demands to develop an outdoor unit demand factor. The indoor and outdoor components are ultimately combined into a total unit demand factor for the residential land-use categories.

2.2.1.1 Indoor

In light of the discussion of various water use drivers in **Section 2.1.3**, unit demand factors for indoor residential land-use categories are estimated accordingly.

- Single-Family and Single-Family High Density: Based upon the meter study described in **Section 2.1.1**, the historic single-family indoor unit demand factor in the City's existing service area is approximately 0.22 af/du/yr. At 2.83 persons per household, the per capita demand is about 70 gallons per person per day (gpd).[36] If the City of Folsom adopts indoor water-efficient infrastructure policies similar to those suggested in **Section 2.1.3.2** to implement its water conservation targets adopted under SBX7 7, and implements metering and volumetric billing as described in **Section 2.1.3.4**, the historic indoor per capita unit demand factor will be reduced by at least ten percent (10%). Therefore, the single-family unit demand factor of 63 gpd is used to calculate the indoor water demand for the Folsom SPA - PPA.[37]

- Multi-Family Low Density; Multi-Family Medium Density; Multi-Family High Density; Multi-Use-Residential: The same per capita indoor unit demand factor is used for the multi-family units as is used for the single-family units because each person has similar individual indoor demands regardless of the size of the unit – e.g., bathing, dishwashing, clothes washing, toilet flushing.[38] Therefore 63 gpd is

[36] See Table 2-2. [(.22af/du/yr)*(325851 gallons/af)/(2.83 persons/unit)/(365 days/yr)] The Folsom 2005 UWMP assumed 2.83 persons per household which is the per capita value that is used as the historical dwelling unit population density.

[37] For comparative purposes, EID has recorded indoor use values associated with projects in its El Dorado Hills service area that average about 60 gallons per person per day (see Appendix Table A, 2007 through 2009 Water Resources & Service Reliability Reports).

[38] The Folsom 2005 UWMP also assumed the multi-family indoor unit demand factor is the same as the single-family indoor unit demand factor.

used as the indoor per capita unit demand for the multi-family and multi-use categories.

For the Folsom SPA - PPA, the indoor unit demand numbers for the single and multiple-family residential classifications are provided in **Table 2-4**. Using the dwelling unit population number for the Single-Family categories of 2.9 persons/unit and 1.9 persons/unit for the Multi-Family categories in combination with the per capita per day estimate of 63 gallons, the annual indoor unit demand factor is calculated as well.[39]

Table 2-4
Folsom SPA - PPA
Residential Unit Demands

Land Use	Capita per Household	Indoor gallons per capita / day	Indoor Unit Demand, AF/DU
SF	2.9	63	0.21
SFHD	2.9	63	0.21
MFLD	1.9	63	0.14
MFMD	1.9	63	0.14
MFHD	1.9	63	0.14
MU - Res	1.9	63	0.14

2.2.1.2 Outdoor

Review of historic City of Folsom data indicates a wide range of planning numbers for outdoor unit demand factors. As suggested in Section **2.2.1**, based upon single-family meter data, outdoor usage in the residential sector is approximately 4.3 acre-feet/acre/ per year (af/ac/yr). An evapotranspiration-based turf demand was calculated in the Folsom Recycled Water Demand Technical Memorandum (TM) as 4.5 af/ac/yr.[40] The Folsom Recycled Water Demand TM also reviewed historic outdoor metered account usage and reported the average usage from 2000-2004 was 3.9 af/ac/yr. Thus, historic usage ranges between 3.9 – 4.5 af/ac/yr. While outdoor meters were only present in the non-residential sector when the unit demands were analyzed in the Recycled Water

[39] The dwelling unit population figure was calculated by dividing the estimated persons per unit by the total number of units for each land-use category as provided in **Appendix C**.
[40] City of Folsom Recycled Water Demands Technical Memorandum. Brown and Caldwell, November 9, 2005.

Demand TM, the unit demand factors from the non-residential sector provide an indication of historic outdoor unit demands in the residential sector given the general similarities in landscape design – specifically an emphasis on turf landscapes with accompanying plantings. Historic outdoor water use in the non-residential sector reflects a non-conservation based demand, as none of the City's parks or landscape and lighting accounts were implementing significant demand management measures at the time the Folsom Recycled Water Demand TM or 2005 UWMP was prepared. As explained below, post-2005 developments related to outdoor water demands support using outdoor unit demand factors for the Folsom SPA - PPA that are lower than the demands reflected in those two City documents.

The primary driver that could significantly change both residential and non-residential outdoor water demands is the MWELO. The MWELO provides that a landscape design plan should include plantings that use no more than seventy percent (70%) of reference evapotranspiration.[41] By requiring preparation of landscape plans for the Folsom SPA – PPA that use 70% of reference evapotranspiration, the long-term unit demand is likely to be somewhat greater than 70% ETo because of variations in plant and irrigation system maintenance. Therefore, this Folsom SPA – PPA demand estimate uses a "mid-point" between 100% ETo and that required in the MWELO - 85% of evapotranspiration, which is equivalent to 3.73 af/ac/yr. To achieve an outdoor unit demand of 3.73 af/ac/yr, consumptive demand would need to be approximately 2.6 af/ac/yr, assuming a 71% irrigation efficiency rate.[42] This would require an average plant factor of 0.6. The average plant factor could be higher if the efficiency rate were higher. For example, the plant factor could be 0.7 if the irrigation efficiency rate were at least 82%.

The outdoor unit demand factor of 3.73 af/ac/yr was developed based upon single-family lot size and associated landscape area for each lot in the Folsom SPA – PPA land-use plan. In the multi-family sector landscaped area is reflected as a percentage of total area for each multi-family category. The estimate of single-family lot area was made based upon the acreage and unit figures for the single-family land use categories as well as an estimate of the area necessary for roads and right-of-ways. For the Single-Family category, the planned unit density is three units per acre (1687 units/557.8 acres). If 25% of the area in the Single Family category is for roads and rights of ways,

[41] CCR Title 23, Div. 2, Chapter 2.7, Sec. 492.4.
[42] See Footnote 20 for formula. ((53/(12*7.481))*.6*43560)/325851 = 2.65 af/ac.

then the lot size is approximately 11,000 square feet (sf).[43] To estimate the landscaped area on each lot, the City of Folsom Zoning Code was used as a reference. Assuming the lots are 11,000 sf, they would likely have associated building standards similar to those in the City of Folsom's *Single Family Dwelling, Medium Lot District* category, which requires minimum 10,000 sf lots and maximum building coverage of 35%.[44] If 25% of the lot is used for hardscapes, then the remainder of the lot, as landscape area, would be approximately 40%.[45] For the Single-Family High Density Category, the planned unit density is approximately 5.5 units/acre (2933 units/532.5 acres). Again, using approximately 25% road and right-of-way dedication, then the average lot size would be about 6,000 sf. And, if some of the hardscapes in the Single-Family High Density category will occupy an area similar to that in the Single-Family category (e.g., a standard two-car driveway), then the Folsom SPA – PPA is assigned a landscaped area that is a smaller percentage of total lot area in the Single-Family High Density category – 30%.

For the Multi-Family categories in the Folsom SPA – PPA land-use plan, total area is first reduced by 10% to account for roads and right of ways.[46] Then landscaped area is derived by assessing that the building coverage is approximately 40-50% for the Multi-Family Low and Medium Density categories to 55% for the Multi-Family High Density category.[47] Since hardscapes are about 15-25% of lot area, then landscaped areas cover between 25-30% of the lot.[48] For the Multi-Unit Residential category, the landscaped area is only 10% of lot area because the combined commercial uses (in the Multi-Unit Nonresidential category) reduce landscaped areas with more area dedicated to

[43] 25% was selected for roads and right of ways in a single-family neighborhood based on surveys of recently constructed subdivisions in the City of Folsom.
[44] City of Folsom Zoning Code, § 17.12.060.
[45] 25% was selected for hardscape coverage in the single-family categories based on surveys of recently constructed subdivisions in the City of Folsom.
[46] Because multi-family units tend to be accessed by main arterial roads and have limited interior roadways, 10% was selected as a reasonable figure across the multi-family categories. This accounts for those complexes accessed entirely by arterial roads, which are already accounted for in the Folsom SPA land-use data and provides for some internal roadways in condominium type complexes.
[47] Land coverage percentages were estimated based upon comparison to existing City of Folsom Zoning Code definitions. The existing R-2, Two-Family Residence definition provides for up to 40% lot coverage and the existing R-3, Neighborhood Apartment District definition provides for coverage up to 50%. It is assumed that the Folsom SPA - PPA Multi-Family Low and Medium Density categories are similar to the existing R-2 and R-3 definitions, thus the use of the 40-50% coverage range. For the Folsom SPA - PPA Multi-Family High Density category, it is assumed that this category is more like the City of Folsom's existing R-M, Residential Multi-Family Dwelling District definition which provides for the building to cover 60% of the lot. (See City of Folsom Zoning Code §§ 17.14, 17.16 and 17.17.)
[48] Hardscape area coverage assessed through electronic surveys of various multi-family complexes in the City of Folsom.

hardscapes connecting the residential and commercial components. All residential land-use coverage assumptions for the Folsom SPA – PPA are provided in **Table 2-5**.

Table 2-5
Folsom SPA – PPA
Residential Land Use Coverage Assumptions

Land Use Category	Building Coverage (% of area)	Hardscape Coverage (% of area)	Landscape Coverage (% of area)
SF	35-40%	20-25%	40%
SFHD	35-40%	30-35%	30%
MFLD	40-50%	15-25%	25%
MFMD	40-50%	15-25%	25%
MFHD	50-55%	15-25%	30%
MU - Res	55-60%	25-30%	10%

Table 2-6 shows the lot area and landscaped area numbers used to develop the outdoor unit demand factor for the residential categories in the Folsom SPA – PPA land-use plan. Consistent with the approach described in **Section 2.1.3.3**, the unit demand factor was developed by applying provisions of the MWELO to irrigated areas in the residential land-use categories. The long-term outdoor unit demand factor for the residential categories is calculated as a percentage of evapotranspiration. Specifically, as previously discussed in this section, unit demands are 85% of ETo. The product of the landscape area and the ETo factor is the outdoor unit demand factor.

Table 2-6
Folsom SPA - PPA
Residential Outdoor Demand Factors

Land Use	Lot Area, ft^2	Lot Landscape Area, ft^2	Landscape Area (Total), Acres	ETo Turf Irrig. Demand, inches/yr	ETAF	Outdoor Unit Demand, AFY/DU
SF	11,000	4,400	n/a	53	85%	0.38
SFHD	6,000	1,800	n/a	53	85%	0.16
MFLD	n/a	n/a	54	53	85%	0.09
MFMD	n/a	n/a	15	53	85%	0.05
MFHD	n/a	n/a	13	53	85%	0.04
MU - Res	n/a	n/a	3	53	85%	0.02

2.2.2 Non-Residential

2.2.2.1 Non-Residential Land Use Coverage Percentages

The Non-Residential sector water demand for the Folsom SPA - PPA is evaluated on a land-area coverage basis. Each non-residential land-use is assigned an average coverage percentage for each non-residential land-use type – indoor, hardscape, and outdoor irrigation. Land-use coverage percentages were estimated based upon existing City land-use coverages as well as proposed Floor Area Ratios in the Commercial categories. First, for the Commercial categories, the Land Use Summary in **Appendix C** provides the target floor area ratios, which serve as an indicator of the "indoor" coverage percentage.[49] For this analysis, all commercial construction in the Community, General and Regional Commercial categories is one story and the building footprint utilizes the maximum targeted floor area. For the Office Park category, some of the units have multiple stories and the indoor coverage percentage is reduced accordingly.[50]

Commercial: Generally, because the indoor coverage for the Commercial categories in the Folsom SPA - PPA is lower than the average historic figures used in the UWMP, coverage percentages for the hardscape and landscape categories are slightly higher than historic values. According to the Land Use Summary in **Appendix C**, in the Community, General and Regional Commercial categories, the floor area ratios are 25%, 25% and 28% respectively. Assuming equivalence between floor area ratio and indoor coverage, this is about 25-35% less than the indoor figures used in the 2005 UWMP. This "excess" indoor area was therefore assigned to the hardscape and landscape categories with about 15-20% to the landscape coverage and 10-15% to the hardscape coverage. While in some cases hardscape coverage is estimated to be as high as 45%, which is slightly higher than historic values, it is more consistent with recent trends towards maximizing parking and minimizing landscaping features.

For the Office Park category, **Appendix C** provides that target floor area ratio is 30%. Starting with this floor area ratio, a building coverage of 25% was estimated based on

[49] Because floor area may be comprised of building area on more than one story, the coverage percentage may be less than floor area, but without specific knowledge of the ultimate building design, the floor area serves as a reasonable approximation of the area that the building will cover.

[50] While the City of Folsom Zoning Code (§ 17.22.050) would seem to provide for buildings in categories similar to the Commercial and Office Park categories for the Folsom SPA to have more than one story, it is not certain what type of businesses will ultimately be sited in the Office Park and Commercial categories. Therefore, the building area coverage estimate is driven primarily by windshield surveys by Tully & Young in new commercial and office park developments in the City of Folsom.

the previously stated assumption that some of the office park buildings will be more than one story. Again, because the floor area ratio is considerably less than the building coverage percentage assumed for the 2005 UWMP, the "excess" indoor area was assigned to the landscape category. Also, the hardscape coverage percentage was reduced from the 2005 UWMP value, with a percentage going to landscape coverage and also based on surveys of more modern office park complexes with a preference for significant landscape features.

Mixed Use: For the Mixed-Use Nonresidential category, the Land Use Summary in **Appendix C** indicates that the floor area ratio for the nonresidential component is 20%. Hardscape and landscape coverages are apportioned similar to Community Commercial, with slightly more landscape coverage in place of indoor coverage.

Schools: For the Schools category, Landscape coverage remains at 50%, consistent with historic values. Based upon an electronic map survey of the existing Folsom service area conducted by Tully & Young using Google Maps, indoor coverage was increased from the historic value of 10% to 25% and the hardscaped area is reduced accordingly to 25%.

Parks: For the Park and Local Park categories, minimal area is devoted to indoor uses and hardscapes. While these figures will vary depending on the location and purpose of the park space, on average, about 5% is devoted to the indoor and hardscape categories and 95% of the park space is landscaped.[51] This estimate provides a conservatively high demand total for the Park category because the landscape category has a higher unit demand factor than the indoor and hardscape categories.

Open Space and Circulation: As for the remaining two non-residential categories, natural non-irrigated landscape will comprise 100% of the Open Space category and so will create no project water demands. As for the Major Circulation category, 90% is dedicated to roads and 10% to irrigated medians and streetscapes.

All coverage percentages are provided in **Table 2-7**.

[51] Tully & Young assessed park coverage by using Google Maps to analyze parks in the City of Folsom.

Table 2-7
Folsom SPA - PPA
Non-Residential Coverage Percentages and Unit Demand Factors

Land-use Category	Acres	Use Class	Coverage %	Use Class Unit Demand (AF/AC/YR)	Land Use Unit Demand (AF/AC/YR)
Mixed Use - Non-Residential	23.6	Indoor	20%	1.66	0.33
		Hardscape	45%	0.00	0.00
		Landscape	35%	3.73	1.31
		Total	100%		1.64
Office Park	89.2	Indoor	25%	1.90	0.48
		Hardscape	35%	0.00	0.00
		Landscape	40%	3.73	1.49
		Total	100%		1.97
General Commercial	212.9	Indoor	25%	1.66	0.42
		Hardscape	45%	0.00	0.00
		Landscape	30%	3.73	1.12
		Total	100%		1.54
Community Commercial	38.8	Indoor	25%	1.66	0.42
		Hardscape	45%	0.00	0.00
		Landscape	30%	3.73	1.12
		Total	100%		1.54
Regional Commercial	110.8	Indoor	28%	1.90	0.53
		Hardscape	47%	0.00	0.00
		Landscape	25%	3.73	0.93
		Total	100%		1.47
Park	118.2	Indoor	2%	0.48	0.01
		Hardscape	3%	0.00	0.00
		Landscape	95%	3.73	3.55
		Total	100%		3.56
Local Park	3.5	Indoor	2%	0.48	0.01
		Hardscape	3%	0.00	0.00
		Landscape	95%	3.73	3.55
		Total	100%		3.56
Schools	179.3	Indoor	25%	2.85	0.71
		Hardscape	25%	0.00	0.00
		Landscape	50%	3.73	1.87
		Total	100%		2.58
Open Space	1053.1	Indoor	0%	0.00	0.00
		Hardscape	0%	0.00	0.00
		Landscape	100%	0.00	0.00
			100%		0.00
Major Circulation	171.6	Indoor	0%	0.48	0.00
		Hardscape	90%	0.00	0.00
		Landscape	10%	3.73	0.37
		Total	100%		0.37

2.2.2.2 Nonresidential Unit Water Demand Factors

Historic indoor unit water demand factors in the City's 2005 UWMP are revised, as explained in **Section 2.2.2.2**, to estimate baseline indoor unit water demands for the Folsom SPA – PPA. Working from the assumption that the City of Folsom must ultimately comply with the water conservation provisions of SBX7 7, which will require the City of Folsom to achieve 20% conservation relative to baseline use, historic non-residential indoor unit demands are conservatively reduced by 5%.[52] The Office Park and Regional Commercial Categories began with a baseline of 2 af/ac/yr, which was then reduced to 1.90 af/ac/yr. For the Community and General Commercial Categories, a common baseline of 1.75 af/ac/yr was used based upon averaging the historic Neighborhood and Regional Commercial categories in the UWMP. The baseline for the Community and General Commercial categories was also reduced by 5% to 1.66 af/ac/yr. The indoor baseline unit demand for Mixed Use – Nonresidential is assumed to be similar to Community Commercial – 1.75 af/ac/yr.

For the Schools categories, Tully & Young evaluated 2008 meter data for a mix of schools to determine whether the 2005 UWMP demand value of 3 af/ac/yr remains a reasonable average value. Based upon rough calculations of area and recent average annual water use, indoor water use was estimated to be about 2.6 af/ac/yr. Given the high degree of variability among the schools, the historic value of 3 af/ac/yr was retained as a conservative baseline. Similar to the Commercial categories, indoor unit demands were reduced by 5% to 2.85 af/ac/yr.

The landscape unit demand for all non-residential categories reflects the requirements of the MWELO as discussed in **Section 2.1.3**. Specifically unit demands are 85% of reference evapotranspiration (53 in.) Based upon review of recent meter data, reference evapotranspiration is a reasonable estimate of baseline landscape demand. Evaluation of recent park landscaping meter data indicates that average water use is about 4.3 af/ac/yr.[53] Approximately 85% of reference evapotranspiration is achieved both through the landscape design requirements in the MWELO as well as the irrigation design system requirements and recommendations for a weather-based controller and

[52] As explained in **Section 2.1.3.2**., this WSA assumes that the nonresidential buildings and structures must comply with the water-efficient fixture requirements of the CAL Green Code. While the CAL Green Code water savings target is 20% compared to baseline use, this WSA assumes a 5% reduction in water use and adjustments to the indoor unit water demand factors are made accordingly.

[53] Tully & Young reviewed 2008 meter data for the City of Folsom's BT Collins, Cohn and Beach Hill Parks. The average 2008 unit demand was 4.2 acre-feet per acre.

dedicated irrigation meter. This is a conservative estimate appropriate for this planning stage.

A unit demand per acre is assigned for each coverage percentage as shown in **Table 2-7**.

2.3 FOLSOM SPA – PPA NON-POTABLE WATER DEMAND

Currently, the City does not have a non-potable supply to serve any portion of the Folsom SPA. If non-potable water service is ultimately available, an indication of the scope of non-potable service may be found in the State Water Resources Control Board's *General Waste Discharge Requirements for Landscape Irrigation Uses of Municipal Recycled Water* (Recycled Water General Permit).[54] Under the Recycled Water General Permit, recycled water can be used in residential front or back yards if the municipality applies for, and obtains, an individual permit with the Regional Water Quality Control Board. According to the Recycled Water General Permit, specified uses of recycled water considered "landscape irrigation" projects include any of the following:

- Parks, greenbelts, and playgrounds;
- School yards;
- Athletic fields;
- Golf courses;
- Cemeteries;
- Residential landscaping, common areas;
- Commercial landscaping, except eating areas;
- Industrial landscaping, except eating areas; and
- Freeway, highway, and street landscaping.

If the City of Folsom were to require that the Folsom SPA - PPA demand categories corresponding to those eligible for non-potable service under the Recycled Water General Permit were to use non-potable water, then the land-use categories in **Table 2-8** would likely be eligible. The corresponding acreage and potential demand values are provided in **Table 2-8** as well.

[54] http://www.swrcb.ca.gov/water_issues/programs/water_recycling_policy/docs/wqo_2009_0006_general_permit.pdf. Non-potable supplies may be available in the future but they are not considered in this analysis.

Table 2-8[55]
Folsom SPA – PPA
Potential Non-Potable Water Demands

Land-Use Category	Landscape Acreage (AC)	Demand (AF/YR)
Parks	116	431
Streetscapes	17	64
C/I/O Landscape	147	549
Schools Landscape	90	334
Total	370	1379

2.4 PROJECTED WATER DEMANDS FOR FOLSOM SPA - PPA

Table 2-9 provides the annual water demands by land-use category for the Folsom SPA – PPA. The total estimated water demand for the Folsom SPA - PPA in a normal year is 5,422 AF, assuming a 10% non-revenue water factor.[56] In a dry-year, this total Folsom SPA - PPA demand is projected to increase to 5,577 acre-feet. The dry-year increase is a result of increasing the normal year outdoor demand for all residential and non-residential demand categories by 5% and then applying the non-revenue water factor of 10%.[57] The 5% increase is applied to the annual outdoor demand factor of 3.73 acre-feet/acre/year.

The portion of the Folsom SPA - PPA that is within the EID service area is projected to have a water demand of 255 AF in a normal year and 262 AF in a dry year, as shown in **Table 2-9**. Finally, **Table 2-9** also provides an indication of the balance between indoor and outdoor water demands for all land-use categories in both the Folsom and EID service areas.

[55] The demand estimates are based on the outdoor unit demand factor of 3.73 acre-feet/acre/year as developed in Section 2.2.1.2. This is a conservatively high value when compared to recorded demand factors documented by EID in its annual Water Resources & Services Reliability Reports, which reported unit demands to be less than 3.0 acre-feet/acre/year. This conservatively high value is further supported, using the evapotranspiration data from a local weather station and comparing high and low values over the last 12 years. Based on the data the highest yearly value (representing the hottest year) is only 5% higher than the average for the period of record.

[56] As a signatory to the CUWCC MOU, the City of Folsom is committed, pursuant to BMP 1.2(f), to following American Water Works Association standards for system water audits, leak detection and repair. It is also committed to achieving non-revenue water losses no greater than 10% of total water introduced into its system (i.e., supply entering the treatment plant). Because the demand for the Folsom SPA-PPA is calculated from the end-user perspective, reflecting a 10% non-revenue water loss of the water entering the treatment plant translates to an equivalent of 11.11% of end-user demand. Thus, 5,422 AF/YR is the result of adding 11.11% to the end-user demand estimate.

[57] Outdoor demand is increased by 5 percent in dry years because a dry winter tends to motivate customers to begin irrigation sooner in the season.

Table 2-9
Folsom SPA - PPA
Normal and Dry-Year Demand Totals

Folsom Service Area				
Residential Land Use	Normal Indoor Total (AFY)	Normal Outdoor Total (AFY)	Normal Total (AFY)	Dry-Year Total (AFY)
SF	362	666	1028	1061
SFHD	632	476	1108	1132
MFLD	332	224	556	567
MFMD	186	63	249	252
MFHD	190	56	247	249
MU - Res	104	13	117	118
Residential Totals	1806	1499	3305	3380

Non-Residential Land Use	Normal Indoor Total (AFY)	Normal Outdoor Total (AFY)	Normal Total (AFY)	Dry-Year Total (AFY)
MU-Non Res.	34	9	43	44
OP	47	148	195	203
CC	18	48	66	69
GC	85	228	313	324
RC	66	115	180	186
Park	1	466	467	490
LP	0	14	14	15
SCH (PQP)	142	372	514	533
OS	0	0	0	0
MAJ CIRC	0	68	68	72
Totals	393	1468	1861	1934
Folsom Totals	2199	2967	5166	5315

El Dorado Irrigation District Service Area				
Residential Land Use	Normal Indoor Total (AFY)	Normal Outdoor Total (AFY)	Normal Total (AFY)	Dry-Year Total (AFY)
SF	24	45	69	71
SFHD	39	29	69	70
MFLD	38	26	65	66
Residential Totals	102	100	202	207

Non-Residential Land Use	Normal Indoor Total (AFY)	Normal Outdoor Total (AFY)	Normal Total (AFY)	Dry-Year Total (AFY)
GC	14	37	50	52
LP	0	0	0	0
OS	0	0	0	0
MAJ CIRC	0	3	3	3
Totals	14	40	53	55
EID Totals	116	140	255	262

Folsom SPA Total	2315	3107	5422	5577

Assuming Folsom SPA residential and non-residential construction starts in 2013 and the 20-year required projection is applied, then the projected water demand shown in Table 2-10 would be realized by 2033 for the Folsom SPA - PPA.

Table 2-10
Folsom SPA – PPA
Projected Water Demand at 2033

Water Year	2033
Normal Year (AF/YR)	5421
Dry Year (AF/YR)	5577

SECTION 3 – FOLSOM SPA WATER SUPPLY

3.1 EXPLANATION OF THE PROPOSED WATER SUPPLY

Section 3 provides an explanation of the water supply that the City of Folsom will use to serve the Folsom SPA. [58] The City will meet the Folsom SPA water demands by securing an assignment of a Sacramento River surface water supply from the Natomas Central Mutual Water Company (NCMWC) pursuant to NCMWC's CVP settlement contract with the United States Bureau of Reclamation (USBR).[59] The water supply to be assigned is a long-term "Project Water" supply.[60] An initial purchase and sale agreement between South Folsom Properties LLC (SFP) and NCMWC is in place and identifies the conditions which ultimately need to be satisfied by both parties to finalize the sale, which will ultimately lead to an assignment to the City.

Currently, NCWMC diverts water and conveys it to its shareholders that apply water to agricultural lands in northern Sacramento County and southern Sutter County. NCMWC's contract provides for delivery of Project Water on an agricultural schedule, with the Project Water delivered during the late irrigation season in the months of July and August. The City will seek modification of the Project Water delivery schedule from the USBR such that water may be delivered to the City on a year-round municipal and industrial (M&I) schedule.[61] The City will divert the assigned Project Water at the Freeport Regional Water Authority's Freeport diversion facility on the Sacramento River

[58] CWC § 10910 (d) (1) requires that "The assessment … include an identification of any existing water supply entitlements, water rights, or water service contracts relevant to the identified water supply for the proposed 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) An identification of existing water supply entitlements, water rights, or water service contracts held by the public water system, or the city or county if either is required to comply with this part pursuant to subdivision (b), shall be demonstrated by providing information related to all of the following: (A) Written contracts or other proof of entitlement to an identified water supply. (B) Copies of a capital outlay program for financing the delivery of a water supply that has been adopted by the public water system. (C) Federal, state, and local permits for construction of necessary infrastructure associated with delivering the water supply. (D) Any necessary regulatory approvals that are required in order to be able to convey or deliver the water supply."

[59] Contract No. 14-06-200-885A-R-1.

[60] "Project Water" is "… all surface water diverted … each month during the period April through October … from the Sacramento River which is in excess of Base Supply." "Base Supply" is "… the quantity of surface water … which may be diverted … from the Sacramento River each month during the period April through October of each year without payment to the United States for such quantities diverted." Article 1 of the 2005 Contract Between the United States and the Natomas Central Mutual Water Company (Renewal Contract), which is included in **Appendix G**

[61] A M&I schedule is generally one with the highest daily demands during the height of the outdoor irrigation season and lower daily demands in the spring and fall and even lower daily demands throughout the winter.

in southern Sacramento County.[62] Water will be conveyed from the Freeport diversion facility to the Folsom SPA via both FRWA facilities, which are already under construction, as well as facilities that will be constructed by the City of Folsom. The water may be either treated by SCWA or the City of Folsom pending further review of various conveyance and treatment alternatives.[63]

As explained in **Section 3.4**, the City of Folsom and the Sacramento County Water Agency (SCWA) have approved the *Memorandum of Understanding Between the City of Folsom and Sacramento County Water Agency Concerning the Folsom Sphere of Influence Area and Sharing of Freeport Project Capacity* (City - SCWA MOU). The City – SCWA MOU commits each party to try to find a mutually agreeable solution to the issue of system capacity in the FRWA facilities so that the City of Folsom can use some of that capacity to deliver Sacramento River water to the Folsom SPA. The water supply that will derive from the NCMWC assignment and be delivered under an agreement following the City – SCWA MOU will be used in both Folsom's and EID's service areas within the Folsom SPA.

The use of this water supply does not impact either the City's or EID's existing water supplies or conveyance facilities. Through SFP, the City intends to acquire water from NCMWC to serve only the Folsom SPA. Water treatment will occur at either newly constructed facilities that will not be connected to the City of Folsom's or EID's existing treatment and conveyance facilities or at third parties' treatment facilities. Thus, neither the water demands associated with land uses in the City of Folsom exclusive of the Folsom SPA, nor the water supplies used to serve these areas, are analyzed in this Folsom SPA WSA.

3.2 SURFACE SUPPLY ANALYSIS

3.2.1 NCMWC Water Supplies

Surface water will be obtained from the NCWMC pursuant to a series of agreements. Initial agreements include one between SFP and NCMWC, and the second between SFP and the City of Folsom. The agreement between SFP and the NCMWC has been

[62] The Freeport Regional Water Authority (FRWA) was created by a Joint Powers Agreement between the Sacramento County Water Agency (SCWA) and East Bay Municipal Utility District (EBMUD). FRWA guides the financing, ownership, development, construction, and operation of the Freeport Regional Water Project (FRWP). The FRWA Board of Directors is made up of two representatives from SCWA, and two representatives from EBMUD. The City of Sacramento is an Associate Member of FRWA.

[63] Conveyance alternatives are analyzed in the Draft EIR/EIS.

executed.[64] The City of Folsom and SFP have executed a non-binding memorandum of understanding.[65] The City and SFP cannot sign a binding legal agreement until after the environmental review – of which this WSA is a part – is completed. The ultimate goal is to complete an assignment of a portion of NCMWC's Project Water supply to the City of Folsom.[66] NCMWC's CVP settlement contract contemplates such an assignment.

NCMWC entered into Contract No. 14-06-200-885A (Settlement Contract) with the USBR in 1964. The Settlement Contract is based on NCMWC's pre-existing licenses and permit to divert water. The Settlement Contract provides for delivery of water to NCMWC during the months of April through October. Effective on May 10, 2005, the Settlement Contract was renewed for a 40-year term (Renewal Contract).

Under the Renewal Contract, in addition to its Base Supply, NCMWC is entitled to divert up to 22,000 acre-feet of "Project Water" which is available during July and August. Distribution of NCMWC's monthly diversion entitlements for Project Water is shown in **Table 3-1**. The Renewal Contract limits NCMWC's annual diversions of water from the Sacramento River to the total quantities included in its Base and Project Supplies regardless of the entitlement pursuant to which the water is diverted.[67]

Table 3-1
Natomas Central Mutual Water Company
Project Water Supply Allocation

Month	Project Water Supply (af)
April	0
May	0
June	0
July	7,200
August	14,800
September	0
October	0
Total	**22,000**

[64] On December 17, 2007, SFP and NCMWC entered into an agreement entitled *Terms and Conditions of Purchase and Sale of Water Entitlements*. (SFP-NCMWC Agreement) A copy of the SFP-NCMWC Agreement is included as **Appendix E.**
[65] A copy of the City-SFP MOU is attached as **Appendix F**.
[66] Assignments are allowed under Article 23 of the 2005 Contract Between the United States and the Natomas Central Mutual Water Company (Renewal Contract), which is included in **Appendix G**.
[67] NCMWC's Base Supply is not a water source for the City and is not considered in this WSA.

3.2.1.1 Reliability of NCMWC Surface Water Supplies

Annual water deliveries to the NCMWC from the USBR pursuant to the Renewal Contract are determined on the basis of natural inflow to Shasta Lake (the Shasta Index). In a normal year when there is ample water in the Central Valley Project (CVP) system, NCMWC receives 100% of its Renewal Contract entitlement. The maximum reduction in NCMWC's diversions during any "Critical Year" is 25% of both Base Supplies and Project Water.[68] A "Critical Year" means any year in which either of the following conditions exist:

(1) The forecasted full natural inflow to Shasta Lake for the current Water Year (October 1 through September 30), as such forecast is made by the United States on or before February 15 and reviewed as frequently thereafter as conditions and information warrant, is equal to or less than 3.2 million acre-feet; or

(2) The total accumulated actual deficiencies below 4 million acre-feet in the immediately prior Water Year or series of successive prior Water Years each of which had inflows of less than 4 million acre-feet, together with the forecasted deficiency for the current Water Year, exceed 800,000 acre-feet.

"Critical Years" occur relatively infrequently. Over 85 years of record (1921-2006), a Shasta Index "Critical Year" would have been triggered only nine times (1924, 1931, 1932, 1933, 1934, 1977, 1991, 1992, and 1994).[69] This results in the occurrence of a "Critical Year" less than once every nine years.

Table 3-2 provides the "Critical Year" water allocation assumption for the NCMWC Project Water supply. As shown, during a "Critical Year," NCMWC receives no less than 75% of its normal year Project Water entitlement, or 16,500 acre-feet.

[68] Article 5(a), Renewal Contract. Article 5(a) is the exclusive provision governing dry-year reductions of NCMWC's water supplies under the Renewal Contract. USBR's draft *2001 M&I Shortage Policy*, if implemented, will not apply to the NCMWC water supply because NCMWC is a settlement contractor, and its Renewal Contract therefore specifically defines the maximum reductions.

[69] www.usbr.gov 8/28/09

Table 3-2
NCMWC "Critical Year" Project Water Supply

Month	Project Water Supply (af)
April	0
May	0
June	0
July	5,400
August	11,100
September	0
October	0
Total	**16,500**

NCMWC's Renewal Contract, among many other Central Valley Project contracts, was challenged in *Natural Resources Defense Council v. Kempthorne*, Case No. 05-CV-01207 (E.D. Cal). In that case, the Honorable Oliver Wanger of the U.S. District Court for the Eastern District of California, upheld NCMWC's Renewal Contract. His decision has been appealed to the federal Court of Appeals for the Ninth Circuit. In certain orders, Judge Wanger ruled that the supply of "Project Water" under NCMWC's Renewal Contract could be reduced "to meet legal obligations" of USBR. If these orders were to be read conservatively, then they would impose on USBR, at most, a contractual obligation to comply with applicable laws, which is a standard element of most contracts. (See e.g., *Edwards v. Arthur Andersen LLC* (2008) 44 Cal.4th 937, 954.) These orders therefore do not adversely affect "Project Water" supplies under NCMWC's Renewal Contract for purposes of this WSA, any more than application of standard contract-law principles would. Because Judge Wanger upheld the Renewal Contract on the basis that USBR had no discretion to reduce NCMWC's water supplies in executing the Renewal Contract, the judge's "legal obligations" rulings probably will have less effect than would be indicated by the above conservative interpretation.

3.2.1.2 Modifications to the NCMWC Delivery Schedule

Tables 3-1 and 3-2 show the NCMWC's existing water delivery patterns in normal and critical years under its existing Renewal Contract with USBR. For the Project Water supply to serve as an effective water supply for the Folsom SPA, it will be necessary to obtain USBR approval for a modification to the delivery schedule to satisfy Folsom SPA demands on a traditional M&I pattern throughout the calendar year. According to the Folsom SPA Notice of Preparation, "the City will work with Reclamation [USBR] or

another CVP contractor to reschedule the delivery of the assigned Project Water Supply."

Table 3-3 provides an example of the delivery pattern that the City intends to seek for delivery of 5,577 AF over a twelve month period under the Folsom SPA – PPA land-use plan.[70] For planning purposes, not only does **Table 3-3** reflect the potential demand pattern, it addresses the potential capacity requirements in the FRWA and the proposed Folsom conveyance systems by providing monthly and annual average day demand, and maximum day demand. Because the maximum day demand may occur at any time throughout the year, maximum day demand is estimated by multiplying annual average day demand by 1.9.

Table 3-3
Demand Pattern for the Folsom SPA - PPA

Month	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total
Pattern (% Total)	4.4%	3.9%	5.5%	6.5%	9.3%	11.5%	14.1%	13.5%	11.8%	9.1%	5.5%	4.7%	
Total (AF)	245.4	217.5	306.7	362.5	518.7	641.4	786.4	752.9	658.1	507.5	306.7	262.1	5577.0
Monthly Avg. Day (MG)	2.6	2.5	3.2	3.9	5.5	7.0	8.3	7.9	7.1	5.3	3.3	2.8	5.0
Maximum Day (Ann. Avg. Day x 1.9) (MG)													9.5

3.3 Agreements Supporting A Plan to Secure a Water Supply[71]

3.3.1 NCMWC – South Folsom Properties Agreement

Under the SFP-NCMWC Agreement, NCMWC agreed to permanently assign to the City, through SFP, not less than 8,000 acre-feet per year (AF/YR) of "Project Water" to which NCMWC has rights under the Renewal Contract. NCMWC did not exercise its option under Section 3.2 of the SFP-NCMWC Agreement to increase the amount of water from the initial amount of 8,000 AF/YR to be purchased by SFP, and therefore the total water supply to be assigned to the City of Folsom by NCMWC is 8,000 AF/YR. The SFP-NCMWC Agreement provides that the assigned water will be subject to a 25% reduction in a "Critical Year."(See discussion of "Critical Year" supply reductions in **Section 3.2.1.1** above.)

The SFP-NCMWC Agreement is effective until April 1, 2012, unless extended by SFP. Under that agreement, SFP may extend its term for up to five additional one-year

[70] Demand pattern obtained from analysis of the Historic Folsom Water Treatment Plan Flows prepared by the J. Crowley Group, December, 2007.
[71] The agreements described in **Section 3.3** are intended to satisfy the requirement in CWC § 10910(d)(2)(A) to provide "Written contracts or other proof of entitlement to an identified water supply."

periods. During the period that the SFP-NCMWC Agreement is effective, both NCMWC and SFP must satisfy specific obligations to ensure that water can ultimately be made available for use as a municipal and industrial supply in the Folsom SPA. Those obligations include, but are not limited to (1) preparation of an engineering study to ensure NCMWC may meet its future demands in the absence of the assigned supply; (2) approval from USBR to reschedule the assigned supply from an irrigation demand schedule to a municipal and industrial demand schedule; and (3) completion of all state and federal environmental review.[72]

3.3.2 City - South Folsom Area Group Agreement

On August 26, 2008, the City and SFP signed a memorandum of understanding that contemplates that SFP will assign the supply that SFP is acquiring under the SFP-NCMWC Agreement (Natomas Water) to the City for use as a new water supply for the Folsom SPA upon the completion of all legal requirements.[73] Specifically, the MOU contemplates that the City will evaluate the technical feasibility of delivering water on a year-round municipal and industrial pattern, diverting water from the Sacramento River at the FRWA facilities, and conveying water to the Folsom SPA using FRWA facilities. The MOU also contemplates that the City will identify alternatives identified in **Section 3.5** for conveying and treating Natomas Water.

3.4 CAPACITY AGREEMENT

The City of Folsom and SCWA approved a City - SCWA MOU.[74] The purpose of this MOU is to establish principles and parameters to govern negotiations between the parties for City's purchase of a portion of the SCWA's capacity in the FRWA facilities in order to convey Natomas Water to supply the area encompassed by the SOI. The City – SCWA MOU indicates that the City and SCWA will cooperate during the MOU's term to develop conditions under which the City may convey the Natomas Water using SCWA's FRWA capacity, with the common goal of eventually executing a binding agreement (City-SCWA Agreement). The City – SCWA MOU therefore acknowledges that the average daily capacity in the FRWA facilities that would be available for purchase by the City is 6.5 mgd with consideration of an appropriate peaking factor.

[72] Specifically, SFP, in cooperation with the City, is to be responsible for obtaining all necessary approvals from USBR, including the scheduling approval and environmental review processes. Also, the City is to serve as the lead agency under CEQA and USBR will perform all duties under NEPA and the ESA. (See Sections 16 and 17 of the SFP-NCMWC Agreement.)
[73] See **Appendix F**.
[74] A copy is attached as **Appendix H**.

3.5 CONVEYANCE ALTERNATIVES

As for conveyance from the FRWA facilities, there are numerous routing alternatives considered in the Draft EIR/EIS:

Alternative 1 and 1A: Convey raw water from the FRWA Bifurcation to the Folsom SPA along Grant Line Road for the majority of the route with two potential approaches to the proposed Folsom Water Treatment Plant (WTP);

Alternative 2, 2A and 2B: Use the proposed SCWA Vineyard WTP to treat water and then convey to Florin Road, then north along either Excelsior or Eagles Nest Road to Douglas, then east to Grant Line Road, and north to the Folsom SPA;

Alternative 3 and 3A: Convey raw water from the FRWA Bifurcation to Florin Road, then north along either Excelsior or Eagles Nest Road to Douglas, then east to Grant Line Road, and north to the Folsom WTP at the Folsom SPA; and

Alternative 4 and 4A: Convey raw water from the FRWA Bifurcation north along either Excelsior or Eagles Nest Road to a proposed Folsom WTP on Folsom Boulevard, and ultimate conveyance to the Folsom SPA after treatment at the Folsom Boulevard location.[75]

No USACE Permit Off-site Water Facility Alternative: Convey raw water through the conveyance pipeline under Alternatives 1 and 3 above but would have no impact to waters of the United States.

The necessary easements and permits will need to be secured once an alternative is selected. Ultimately, the conveyance alternative selected will accommodate the supply secured from NCMWC.

3.6 FACILITIES COST AND FINANCING

3.6.1 Facility Costs

The Draft Project Facilities Financing Plan (PFFP) focuses on the costs of backbone infrastructure and community facilities for the Folsom SPA as well as the financing of these facilities. The Draft PFFP specifically addresses water infrastructure costs and

[75] A set of maps identifying the water conveyance alternatives is attached as **Appendix I.**

financing.[76] Because the scope of the current water infrastructure requirements and the associated cost estimates are comprehensive, the Draft PFFP provides considerable support for the City of Folsom's plan to secure a reliable water supply for the Folsom SPA. It is anticipated that the cost projections and financing strategies will be refined throughout the planning process.

Anticipated potable water improvements included in the Draft PFFP are an off-site transmission main, an on-site water treatment plant, storage tanks, booster stations, distribution mains, and laterals. Additionally, the Draft PFFP includes the cost associated with the City of Folsom acquiring conveyance capacity in the FRWA facilities. Taken together, by acquiring capacity in the FRWA system, and constructing the proposed City of Folsom conveyance, treatment and storage facilities, it will be possible to deliver the NCMWC supply to the Folsom SPA.

Complementing the potable water system, the Draft PFFP includes a recycled water system in the Project's initial design objectives and policies. To this end, the Draft PFFP includes a cost estimate for non-potable water deliveries. Yet, because the City does not have non-potable supplies available at this time, non-potable supplies are not considered to be available for purposes of estimating supply sufficiency in the WSA.

The gross cost estimate for potable and non-potable water facilities is approximately $302.1 million. However, because the cost of the water supply ($32 million) is to be funded with revenue bond proceeds and approximately 48% (based on City staff's estimate) of the water treatment plant costs relate to projects outside the plan area, the total net cost for potable and non-potable water facilities is estimated to be $245.8 million.[77]

With a net project-specific cost totaling $245.8 million, one-time burdens vary from $6,301 per central commercial mixed use unit to $38,882 per single family unit. Non-residential land use designations, meanwhile, are assigned a cost per acre ranging from $80,331 per regional commercial acre to $113,378 per office park acre.[78]

[76] The Draft PFFP assesses public facility feasibility based upon the land uses in the Folsom Plan Area Specific Plan, Administrative Review Draft, June 6, 2008. A discussion of the Draft PFFP is included in **Section 3.6** to satisfy the requirement to submit information regarding a capital outlay program to demonstrate entitlement to the identified water supply pursuant to CWC § 10910(d)(2)(B).
[77] Draft PFFP, p. 13.
[78] Draft PFFP, p. 18.

3.6.2 Financing Plan

The Draft PFFP identifies the basic components of the financing plan. Specifically, the plan includes development impact fees, utility revenue bonds, debt issued through the Mello-Roos Community Facilities Act, and developer capital.[79] If a Community Facilities District (CFD) is formed, special taxes will be collected to repay the bonds issued by the CFD. Also, an additional monthly charge included on property owners' utility bills will be collected to repay the utility revenue bonds.

Developer impact fees will fund the total net project-specific costs. A project-specific fee will ensure allocation of backbone and community facility costs among properties in the plan area.[80] The project applicant has proposed the use of revenue bonds to fund the anticipated cost to acquire rights to water supplies, and without revenue bonds, it would be necessary to increase developer impact fees. The Draft PFFP recommends establishment of a Mello-Roos CFD and issuance of tax-exempt bonds. The Draft PFFP earmarks special taxes for the public facilities to maximize available [bond] capacity. In total, $288.3 million in net CFD proceeds are expected to be generated through bonding.[81] Finally, the Draft PFFP assumes that developer capital will be required to close gaps between the time infrastructure is needed and revenues become available through the developer impact fees, utility revenue bonds and Mello-Roos CFD mechanisms.

3.7 Regulatory Approvals and Permits

Pursuant to CWC § 10910(d)(2)(C)-(D), the City shall identify, for its proposed water supply: (1) Federal, state, and local permits for construction of necessary infrastructure associated with delivering the water supply; and (2) Any necessary regulatory approvals that are required in order to be able to convey or deliver the water supply. The anticipated federal, state and local permits are identified in the Draft EIR/EIS.[82] Based upon the ultimate quantity of water assigned, the capacity agreement with SCWA, the conveyance route selected and the treatment process chosen, the City of Folsom will obtain the appropriate approvals and permits from the suite listed in **Appendix J**.

3.8 Proof of Appropriation

CWC § 10910(e) requires that, if the water supplier has not received water from the designated source before, then the WSA has to contain "an identification" of the other

[79] Draft PFFP, p. 24.
[80] Draft PFFP, p. 24.
[81] Draft PFFP, p. 25.
[82] Draft EIR/EIS, Section 1.6.3. A copy of Section 1.6.3 is attached as **Appendix J**.

water suppliers "that receive a water supply or have existing water supply entitlements . . . or water service contracts, to the same source of water as the public water system . . . has identified as a source of water supply within its [WSA]." The City of Folsom has not previously received a water supply from either the NCMWC or the Sacramento River. The source of water from which the City will obtain its supplies is NCMWC's unique Renewal Contract, which is based on NCMWC's unique underlying water rights. The NCMWC has been entitled to divert Project Water under the Renewal Contract consistently since the contract took effect in 2005. Upon assignment, the City should be entitled to divert Project Water as well in a manner similar to that provided for under NCMWC's Renewal Contract, with an adjustment in the water delivery schedule to reflect the Folsom SPA's municipal and industrial demand pattern.

3.9 SUPPLY SUMMARY

Based upon the City of Folsom's plan to ultimately secure an assignment of a portion of NCMWC's Project Water supply, the normal year supply contractually available for the City of Folsom under the assignment is 8,000 AF/YR. The maximum diversion for the Folsom SPA will be 6,000 AF/YR. The existing agreement between SFP and NCMWC, and the existing non-binding memorandum of understanding between SFP and the City, provides the foundation for the City to obtain an entitlement to the water supply through an assignment approved by USBR. Consistent with the dry-year shortage provisions in the Renewal Contract, the supply ultimately assigned to the City of Folsom will be subject to a 25% reduction in "Critical Years." For purposes of the sufficiency analysis in **Section 4**, this reduction results in 6,000 AF being available in both single and multiple-dry year conditions.

In addition to the water supply agreements that have been signed, the City of Folsom is diligently pursuing conveyance and treatment options to use the supply to be assigned by NCMWC with specific focus on acquiring and using capacity in the FRWA facilities, which are already permitted and partially constructed. Moreover, the Draft PFFP provides cost estimates for the water supply and treatment infrastructure necessary to serve the Folsom SPA with the supply to be assigned by NCMWC. Given these efforts to date, the City of Folsom has a viable plan for a secure supply for the Folsom SPA.

SECTION 4 – FOLSOM SPA - PPA SUPPLY SUFFICIENCY ANALYSIS

Section 4 provides analysis of the sufficiency of the designated water supply for the projected Folsom SPA – PPA water demands.[83] **Table 4-1** incorporates the demand projection in **Table 2-10**, including both normal and dry-year demand projections at 2033. It also contains the supply projections discussed in **Section 3**. Although 8,000 AF/YR is anticipated to be available to the City of Folsom under the assignment, for every normal water year between 2013 and 2033, the City will divert a maximum of 6,000 AF/YR to serve the Folsom SPA. For each single and multiple-dry year period, it is assumed that the 8,000 AF/YR base water supply is restricted pursuant to the "Shasta Critical" provisions discussed in **Section 3.2.1.1**, thereby reducing the base supply by 25% and resulting in a total supply of 6,000 AF.

Conveyance water infrastructure is expected to be complete by 2013 in time to make water deliveries to the project. Given the limited development anticipated in 2013, there will be a significant surplus of water. In a dry year at full project build out anticipated to be in 2033, supplies are still estimated to exceed demand by about 425 AF/YR because annual dry-year demand will be approximately 5,577 AF/YR and supplies will be approximately 6,000 AF/YR. Thus, based upon the information in **Table 4-1** and the supporting analyses in **Sections 1** through **3**, the Folsom SPA - PPA will have a sufficient water supply at full project buildout, even in single and multiple dry year periods.

[83] CWC § 10910 (c)(4) provides that "If the city or county is required to comply with this part pursuant to subdivision (b), the water supply 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 proposed project, in addition to existing and planned future uses, including agricultural and manufacturing uses."

Table 4-1
Folsom SPA – PPA
Supply/Demand Comparison

Year	Projected Baseline Water Demand (ac-ft/year)	Surface Water			Projected Surplus/ (Shortfall) (ac-ft/year)
		Hydrologic Year Type		Available Water Supply (ac-ft/year)	
2033	5,421	Normal		6,000	579
	5,577	Single Dry		6,000	423
		Multiple Dry	Year 1	6,000	423
			Year 2	6,000	423
			Year 3	6,000	423

SECTION 5 - FOLSOM SPA - RHA LAND USE PLAN

5.1 LAND USE PLAN CHARACTERISTICS

The Folsom SPA - RHA land uses are provided in **Table 5-1**. The land uses are depicted graphically in **Appendix K**.[84] Total project acreage will be 3,502 acres, including 11,553 dwelling units. As discussed in the Introduction, the Folsom SPA-RHA is not the proposed project to be analyzed under CWC §§ 10910(a) and 10912(a), but rather is analyzed in this WSA because the EIR/EIS analyzes the Folsom SPA-RHA at the level of detail required by NEPA and the Folsom SPA-RHA contains more residential units than the Folsom SPA-PPA.

Table 5-1
Folsom SPA - RHA
Land Uses

Land Use ID	Area, acres	Dwelling Unit Density DU/acre	Dwelling Units
Residential			
Single-Family (SF)	370.7	2.7	989
Single-Family; High Density (SFHD)	331.0	4.9	1,619
Multi-Family; Low Density (MFLD)	483.2	8.0	3,866
Multi-Family; Med. Density (MFMD)	144.6	16.0	2,314
Multi-Family; High Density (MFHD)	107.1	22.2	2,380
Mixed Use - Res. (MU-R)	21.7	10.7	385
Non-Residential			
Mixed Use - Non Residential (MU-NR)	14.4		
Office Park (OP)	111.8	--	--
Community Commercial (CC)	15.4	--	--
General Commercial (GC)	210.1	--	--
Regional Commercial (RC)	133.6		
Park	158.6	--	--
School (SCH)	188.3	--	--
Open Space (OS)	1,057.6	--	--
Major Circulation (MAJ CIRC)	154.5	--	--
Total Residential	**1,458.3**		**11,553**
Total Non-Res	**2,044.3**		**0**
Total:	**3,502.6**		**11,553**

The land uses planned for the Folsom SPA – RHA in the City of Folsom and EID service areas respectively are provided in **Tables 5-2 and 5-3**.

[84] See **Appendix K, Folsom SPA – RHA Land Use Diagram.**

Table 5-2
Folsom SPA – RHA
Folsom Water Service Area
Land Uses

Land Use ID	Area, acres	Dwelling Unit Density DU/acre	Dwelling Units
Residential			
Single-Family (SF)	331.5	2.7	884
Single-Family; High Density (SFHD)	331.0	4.9	1,619
Multi-Family; Low Density (MFLD)	456.1	8.0	3,649
Multi-Family; Med. Density (MFMD)	144.6	16.0	2,314
Multi-Family; High Density (MFHD)	107.1	22.2	2,380
Mixed Use - Res. (MU-R)	21.7	10.7	385
Non-Residential			
Mixed Use - Non Residential (MU-NR)	14.4		
Office Park (OP)	111.8	--	--
Community Commercial (CC)	15.4	--	--
General Commercial (GC)	175.7	--	--
Regional Commercial (RC)	133.6		
Park	149.7	--	--
School (SCH)	188.3	--	--
Open Space (OS)	993.9	--	--
Major Circulation (MAJ CIRC)	149.0	--	--
Total Residential	**1,392.0**		**11,231**
Total Non-Res	**1,931.8**		**0**
Total:	**3,323.8**		**11,231**

Table 5-3
Folsom SPA – RHA
EID Water Service Area
Land Uses

Land Use ID	Area, acres	Dwelling Unit Density DU/acre	Dwelling Units
Residential			
Single-Family (SF)	39.2	2.7	105
Multi-Family; Low Density (MFLD)	27.1	8.0	217
Non-Residential			
General Commercial (GC)	34.4	--	--
Park	8.9	--	--
Open Space (OS)	63.7	--	--
Major Circulation (MAJ CIRC)	5.5	--	--
Total Residential	**66.3**		**322**
Total Non-Res	**112.5**		**0**
Total:	**178.8**		**322**

SECTION 6 - FOLSOM SPA – RHA WATER DEMAND ESTIMATE

Section 6 provides a water demand projection for the Folsom SPA - RHA.[85] The demand projection in **Section 6** uses the bases for the unit demand factors for the Folsom SPA - PPA outlined in **Section 2.1**. Both the historic demand factor assessment and the conservation drivers provide a foundation for the water demand projection in **Section 6.1**. **Section 6.2** identifies potential demands that could be served by a non-potable supply. **Section 6.3** provides the water demand projection used for the sufficiency analysis in **Section 8**.

6.1 FOLSOM SPA – RHA DEMAND FACTORS

6.1.1 Residential

The residential unit demand factors for the Folsom SPA - RHA include both an indoor and outdoor component. The indoor unit demand factor for both the single-family and multi-family residential categories remains the same as that used for the Folsom SPA – PPA as described in **Section 2.2.1.1**. Given the difference in the proposed unit densities for the Folsom SPA - RHA, unique residential outdoor unit demand factors were developed. The indoor and outdoor components are ultimately combined into a total unit demand factor for the residential land-use categories.

6.1.1.1 Indoor

For the Folsom SPA - RHA, the indoor unit demand factors for the single and multi-family residential classifications are provided in **Table 6-1**. Assuming the housing product type and the number of persons per unit is the same as the Folsom SPA - PPA for each land use classification, the indoor unit demand factors for the Folsom SPA – RHA are the same for each residential category.

[85] CWC § 10910(c)(4) provides that "If the city or county is required to comply with this part pursuant to subdivision (b), the water supply 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 proposed project, in addition to existing and planned future uses, including agricultural and manufacturing uses."

Table 6-1
Folsom SPA - RHA
Residential Unit Demands

Land Use	Capita per Household	Indoor gallons per capita / day	Indoor Unit Demand, AF/DU
SF	2.9	63	0.21
SFHD	2.9	63	0.21
MFLD	1.9	63	0.14
MFMD	1.9	63	0.14
MFHD	1.9	63	0.14
MU - Res	1.9	63	0.14

6.1.1.2 Outdoor

For the Folsom SPA - RHA, outdoor unit demand factors are projected to be higher than the Folsom SPA - PPA because the unit density for each residential land use category is lower. (Compare **Table 1-1** and **Table 5-1**.) Assuming each buildable acre has approximately 25% of the area devoted to roads and approximately 75% of the area for the lots, the area of the Single Family lots is assumed to increase from 11,000 square feet (sq. ft.) to 12,373 sq. ft., and the Single Family High Density lot area is assumed to increase from 6,000 sq. ft. to 6,749 sq. ft. A percentage of the difference in lot area for each category is assigned to both landscape coverage and hardscape coverage. For the Folsom SPA - RHA, 50% of the difference in lot area for the Single Family categories is assigned to landscape coverage for each category as shown in **Table 6-2**, and 50% is assigned to hardscape coverage.

By assigning 50% of the additional lot area in each Single-Family category to landscape area, unique landscape area totals were developed for each lot type as well as unique landscape area coverage percentages. Assuming the building size remains the same, then the original building coverage area remains the same and the hardscape area is adjusted accordingly to fill the remainder of the area not occupied by the building or landscape area.

Table 6-2
Folsom SPA - RHA
Building Acreage Assignment Assumptions[86]

Land Use Category	Assignment Percentages for Additional Residential Lot Area
SF	50% of difference to landscape
SFHD	50% of difference to landscape
MFLD	30% to landscape (up by 3.0%)
MFMD	30% to landscape (up by 3.0%)
MFHD	No Change
MU - Res	30% to landcape (up by 3.0%)

For the Multi-Family Low Density and Multi-Family Medium Density categories, 30% of the additional lot area is assigned to landscape area thereby increasing landscape coverage from 25% to 28%. For the Multi-Family High Density category, the layout may change most significantly with the possibility of fewer multi-level structures, thereby leading to similar building, landscape and hardscape coverages as those assumed in the Folsom SPA - PPA. For the Multi-Use Residential category, the landscape coverage is increased from 25% to 28% as well, under the assumption that more area than originally planned may be devoted to hardscapes that connect with the adjacent Multi-Use Nonresidential land uses (i.e., commercial uses). The land area coverage assumptions for the Folsom SPA – RHA are shown in **Table 6-3**.

Table 6-3
Folsom SPA - RHA
Residential Land Use Coverage

Land Use Category	Building Coverage (% of area)	Hardscape Coverage (% of area)	Landscape Coverage (% of area)
SF	36%	23%	41%
SFHD	36%	32%	32%
MFLD	47%	25%	28%
MFMD	47%	25%	28%
MFHD	55%	15%	30%
MU - Res	57%	30%	13%

[86] The remaining percentage under each land use coverage classification is assigned to hardscape, which has a demand factor of zero.

The increase in landscape coverage results in a higher outdoor unit demand factor than the Folsom SPA-PPA for each residential land classification. Consistent with the approach described in **Section 2.1.3.3**, the long-term outdoor unit demand factor for the single-family residential categories is calculated as a percentage of evapotranspiration. The landscape coverage has a demand per acre similar to that calculated for the Folsom SPA - PPA – 3.73 af/ac. The unit demand factor for each classification is provided in **Table 6-4**.

Table 6-4
Folsom SPA - RHA
Residential Outdoor Demand Factors

Land Use	Lot Area, ft^2	Lot Landscape Area, ft^2	Landscape Area (Total), Acres	ETo Turf Irrig. Demand, inches/yr	ETAF	Outdoor Unit Demand AFY/DU
SF	12,373	5,087	n/a	53	85%	0.44
SFHD	6,749	2,175	n/a	53	85%	0.19
MFLD	n/a	n/a	122	53	85%	0.12
MFMD	n/a	n/a	36	53	85%	0.06
MFHD	n/a	n/a	29	53	85%	0.05
MU - Res	n/a	n/a	3	53	85%	0.02

6.1.2 Non-Residential Unit Demand Factors

6.1.2.1 Non-Residential Land Use Coverage Percentages

The Folsom SPA – RHA non-residential sector unit demand factors are based on land-use coverage area. With one exception, each non-residential land-use coverage area percentage is assumed to be same as that used for the Folsom SPA - PPA. (See **Section 2.2.2.1.**) For school property, 50 percent of the landscape area will include non-irrigated areas based on some of the areas that are traditionally landscaped are instead hardscaped. The non-residential landscape coverage percentages are shown in **Table 6-5**.

Table 6-5
Folsom SPA - RHA
Non-Residential Unit Demand Factors

Land-use Category	Acres	Use Class	Coverage %	Use Class Unit Demand (AF/AC/YR)	Land Use Unit Demand (AF/AC/YR)
Mixed Use - Non-Residential	14.4	Indoor	20%	1.66	0.33
		Hardscape	45%	0.00	0.00
		Landscape	35%	3.29	1.15
		Total	100%		1.49
Office Park	111.8	Indoor	25%	1.90	0.48
		Hardscape	35%	0.00	0.00
		Landscape (Irr.)	40%	3.29	1.32
		Total	100%		1.79
General Commercial	175.7	Indoor	25%	1.66	0.42
		Hardscape	45%	0.00	0.00
		Landscape (Irr.)	30%	3.29	0.99
		Total	100%		1.40
Community Commercial	15.4	Indoor	25%	1.66	0.42
		Hardscape	45%	0.00	0.00
		Landscape (Irr.)	30%	3.29	0.99
		Total	100%		1.40
Regional Commercial	133.6	Indoor	28%	1.90	0.53
		Hardscape	47%	0.00	0.00
		Landscape (Irr.)	25%	3.29	0.82
		Total	100%		1.36
Park	149.7	Indoor	2%	0.48	0.01
		Hardscape	3%	0.00	0.00
		Landscape (Irr.)	95%	3.73	3.55
		Total	100%		3.56
Schools	188.3	Indoor	25%	2.85	0.71
		Hardscape	25%	0.00	0.00
		Landscape (Irr.)	25%	3.73	0.93
		Landscape (Non-Irr.)	25%	0.00	0.00
		Total	100%		1.65
Open Space	993.9	Indoor	0%	0.00	0.00
		Hardscape	0%	0.00	0.00
		Landscape	100%	0.00	0.00
			100%		0.00
Major Circulation	149	Indoor	0%	0.48	0.00
		Hardscape	90%	0.00	0.00
		Landscape (Irr.)	10%	3.29	0.33
		Total	100%		0.33

6.1.2.1 Nonresidential Unit Water Demand Factors

Nonresidential demand factors for the Folsom SPA - RHA were derived in a manner similar to those developed for the Folsom SPA - PPA. (See **Section 2.2.2.2**). All indoor unit demand factors are the same as those used for the Folsom SPA - PPA. The landscape unit demand factor for the commercial categories – Regional Commercial,

Community Commercial, General Commercial, Office Park and Mixed-Use Non Residential – is 75 percent of ETo (compared to 85 percent of ETo for the Folsom SPA - PPA). The landscape unit demand for the Major Circulation category is also 75 percent of ETo. The reduction from 85 to 75 percent of ETo compared to the Folsom SPA - PPA will require the commercial categories to develop landscape plans that include more native and low-water using plantings as well as greater use of natural non-irrigated groundcover than in the Folsom SPA - PPA.[87] The landscape unit demand factor for the school and park categories remains at 85 percent of ETo because residents are most likely to demand grass covered areas in parks and in many of the non-playfield areas at schools.

The unit demand factors for each class per unit of land area for each land use category in the Folsom SPA - RHA are provided in **Table 6-5**.

6.2 Folsom SPA – RHA Non-Potable Water Demand

If the City of Folsom were to require that the Folsom SPA – RHA demand categories corresponding to those eligible for non-potable service under the Recycled Water General Permit to use non-potable water, then the Folsom SPA - RHA land-use categories in **Table 6-6** would likely be eligible. The corresponding acreage and potential demand values are provided in **Table 6-6** as well.[88]

Table 6-6
Folsom SPA - RHA
Potential Non-Potable Water Demands

Land-Use Category	Landscape Acreage (AC)	Demand (AF/YR)
Parks	142	531
Streetscapes	15	49
C/I/O Landscape	141	463
Schools Landscape	47	176
Total	345	1,219

[87] See discussion in Section 2.1.3.3. A requirement to install low water using plants and weather-based irrigation controllers, as well as the use of dedicated landscape irrigation meters could reasonably achieve a reduction in water use from 85% to 75% of ETo. Monitoring use through a dedicated meter would provide a check on the efficacy of a landscape plan and the weather-based controller.
[88] See Section 2.3 for eligible non-potable water demand categories in the Recycled Water General Permit.

6.3 PROJECTED WATER DEMANDS FOR FOLSOM SPA

Table 6-7 applies the land-use assumptions in **Table 5-2 and Table 5-3** to the unit demand values in **Tables 6-1, 6-4** and **6-5**. The total estimated water demand for the Folsom SPA RHA in a normal year is 5,395 AF, assuming a 10% non-revenue water factor.[89] In a dry-year, total Folsom SPA - RHA demand is projected to increase to 5,547 acre-feet. Similar to the Folsom SPA – PPA, the dry-year increase is a result of increasing the normal year outdoor demand for all residential and non-residential demand categories by 5% and then applying the non-revenue water factor of 10%. The portion of the Folsom SPA - RHA that is within the EID service area is projected to have a water demand of 228 AF in a normal year and 235 AF in a dry year, as shown in **Table 6-7**. Finally, **Table 6-7** also provides an indication of the balance between indoor and outdoor water demands for all land-use categories in both the Folsom and EID service areas.

[89] See footnote 43 for derivation of Non-Revenue Water factor.

Table 6-7
Folsom SPA - RHA
Normal and Dry-Year Demand Totals

Folsom Service Area				
Residential Land Use	Normal Indoor Total (AFY)	Normal Outdoor Total (AFY)	Normal Total (AFY)	Dry-Year Total (AFY)
SF	202	431	633	655
SFHD	371	337	708	724
MFLD	555	479	1,034	1,058
MFMD	352	152	504	512
MFHD	362	121	483	489
MU - Res	59	11	69	70
Residential Totals	1,901	1,530	3,431	3,508
Non Residential Land Use				
MU - Non Res.	5	19	24	25
OP	59	164	223	231
CC	7	17	24	25
GC	81	193	274	284
RC	79	122	201	207
Park	2	590	592	621
SCH	149	195	344	354
OS	0	0	0	0
MAJ CIRC	0	55	55	57
Non-Residential Totals	382	1,354	1,737	1,804
Folsom Service Area Total	2,283	2,884	5,168	5,312

El Dorado Irrigation District Service Area				
Residential Land Use	Normal Indoor Total (AFY)	Normal Outdoor Total (AFY)	Normal Total (AFY)	Dry-Year Total (AFY)
SF	24	51	75	78
MFLD	33	29	62	63
Residential Totals	57	80	137	141
Non-Residential Land Use				
GC	16	38	54	56
Park	0	35	35	37
OS	0	0	0	0
MAJ CIRC	0	2	2	2
Non-Residential Totals	16	75	91	95
EID Service Area Total	73	155	228	235
Total Demand	2,356	3,039	5,395	5,547

Assuming Folsom SPA - RHA residential and non-residential construction begins in 2013 and the 20-year required projection is applied, then the projected water demand shown in **Table 6-9** would be realized for the Folsom SPA-RHA.

Table 6-9
Folsom SPA – RHA
Projected Water Demands

Water Year	2033
Normal Year (AF/YR)	5395
Dry Year (AF/YR)	5547

SECTION 7 – FOLSOM SPA - RHA WATER SUPPLY

The proposed water supply for the Folsom SPA – RHA is the same as the supply planned for the Folsom SPA – PPA that is analyzed in **Section 3**.[90] In summary, the City of Folsom plans to secure an assignment of a portion of NCMWC's Project Water supply. The existing agreement between SFP and NCMWC, and the existing non-binding memorandum of understanding between SFP and the City, provide the foundation for the City of Folsom to obtain an entitlement to the water supply through an assignment approved by the USBR. Consistent with the dry-year shortage provisions in the Renewal Contract, the supply ultimately assigned to the City of Folsom will be subject to a 25% reduction in "Critical Years." For purposes of the sufficiency analysis in **Section 8**, this reduction results in 6,000 AF being available in both single and multiple-dry year conditions. The normal year supply contractually available is projected to be 8,000 AF/YR, though the maximum diversion will be 6,000 AF/YR.

[90] The one difference that the Folsom SPA – RHA demand makes in the supply analysis is related to the demand pattern as explained in **Section 3.2.1.2**. Yet, because the dry-year demand estimate for the Folsom SPA – RHA is nearly the same (5,547 v. 5,577), 9.5 mgd is the projected maximum day demand estimate for the Folsom SPA – RHA.

SECTION 8 – FOLSOM SPA – RHA WATER SUPPLY SUFFICIENCY ANALYSIS

Section 8 provides analysis of the sufficiency of the designated water supply for the projected demands for the Folsom SPA - RHA.[91] **Table 8-1** incorporates the demand projection in **Table 6-9**, including both normal and dry-year demand projections at 2033. It also contains the supply projections discussed in detail in **Section 3** and summarized in **Section 7**. Although 8,000 AF/YR is anticipated to be available through contract, for every normal water year between 2013 (start of demand) and 2033 (20-year projection), the City of Folsom will divert a maximum of 6,000 AF/YR to serve the Folsom SPA. For each single and multiple-dry year period, it is assumed that the 8,000 AF/YR base water supply is restricted pursuant to the "Shasta Critical" provisions discussed in **Section 3.2.1.1**, thereby reducing the base supply by 25% and resulting in a total supply of 6,000 AF.

Because construction of water infrastructure is expected to commence in 2011, and construction will continue for 2-3 years, water supplies will first need to be available some time in 2013. In a dry year in 2033, supplies are still estimated to exceed demand by about 450 AF/YR because annual dry-year demand will be approximately 5,547 AF/YR and supplies will be 6,000 AF/YR. Based upon the information in **Table 8-1** and the supporting analyses in **Sections 1, 5 and 6**, there will be a sufficient water supply for the Folsom SPA - RHA even in single and multiple dry year periods.

[91] CWC § 10910 (c)(4) provides that "If the city or county is required to comply with this part pursuant to subdivision (b), the water supply 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 proposed project, in addition to existing and planned future uses, including agricultural and manufacturing uses."

Table 8-1
Folsom SPA - RHA
Supply/Demand Comparison

Year	Projected Baseline Water Demand (ac-ft/year)	Surface Water			Projected Surplus/ (Shortfall) (ac-ft/year)
		Hydrologic Year Type		Available Water Supply (ac-ft/year)	
2033	5,395	Normal		6,000	605
	5,547	Single Dry		6,000	453
		Multiple Dry	Year 1	6,000	453
			Year 2	6,000	453
			Year 3	6,000	453

APPENDICES

Appendix A – LAFCO SOI Approval

RESOLUTION NO. LAFC 1196

RESOLUTION OF THE SACRAMENTO LOCAL AGENCY FORMATION COMMISSION APPROVING THE CITY OF FOLSOM SPHERE OF INFLUENCE AMENDMENT APPLICATION (4-97)

WHEREAS, the Sacramento Local Agency Formation Commission is the entity authorized to approve a Sphere of Influence pursuant to the Cortese-Knox-Hertzberg Local Government Reorganization Act;

WHEREAS, the Sacramento Local Agency Formation Commission has undertaken a comprehensive analysis of the City of Folsom Sphere of Influence Amendment proposal in accordance with law and has conducted hearings since 1997 on the proposal and a history of such hearings and Commission actions is set forth in Resolution No. LAFC 1192 which is incorporated herein by this reference; and

WHEREAS, the City of Folsom and the County of Sacramento entered into a "Memorandum of Understanding", regarding the Sphere of Influence Amendment proposal, its boundaries, development standards and zoning requirements. The Sacramento Local Agency Formation Commission has given great weight to the terms of this Memorandum of Understanding; and

WHEREAS, the Sacramento Local Agency Formation Commission has certified the Final Environmental Impact Report for the City of Folsom Sphere of Influence Amendment by Resolution No. LAFC 1192 which is incorporated herein by reference; and

WHEREAS, the Sacramento Local Agency Formation Commission has adopted Mitigation Measures and a Mitigation Monitoring Program for the City of Folsom Sphere of Influence Amendment by Resolution No. LAFC 1193 which is incorporated herein by reference; and

WHEREAS, the Sacramento Local Agency Formation Commission has complied with Government Code section 56425 by adopting determinations regarding the City of Folsom Sphere of Influence Amendment by Resolution No. LAFC 1194 which is incorporated herein by reference;

WHEREAS, the Sacramento Local Agency Formation Commission has adopted findings of Fact and a Statement of Overriding Considerations in compliance with the intent and provision of the California Environmental Quality Act concurrently by Resolution No. LAFC 1195 which is incorporated herein by reference; and

WHEREAS, the Sacramento Local Agency Formation Commission has concurrently adopted Findings of Fact regarding the appropriateness of the City of Folsom Sphere of Influence Amendment by Resolution No. LAFC 1195.

NOW THEREFORE THE SACRAMENTO LOCAL AGENCY FORMATION COMMISSION, HEREINAFTER REFERRED TO AS COMMISSION OR LAFCo, HEREBY RESOLVES AND DETERMINES AS FOLLOWS:

The Commission hereby approves and amends the City of Folsom's Sphere of Influence boundaries as shown on the map set forth in Exhibit "A", attached hereto and made part hereof, and as described therein as:

All that real property situated in the County of Sacramento, State of California:

Bounded by U.S. Highway 50 to the north, Prairie City Road to the west,

White Rock Road to the south and the Sacramento County/El Dorado

County boundary to the east.

FURTHERMORE, the Commission does hereby resolve that it is necessary and appropriate to apply certain conditions to the approval of the Sphere of Influence Amendment in order to encourage well-ordered, efficient urban development with sufficient services and to preserve open space resources, agricultural land and habitat for species. Accordingly, approval of the project is conditioned upon the following:

1. Prior to submittal of any application to annex property within the Sphere of Influence Amendment area, the City of Folsom shall:

   (a) Revise and update its General Plan in accordance with State law;
   (b) Obtain a determination of substantial compliance from the California Department of Housing and Community Development (HCD) consistent with Government Code section 65585(d) or (h). The City of Folsom shall establish in its approved Housing Element that it has or will meet its regional share housing needs for all income levels for the second and third housing element revisions, as defined in Government Code section 65588.
   (c) Adopt appropriate land use designations for all property within the Sphere of Influence area; and
   (d) Pursuant to Government Code section 56375, pre-zone the property consistent with the City of Folsom General Plan. In pre-zoning within the Sphere of Influence Amendment, the City of Folsom shall address the location, distribution, intensity, and extent of the land use designations, including open space.

2. The City of Folsom is encouraged to promote annexations within the Sphere of Influence Amendment area that are well planned, capable of being efficiently served, have an orderly development pattern, and avoid the premature conversion of open space and agricultural lands within the Sphere of Influence area. Consistent with its General Plan policy, the City of Folsom is encouraged to develop an orderly annexation program

and should discourage the filing of any annexation application seeking to annex property prematurely or in a piece-meal manner.

3. In any application to annex property within the Sphere of Influence Amendment area, the City of Folsom shall submit to LAFCo for its review and approval, an updated Master Services Element which includes a program of implementation and financing measures necessary to support the provision of major components of infrastructure and services, and other essential facilities, needed to support the proposed distribution, location, extent and intensity of land uses proposed within the Sphere of Influence Amendment area. The Master Services Element shall identify a water source(s) and the ability to acquire said water source(s) sufficient to serve the area contained in the annexation application. The Master Services Element shall identify the process the City will undertake to acquire and secure a water supply sufficient for LAFCo to determine compliance with Condition (11)(a) of this Resolution.

4. Prior to submittal of any application to annex property within the Sphere of Influence Amendment area, the City of Folsom, with the cooperation of Sacramento and El Dorado Counties, shall prepare a plan to address the necessary improvements to the local roadway network of each jurisdiction in order to mitigate the impacts associated with development within the Sphere of Influence Amendment area. The plan should include a list of improvements, description of the responsible jurisdiction, phasing plan and a clearly defined financing mechanism. Implementation of the plan shall result in service levels on local roadways that are consistent with the General Plans of the City of Folsom and County of Sacramento and County of El Dorado. The plan shall be submitted with the annexation application.

5. Prior to LAFCo approval of any application to annex property within the Sphere of Influence area (SOIA), the City of Folsom, with the cooperation of Caltrans, Sacramento County, El Dorado County, the El Dorado County Transportation Commission and the Sacramento Area Council of Governments, shall identify the traffic/transportation measures that must be implemented to mitigate the potential impacts on regional transportation infrastructure from proposed development within the SOIA area consistent with mitigation measure 4.4-2 in the Mitigation Monitoring and Reporting Plan. The City shall further set forth a funding strategy to construct the traffic/transportation measures necessary to fully mitigate the impacts from the development of the SOIA area and a proposed timeline for the construction of such improvements. The timeline shall be linked to the approval and construction of new development within the SOIA, within a time frame intended to mitigate the long-term impacts from the SOIA development. Where appropriate, the City shall utilize assessment districts and impact fee programs to fund improvements. As soon as reasonably possible, the improvements identified in this paragraph that are of regional significance shall be programmed in the MTP and the MTIP. The City shall request the programming of the improvements in the MTP as soon as the improvements are identified through the General Plan Amendment Process, and shall request the programming of the improvements in the MTIP consistent with the financing plan established for implementation of the improvements.

6. Any application to annex property within the Sphere of Influence Amendment area, shall include a Transit Master Plan for the SOIA area consistent with the policies of the City's General Plan. The Plan shall identify the roadways to be used by bus transit routes, locations for bus turnouts and pedestrian shelters, locations for bus transfer stations, alignments for fixed route rail service, and the location of rail service stations.

7. Any application to annex property within the Sphere of Influence Amendment area, shall include an updated Bikeway Master Plan to delineate bikeway and pedestrian facilities within the Sphere of Influence Amendment area consistent with the goals and policies of the City's General Plan. The update shall incorporate bikeway designations for Prairie City Road and White Rock Road to be equivalent, or better, than those contained in the ***Sacramento City/County Bikeway Master Plan***.

8. Any application to annex property within the Sphere of Influence Amendment area, shall include hydraulic and hydrologic modeling of that portion of Alder Creek which traverses the planning area and include a Drainage Master Plan for the Sphere of Influence Amendment area. The Drainage Master Plan shall address flood hazards and the use of flood protection measures. The objective of the Master Plan shall conform to a no net increase in floodwater surface elevations downstream of the Sphere of Influence Amendment area.

9. Any application to annex property within the Sphere of Influence Amendment area, shall include the City of Folsom's multi-species habitat mitigation strategy (e.g., Habitat Conservation Plan (HCP)) for the Sphere of Influence Amendment area consistent with the goals and policies contained in the City's General Plan.) The strategy shall address the mitigation of development impacts upon habitat and biological/environmental resources in a manner that meets federal and state regulatory requirements. The City may fulfill the requirements of this condition by becoming a participant in the Sacramento County HCP process for the southeast County.

10. Any application to annex Aerojet General Corporation property, or a portion of such property, within the Sphere of Influence Amendment area, must include information sufficient to demonstrate that on-site surface contamination has been remediated to standards determined to be acceptable by federal and state regulatory agencies and that either the groundwater contamination has been remediated or that measures to remediate the contamination are in place and working satisfactorily. In addition, the City of Folsom shall provide evidence of any covenants and restrictions limiting the surface or subsurface use of the property.

11. a. Prior to LAFCo approval of any application to annex property within the Sphere of Influence Amendment area, the City of Folsom shall demonstrate that it has a sufficient water supply to serve existing customers, future customers within the existing service area, and all proposed uses within the annexation application area, in compliance with the terms and conditions of the Water Forum Agreement. The information provided

shall be sufficient for LAFCo to determine water availability to the area pursuant to Gov. Code section 56668(k) or its successor.

b. Prior to LAFCo approval of any application to annex property within the Sphere of Influence area, the City of Folsom shall identify the timely availability of sufficient wastewater transmission and treatment capacity to serve existing customers, future customers with the existing service area, and all proposed uses within the annexation application area.

12. Prior to LAFCo approval of any application to annex property within the Sphere of Influence Amendment area, the City of Folsom or other applicants shall meet and confer with the El Dorado Irrigation District, "EID", the Sacramento Metropolitan Fire Protection District, and any other special districts, regarding impacts to the districts and their operations. This process shall identify potential impacts from the proposed annexation upon the districts, including but not limited to fiscal and operational impacts, assessments, bonded indebtedness, loss of property tax revenues and other impacts proposed relating to any proposed changes of organization or services. In addition, LAFCo will fully analyze and consider these impacts prior to approval of any annexation to determine appropriate mitigation measures or conditions of annexation. With respect to EID, the City of Folsom shall not request any detachment of EID territory such that EID will no longer qualify as a multi-county district under Revenue Taxation Code section 97 et seq. In addition, the City of Folsom shall meet with EID on an ongoing periodic basis, subject to a schedule mutually agreed to between the City and EID. The City of Folsom shall be responsible for scheduling these meetings. The objective of these periodic meetings is to provide for discussion and coordination of issues of mutual concern regarding water and wastewater supplies and treatment.

13. Where permitted by law, the City of Folsom shall incorporate feasible school impact mitigation requirements into development agreements that would take effect upon annexation of property within the Sphere of Influence area. The extent to which mitigation requirements may be necessary will depend upon availability of school facilities at the time of development, the type of development that occurs within the Sphere of Influence Amendment (residential compared to non-residential uses) and school district policies on providing enrollment space for non-residents who are employed within district boundaries.

14. The Mitigation measures adopted pursuant to the California Environment Quality Act by LAFCo Resolution 1193 are incorporated herein by reference. Subsequent to submittal of any application to annex property within the Sphere of Influence Amendment area, LAFCo shall review the Mitigation Monitoring and Reporting Plan approved as part of the Sphere of Influence Amendment for compliance and shall undertake additional environmental review in accordance with the California Environmental Quality Act.

15. At the time of submittal of any application to annex property within the Sphere of

Influence area, the City of Folsom shall submit information demonstrating compliance within the Memorandum of Understanding between the City of Folsom and the County of Sacramento, effective November 14, 2000, attached hereto and made a part hereof. Prior to LAFCo approval of any application to annex property within the Sphere of Influence Amendment area, LAFCo shall review the application for compliance with the Memorandum of Understanding.

16. At the time of submittal of any annexation application, the City of Folsom shall demonstrate its compliance with the provisions of Condition 5 of the Memorandum of Understanding, the City of Folsom Master Services Element dated November 4, 1997, and the Final Environmental Impact Report to preserve woodlands and to prevent loss of habitat and biological resources, including setting aside a minimum of thirty percent (30%) of the Sphere of Influence area, approximately 1,075 acres, for permanent open space as defined by State law, for preservation of habitat for species and for conservation of agricultural land.

On a motion made by Commissioner MACGLASHAN, seconded by Commissioner M. JOHNSON, the foregoing Resolution was passed and adopted by the SACRAMENTO LOCAL AGENCY FORMATION COMMISSION, State of California, this 6th day of JUNE, 2001, by the following vote, to-wit:

AYES: E. Mulberg, W. Porter, R. MacGlashan, M. Johnson, I. Collin, L. Hammond, C. Tooker.

NOES: None.

ABSTAIN: None.

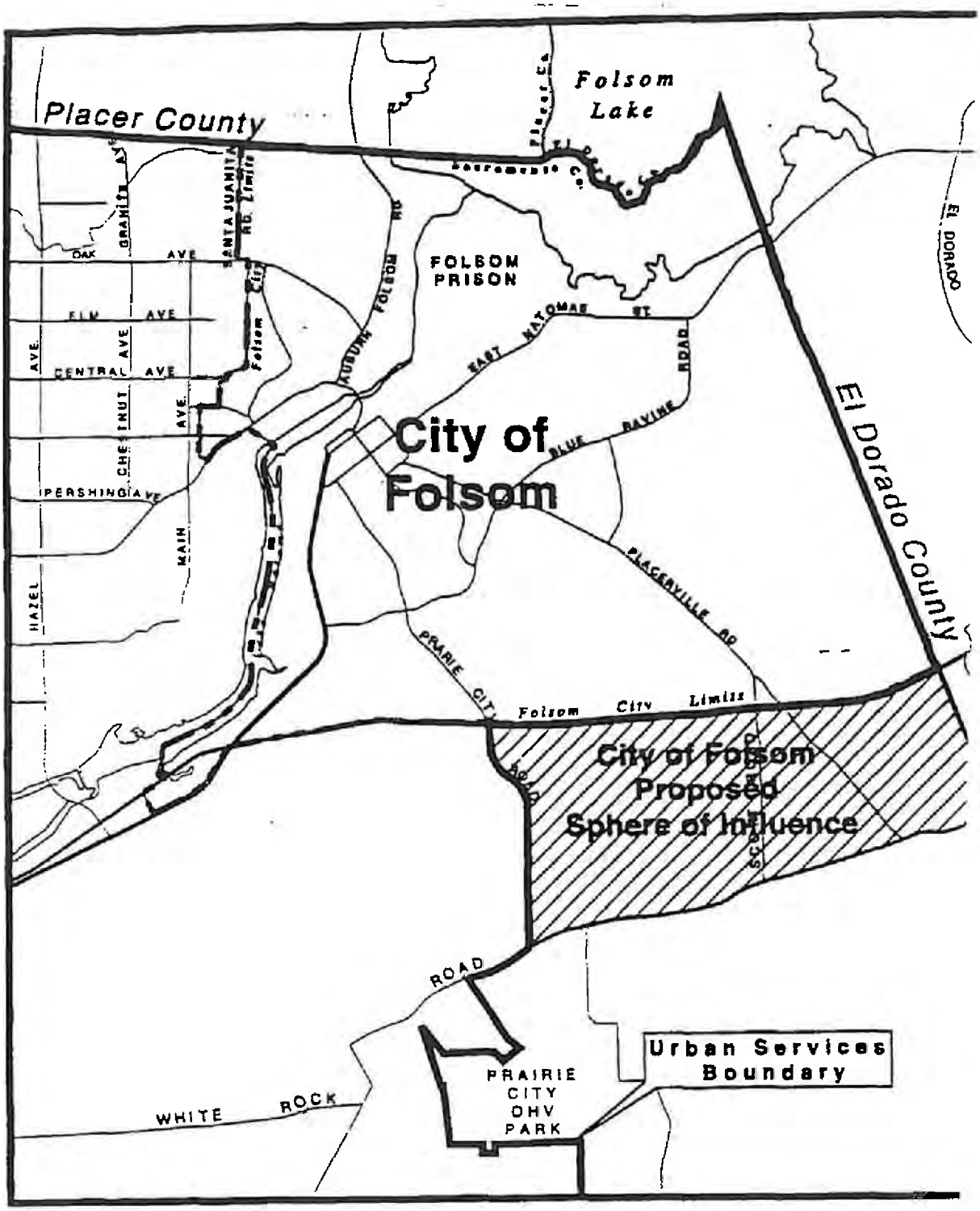
ABSENT: None.

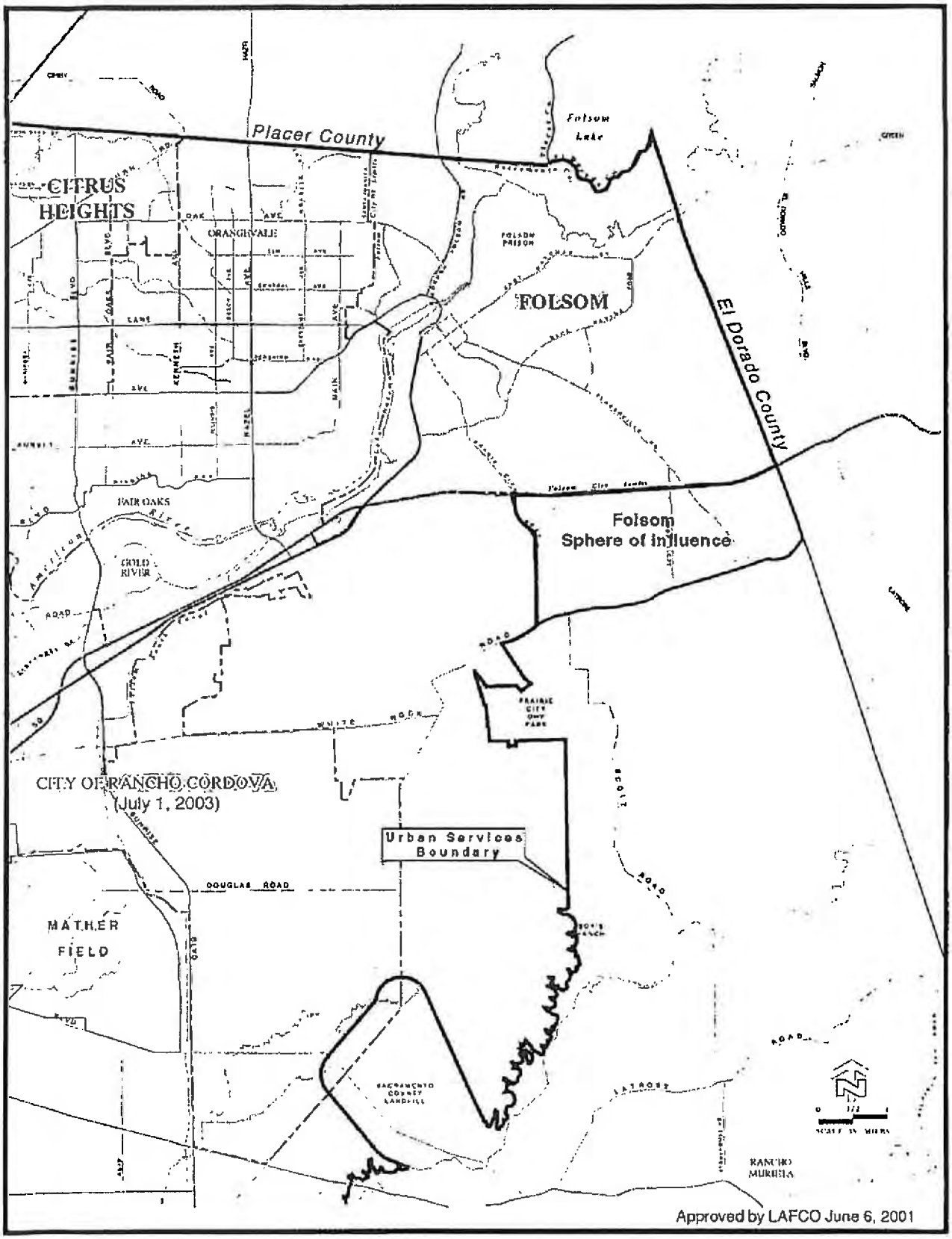
Christopher Tooker, Chair
SACRAMENTO LOCAL AGENCY FORMATION COMMISSION

ATTEST:

Marilyn Ann Flemmer
Commission Clerk

NM:Maf
5/8/01
(Reso 1196 FSOI)


Placer County
Folsom Lake
Placer Co.
El Dorado Co.
SANTA JUANITA
GRANITE AVE
OAK AVE
FOLSOM PRISON
AUBURN FOLSOM RD
EAST NATOMAS ST
EL DORADO
FIG AVE
CENTRAL AVE
CHESTNUT AVE
Folsom City Limits
City of Folsom
BLUE RAVINE
BLUE RAVINE ROAD
PERSHING AVE
MAIN
HAZEL
PLACERVILLE RD
PRAIRIE CITY
Folsom City Limits
City of Folsom Proposed Sphere of Influence
SCOTT
ROAD
Urban Services Boundary
PRAIRIE CITY OHV PARK
WHITE ROCK
El Dorado County


Placer County
CITRUS HEIGHTS
ORANGEVALE
FOLSOM
El Dorado County
Folsom Sphere of Influence
FAIR OAKS
GOLD RIVER
CITY OF RANCHO CORDOVA
(July 1, 2003)
Urban Services Boundary
DOUGLAS ROAD
MATHER FIELD
RANCHO MURIETA
Approved by LAFCO June 6, 2001

Attachment 6

MEMORANDUM OF UNDERSTANDING

This Memorandum of Understanding ("MOU") is entered into and effective on 11-14-00 between the County of Sacramento ("COUNTY") and the City of Folsom ("CITY"). The COUNTY and CITY mutually desire to establish the planning, stakeholder and public participation steps contemplated for that area subject to the CITY's Sphere of Influence Amendment ("SOIA") proposal pending before the Sacramento County Local Agency Formation Commission ("LAFCo"). It is the intent of this MOU to serve as the guide to sound regional-long-range planning efforts by establishing and recognizing planning principals that will be incorporated into any annexation process relative to the SOIA area into the CITY, if such annexation ever occurs.

RECITALS

WHEREAS, the CITY filed an application to amend its Sphere of Influence with LAFCo in 1997 to include 3,584 acres south of Highway 50; and

WHEREAS, LAFCo has proceeded with the preparation of an Environmental Impact Report ("EIR"); and

WHEREAS, LAFCo has considered the SOIA proposal on July 29, 1998, and is scheduled to conduct another public hearing on December 6, 2000; and

WHEREAS, during the LAFCo process Sacramento County expressed concern over water supply, open space, transportation, and air quality issues related to development within the proposed SOIA expansion area. Consequently, the City and County convened a "2x2 committee", comprised of two Council members and two Board members, that has worked over a period of months to address those issues; and

WHEREAS, upon approval of the SOIA, the CITY will then embark upon a process by which it will update the CITY General Plan and develop land use regulations applicable to the SOIA area; and

WHEREAS, the COUNTY and the CITY have engaged in good faith cooperative discussions through the 2x2 process and that this process in turn lead to each party adopting resolutions identifying planning principles for consideration in this MOU, and

WHEREAS, the COUNTY and the CITY desire to combine their respective resolutions into a common understanding, as embodied in this MOU:

NOW THEREFORE, THE COUNTY AND CITY AGREE AS FOLLOWS:

1. Incorporation of Recitals. The foregoing recitals are true and correct, and are incorporated by reference herein. In the event of a conflict between a recital and a term or condition of the MOU, the term or condition shall prevail.

2. Future City Actions. Prior to an application being submitted to LAFCo for annexation, the City will require the development and adoption of a set of ENTITLEMENT DOCUMENTS to evaluate planning options for, and to develop policies applicable to the SOIA area. At a minimum, the ENTITLEMENT DOCUMENTS shall include a general plan amendment, zoning and other regulations, an annexation plan in the event the CITY decides to proceed with annexation, and an infrastructure phasing and financing plan. The ENTITLEMENT DOCUMENTS shall also include such additional policies and regulations as may be necessary to implement this MOU.

3. Recognition of other Applicable Laws. For purposes of this MOU and the adoption of the ENTITLEMENT DOCUMENTS by the CITY, both parties acknowledge that the CITY and COUNTY are guided by statutory and case law (hereinafter collectively referred to as "LIMITING AUTHORITY") which directly affects the discharge of their responsibilities under this MOU and in the adoption of the ENTITLEMENT DOCUMENTS. The LIMITING AUTHORITY includes, but is not limited to, the California Environmental Quality Act **(Public Resources Code §21000 et seq.)**, the Brown Act **(Government Code §54950 et seq.)**, the Planning and Zoning Law **(Government Code §65000 et seq.)**, Cortese-Knox Local Government Reorganization Act **(Government Code §56000 et seq.)**, and limitations on the extra-territorial exercise of land use powers (See Alameda County Land Use Association v. City of Hayward (1996) 38 Cal.App.4th 1716.)

4. Phasing of ENTITLEMENT DOCUMENTS. Prior to approval of any area for annexation by LAFCo, CITY agrees to adopt an annexation plan, the general plan amendment, pre-zoning and an infrastructure phasing and financing plan. In addition, the CITY will update the following plans: Master Services Element, Transit Master Plan, Bikeway Master Plan, Local Roadway Network Plan, Drainage Master Plan for Alder Creek, and a Multi-Species Habitat Plan.

5. Issues to be included within the ENTITLEMENT DOCUMENTS

   A. Comprehensive Planning. As the CITY deliberates on the appropriate level of development for the SOIA, there shall be a comprehensive planning approach taken to ensure that the area will be efficiently served. Further, the CITY will prepare and adopt a comprehensive plan for development and preservation of resources (prior to any annexation) that will include the entire Sphere of Influence Amendment area with the goal of avoiding piecemeal development.

B. Public-Stakeholder Participation. The CITY will collaboratively discuss as appropriate with Sacramento and El Dorado Counties, the Folsom - Cordova Unified School District and stakeholders issues of mutual interest such as land-use (prezoning), fair share/diversity of housing, transportation, Smart Growth, air quality, and scenic corridor preservation.

In its efforts to amend the General Plan and pre-zone the SOIA area, the CITY shall provide opportunity for public participation and broad public input, which include (but are not limited to):

1. Public Hearings at the Planning Commission
2. Public Hearings at the City Council
3. ~~Community Forums~~
4. Neighborhood meetings
5. Town Hall meetings
6. Existing Joint Power Authority
7. Other public meetings as deemed necessary

In so coordinating and planning these meetings, the CITY shall provide notification to interested parties which shall include (but not be limited to)

1. Folsom Telegraph
2. City Newsletter
3. City Radio Station
4. Sacramento Bee
5. Business Journal
6. Property owners within the SOIA
7. Neighborhood Organizations (e.g., list)
8. Environmental Organizations (e.g., Sierra Club, Audubon Society & E.C.O.S.)
9. Public posting process (City Hall, Library, etc.)
10. County of Sacramento
11. County of El Dorado
12. Sacramento Area Cities Forum

C. Water. The CITY will identify the source of water supply(ies) to serve any area subject to an annexation request and as a signatory of the *Water Forum Agreement* shall continue to abide by the established obligations of the agreement. Consistent with the CITY of Folsom Public Facilities Element General Plan Goal 40, the CITY shall not permit the development of a portion of the Sphere of Influence Amendment area without securing the water supply, providing adequate water infrastructure, or the approval of an infrastructure financing and phasing plan which provides for the timely installation of water facilities.

D. Open Space. The CITY shall consider open space areas based on habitat value, scenic resource benefits, buffer of land uses, and connection to other open space areas within the SOI area and the County of Sacramento.

In implementing its responsibilities and the open space element requirements of the planning, zoning and subdivision law, the CITY shall consider, adopt and implement as appropriate, open space protection tools such as General Plan Land Use Policy 8.4, an open space bank, open space easements, developer dedications, and grants, transfer of development rights, and zoning.

The CITY shall integrate its open space program with any Habitat Conservation Management Plan(s) adopted within the SOIA area.

E. Preservation and/or Mitigation of Habitat. In entering into this MOU, the CITY and COUNTY share the objective of preserving the viable oak woodlands located within the SOIA area. The CITY and COUNTY both recognize that the oak woodland is a resource area of special value, and its preservation needs to be incorporated as a planning goal in both CITY and COUNTY planning documents and as a guiding strategy for CEQA compliance. In adopting the ENTITLEMENT DOCUMENTS, the CITY commits to including preservation of viable oak woodlands as a planning goal. In complying with CEQA, the city's first priority for preservation shall be through avoidance of adverse environmental impacts to oak woodlands.

For the purposes of this MOU, options for preservation will include contribution by the owners of property in the SOIA area (i.e., through a transfer of development rights program, development fees or other financing mechanism) and ultimate dedication and/or acquisition by the CITY and/or COUNTY of key segments of the oak woodland. Such dedications will include, but may not be limited to lands designated Resource Conservation Area on the 1993 Sacramento County General Plan. It is the intent of the CITY and COUNTY to develop an addendum to this MOU prior to approval of annexation of land within the SOIA area to more clearly define the process for accomplishing this acquisition, potential financing strategies, and methods to maintain this area as an oak woodland preserve within the Folsom urban area.

The CITY will require mitigation for any loss of habitat and biological resources in a manner which is consistent with the General Plan (including a minimum of 30% natural (active or passive) open space), meets federal and state regulatory requirements and satisfies the CITY's Tree Preservation, Hillside, and Wetland and Riparian Habitat Management Ordinances. For the purposes of this MOU, natural open space shall not include golf courses or parking lots and their associated landscaping.

The CITY desires to provide for all mitigation to be included within the SOIA, although it may elect to participate in the South Sacramento Habitat Conservation Plan and/or East County Open Space Plan when the Plan(s) is/are established.

F. Provision of Services. Consistent with the CITY's Public Facilities Element General Plan Goal 40, the CITY shall not permit the development of the SOIA without adequate infrastructure in place, or approval of an infrastructure financing and phasing plan which provides for the timely installation of needed facilities (including, but not limited to transportation issues along the Highway 50 corridor).

G. Tax Negotiations. The CITY commits to the concept of revenue sharing with the COUNTY, and consistent with the California Constitution and state statutes, the CITY and COUNTY each agree to negotiate in good faith regarding the apportionment of all future tax revenues from the SOIA area.

6. COUNTY Responsibilities. The COUNTY agrees to take reasonable measures to provide the CITY with information in a timely manner and a format consistent (i.e. compatible software, map scale, etc.) with the CITY's planning efforts as follows:

1. Location and extent of potential open space linkages

2. Progress reports on the COUNTY's Habitat Conservation Plan, including a comparative evaluation of environmental resources within the SOIA compared to those sought in the COUNTY's Habitat Conservation Plans.

3. Location and extent of open space areas designated by the COUNTY outside of the SOIA.

4. Identification by the COUNTY of an appropriate buffer area outside of the SOIA area in the East County Area Open Space Plan or County's General Plan Update.

In addition to the foregoing, the COUNTY has no immediate intention of providing urban services to the SOIA area except where already approved in the Special Planning Area (SPA) for Aerojet.

The CITY and COUNTY agree that the policies, standards and procedures of LAFCo shall be the governing tools for guiding future development within the SOIA.

The CITY and COUNTY administrative offices shall discuss the impact of annexations of the SOIA area on present and potential COUNTY employment. The COUNTY may develop a plan to be presented to the City Council and Board of Supervisors that addresses this issue.

7. Continuing cooperation between CITY and COUNTY. The staffs of the CITY and COUNTY shall meet no less than every 60 days to discuss progress in the implementation of this MOU and issues of regional planning in the Area of Concern. Both parties shall select two members of its respective governing body as a continuation of the 2x2 process leading to this MOU, and the continued 2x2 meetings shall occur at least twice every twelve months. The CITY shall be responsible for scheduling these meetings. The CITY and COUNTY shall consider the compatibility of existing and proposed land-uses where the CITY and COUNTY share a common boundary.

8. MOU Term. This MOU shall expire upon annexation of all of the property approved within the revised SOI, or upon its tenth anniversary, whichever occurs first. The parties may agree, in writing, to extend its term.

9. Continued Effectiveness of the Existing MOU. The existing MOU addressing the "Area of Concern" shall continue in effect.

10. Enforcement of MOU. This MOU shall be submitted to LAFCo as part of the Sphere of Influence Amendment application pursuant to Government Code §Section 56425. It is the intent of the CITY and COUNTY that in reviewing subsequent requests for organizations, reorganizations and/or annexations in the SOIA area, LAFCo shall review this MOU for compliance with the stated terms and principals set forth herein.

The CITY and COUNTY intend that this MOU guide development, if any, within the SOIA which occurs subsequent to annexation. The CITY and COUNTY also agree that nothing in this MOU shall be interpreted to create a legal limit to the exercise, by each jurisdiction of its authority to enact or amend land use regulations and discharge it responsibilities under CEQA.

CHAPTER 5

NONRESIDENTIAL MANDATORY MEASURES

DIVISION 5.3 WATER EFFICIENCY AND CONSERVATION

SECTION 5.301
GENERAL

5.301.1 Scope. The provisions of this chapter shall establish the means of conserving water used indoors, outdoors, and in wastewater conveyance.

SECTION 5.302
DEFINITIONS

5.302.1 Definitions. The following words and terms shall, for the purposes of this chapter and as used elsewhere in this code, have the meanings shown herein.

GRAYWATER. [BSC, DSA-SS]Untreated household waste which has not come into contact with toilet waste. Graywater includes used water from bathtubs, showers, bathroom wash basins, and water from clothes washing machines and laundry tubs. It shall not include waste water from kitchen sinks, dishwashers, or laundry water from soiled diapers.

MODEL WATER EFFICIENT LANDSCAPE ORDINANCE. [BSC, DSA-SS] The California ordinance regulating landscape design, installation and maintenance practices that will ensure commercial, multifamily and other developer installed landscapes greater than 2500 square feet meet an irrigation water budget developed based on landscaped area, and climatological parameters.

POTABLE WATER. [BSC, DSA-SS] Water that is drinkable and meets the U. S. Environmental Protection Agency (EPA) Drinking Water Standards. See definition in the California Plumbing Code, Part 5.

RECYCLED WATER. [BSC, DSA-SS] Water which, as a result of treatment of waste, is suitable for a direct beneficial use or a controlled use that would not otherwise occur (Water Code Section 13050 (n)). Simply put, recycled water is water treated to remove waste matter attaining a quality that is suitable to use the water again.

SUBMETER. [BSC, DSA-SS] A meter installed subordinate to a site meter. Usually used to measure water intended for one purpose, such as landscape irrigation. For the purposes of this section, a Dedicated Meter may be considered a submeter.

WATER BUDGET. [BSC, DSA-SS] Estimated total landscape irrigation water use shall not exceed the maximum applied water allowance calculated in accordance with the Department of Water Resources Model Efficient Landscape Ordinance (MLO).

SECTION 5.303
INDOOR WATER USE

5.303.1 Meters. [BSC] Separate meters or metering device shall be installed for the uses described in Sections 503.1.1 and 503.1.2.

5.303.1.1 Buildings in excess of 50,000 square feet [BSC]. Separate submeters shall be installed as follows:

1. For each individual leased, rented, or other tenant space within the building projected to consume more than 100 gal/day.
2. For spaces used for laundry or cleaners, restaurant or food service, medical or dental office, laboratory, or beauty salon or barber shop projected to consume more than 100 gal/day.

5.303.1.2 Excess consumption [BSC]. Any building within a project or space within a building that is projected to consume more than 1,000 gal/day.

5.303.2 20% Savings. [BSC, DSA-SS] A schedule of plumbing fixtures and fixture fittings that will reduce the overall use of potable water within the building by 20% shall be provided. The reduction shall be based on the maximum allowable water use per plumbing fixture and fittings as required by the California Building Standards Code. The 20% reduction in potable water use shall be demonstrated by one of the following methods.

1. Each plumbing fixture and fitting shall meet the 20% reduced flow rate specified in Table 5.303.2.3, or
2. A calculation demonstrating a 20% reduction in the building "water use baseline" as established in Table 5.303.2.2 shall be provided.

5.303.2.1 Multiple showerheads serving one shower. [BSC] When single shower fixtures are served by more than one showerhead, the combined flow rate of all the showerheads shall not exceed the maximum flow rates specified in the 20% reduction column contained in Table 5.303.2.2 or the shower shall be designed to only allow

11. General Provisions.

Completeness of instrument. This MOU, together with its specific references and attachments, constitutes all of the agreements and understandings made by and between the parties hereto.

Captions. The captions of this MOU are for convenience in reference only and the words contained therein shall in no way be held to explain, modify, amplify or aid in the interpretation, construction or meaning of the provisions of this MOU.

Number and gender. In this MOU, the neuter gender includes the feminine and masculine, and the singular includes the plural, the word "person" includes corporations, partnerships, firms or associations, wherever the context so requires.

Mandatory and permissive. "Shall" and "will" and "agrees" are mandatory. "May" is permissive.

Term includes extensions. All references to the term of this MOU or the MOU Term shall include any extensions of such term.

Modification. No modification or waiver of any provisions of this MOU or its attachments shall be effective unless such waiver or modification shall be in writing, signed by all parties, and then shall be effective only for the period and on the condition, and for the specific instance for which given.

Counterparts. This MOU may be executed simultaneously and in several counterparts, each of which shall be deemed an original, but which together shall constitute one and the same instrument.

Other documents. The parties agree that they shall cooperate in good faith to accomplish the object of this MOU and to that end, agree to execute and deliver such other and further instruments and documents as may be necessary and convenient to the fulfillment of these purposes.

Partial invalidity. If any term, covenant, condition or provision of this MOU is held by a court of competent jurisdiction to be invalid, void or unenforceable, the remainder of the provision and/or provisions shall remain in full force and effect and shall in no way be affected, impaired or invalidated.

Document Preparation. This MOU will not be construed against the party preparing it, but will be construed as if prepared by all parties.

DATED: NOV 14 2008

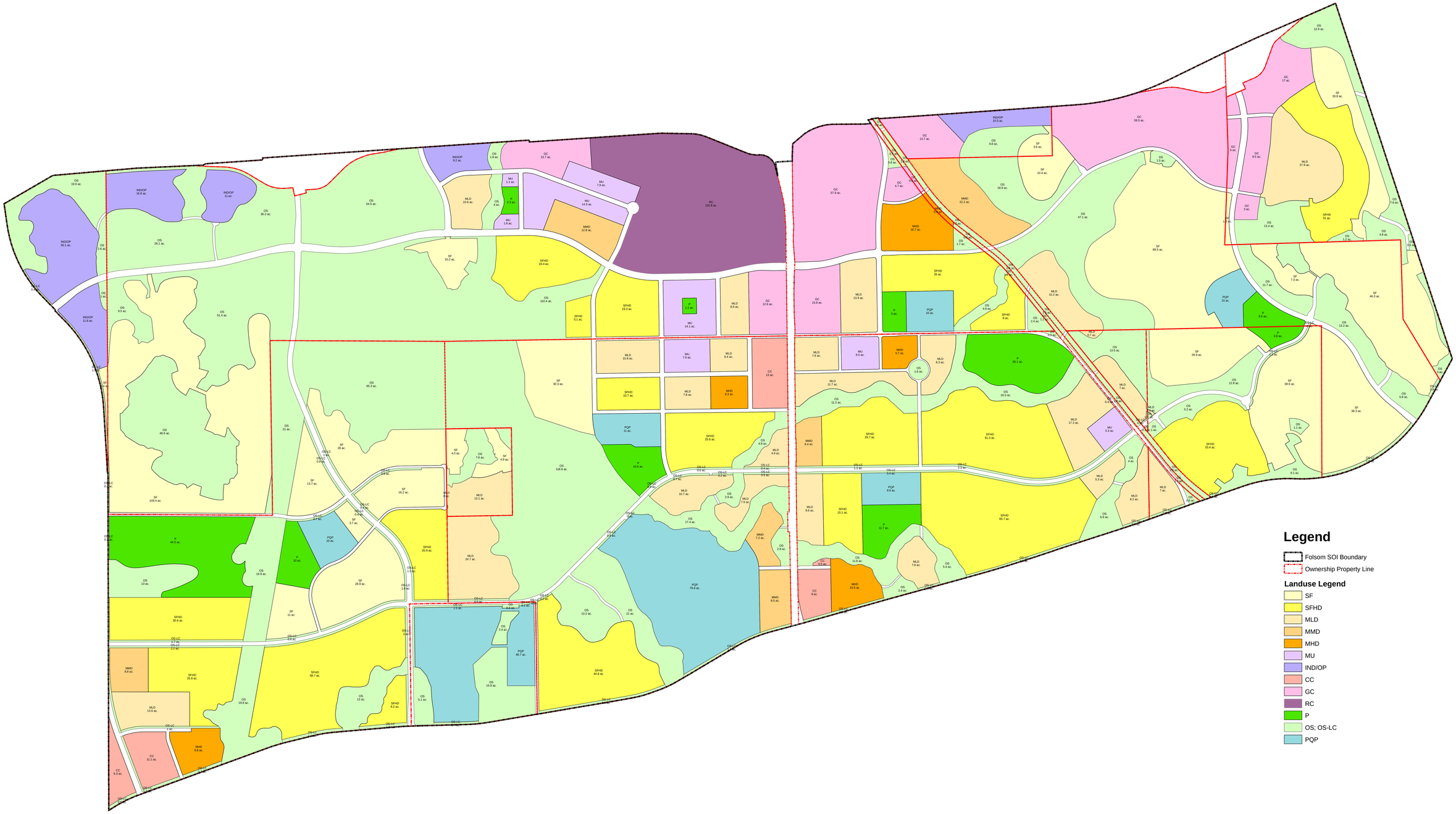
COUNTY OF SACRAMENTO

Roger Dickinson, Chairman, Board of Supervisors

CITY OF FOLSOM

Stephen E. Miklos, Mayor

Appendix B – Land Use Exhibit 2009-5-20



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Composite Land Use Areas

Folsom SOI

City of Folsom, California

May 20, 2009

MacKay & Somps
CIVIL ENGINEERS, INC.
CIVIL ENGINEERING • LAND PLANNING • LAND SURVEYING
SACRAMENTO, CALIFORNIA (916) 929-6092

7919-00

Appendix C – Land Use Summary 2009-5-20

Section 4

LAND USE SUMMARY

Table 4-1
Folsom Specific Plan - Land Use Summary

Land Use	Acreage		% of Site	Density Range (du/ac)	Target DU[1]	Percentage of Allocated Units	Projected Population	Target FAR[2]	Potential Bldg. SF
Single Family (SF)	557.8		15.9%	1.0 - 4.0	1,687	16.5%	4,926		
Single Family High Density (SFHD)	532.5		15.2%	4.0 - 7.0	2,933	28.7%	8,564		
Multi-Family Low Density (MLD)	266.7		7.6%	7.0 - 12.0	2,434	23.8%	4,722		
Multi-Family Medium Density (MMD)	67.0		1.9%	12.0 - 20.0	1,224	12.0%	2,375		
Multi-Family High Density (MHD)	49.9		1.4%	20.0 - 30.0	1,251	12.3%	2,427		
Subtotal Residential	*1,473.9*		*42.0%*		*9,529*		*23,014*		
Mixed Use District (MU)[3]	59.1		1.7%	9.0 - 30.0	681	6.7%	1,321	0.20	205,952
Office Park (OP)	89.2		2.5%					0.30	1,165,666
Community Commercial (CC)	38.8		1.1%					0.25	423,621
General Commercial (GC)									
Office (25% of Net Usable)	65.1	(47.1 net usable)	1.9%					0.25	512,919
Commercial (75% of Net Usable)	147.8	(141.4 net useable)	4.2%					0.25	1,539,846
Regional Commercial (RC)	110.8		3.2%					0.28	1,351,405
Subtotal Commercial/Office	*510.8*		*14.6%*		*681*		1,321		5,199,408
Parks - Community West (P)	44.5		1.3%						
Parks - Community East (P)	26.1		0.7%						
Parks - Neighborhood (P)	47.6		1.4%						
Parks - Local (P)	3.5		0.1%						
High School-Middle School (PQP) MS/HS	79.6		2.3%						
Elementary School (PQP) ES	51.0		1.5%						
Country Day School (PQP)	48.7		1.4%						
Subtotal Parks and Schools	*301.0*		*8.6%*						
Open Space (OS)	*1,053.1*		*30.0%*						
Proposed Major Circulation	171.6		4.9%						
Folsom Specific Plan Area Total	**3,510.4**		**100.0%**		**10,210**	**100.0%**	**24,335**		

1: Target dwelling unit allocation is an estimate. Actual total dwelling units may be higher or lower so long as it falls within land use density ranges and does not exceed the Plan Area maximum.
2: Floor Area Ratio (FAR) is the ratio of building area to parcel area. The target FAR represents the Plan Area overall maximum. Higher FAR is permitted on an individual basis as long as the the overall target is not exceeded. Refer to Development Standards Appendix A for FAR range by use.
3: Mixed Use District area is split 60% residential and 40% commercial area. The Mixed Use commercial FAR Plan Area target is 0.2. Higher FAR is permitted on an individual basis as long as the overall target is not exceeded. Refer to Development Standards Appendix A for FAR range by use.

Table 4.1 Land Use Summary

Appendix D – Cal Green Code

CHAPTER 4

RESIDENTIAL MANDATORY MEASURES

DIVISION 4.3 – WATER EFFICIENCY AND CONSERVATION

SECTION 4.301
GENERAL

4.301.1 Scope. The provisions of this chapter shall establish the means of conserving water used indoors, outdoors and in wastewater conveyance.

SECTION 4.302
DEFINITIONS

4.302.1 Definitions. The following words and terms shall, for the purposes of this chapter and as used elsewhere in this code, have the meanings shown herein.

SECTION 4.303
INDOOR WATER USE

4.303.1 20% Savings. A schedule of plumbing fixtures and fixture fittings that will reduce the overall use of potable water within the building by at least 20% shall be provided. The reduction shall be based on the maximum allowable water use per plumbing fixture and fitting as required by the California Building Standards Code. The 20% reduction in potable water use shall be demonstrated by one of the following methods.

1. Each plumbing fixture and fitting shall meet reduced flow rates specified in Table 4.303.2; or
2. A calculation demonstrating a 20% reduction in the building "water use" baseline as established in Table 4.303.1 shall be provided. For low-rise residential occupancies, the calculation shall be limited to the following plumbing fixture and fitting types: water closets, urinals, lavatory faucets and showerheads.

4.303.2 Multiple showerheads serving one shower. When single shower fixtures are served by more than one showerhead, the combined flow rate of all the showerheads shall not exceed the maximum flow rates specified in the 20% reduction column contained in Table 4.303.2 or the shower shall be designed to only allow one showerhead to be in operation at a time.

Exception: The maximum flow rate for showerheads when using the calculation method specified in Section 4.303.1, Item 2, is 2.5 gpm @ 80 psi.

TABLE 4.303.1
WATER USE BASELINE[1]

Fixture Type	Flow-rate[2]	Duration	Daily uses	Occupants[3]
Showerheads Residential	2.5 gpm @ 80 psi	8 min.	1	
Lavatory Faucets Residential	2.2 gpm @ 60 psi	.25 min.	3	
Kitchen Faucets	2.2 gpm @ 60 psi	4 min.	1	
Replacement Aerators	2.2 gpm @ 60 psi			
Gravity tank type Water Closets	1.6 gallons/flush	1 flush	1 male 3 female	
Flushometer Tank Water Closets	1.6 gallons/flush	1 flush	1 male 3 female	
Flushometer Valve Water Closets	1.6 gallons/flush	1 flush	1 male 3 female	
Electromechanical Hydraulic Water Closets	1.6 gallons/flush	1 flush	1 male 3 female	
Urinals	1.0 gallons/flush	1 flush	2 male	

Fixture "Water Use" = Flow rate x Duration x Occupants x Daily uses

[1] Use Worksheet WS-1 to calculate baseline water use.
[2] The Flow-rate is from the CEC Appliance Efficiency Standards, Title 20 California Code of Regulations; where a conflict occurs, the CEC standards shall apply.
[3] For low rise residential occupancies, the number of occupants shall be based on two persons for the first bedroom, plus one additional person for each additional bedroom.

TABLE 4.303.2
FIXTURE FLOW RATES

Fixture Type	Flow-rate	Maximum flow rate at ≧ 20% Reduction
Showerheads	2.5 gpm @ 80 psi	2 gpm @ 80 psi
Lavatory Faucets Residential	2.2 gpm @ 60 psi	1.5 gpm @ 60 psi[2]
Kitchen Faucets	2.2 gpm @ 60 psi	1.8 gpm @ 60 psi
Gravity tank type Water Closets	1.6 gallons/flush	1.28 gallons/flush[1]
Flushometer Tank Water Closets	1.6 gallons/flush	1.28 gallons/flush[1]
Flushometer Valve Water Closets	1.6 gallons/flush	1.28 gallons/flush[1]
Electromechanical Hydraulic Water Closets	1.6 gallons/flush	1.28 gallons/flush[1]
Urinals	1.0 gallons/flush	.5 gallons/flush

[1] Includes single and dual flush water closets with an effective flush of 1.28 gallons or less.
Single Flush Toilets - The effective flush volume shall not exceed 1.28 gallons (4.8 liters). The effective flush volume is the average flush volume when tested in accordance with ASME A112.19.233.2.
Dual Flush Toilets - The effective flush volume shall not exceed 1.28 gallons (4.8 liters). The effective flush volume is defined as the composite, average flush volume of two reduced flushes and one full flush. Flush volumes will be tested in accordance with ASME A112.19.2 and ASME A112.19.14.

[2] Lavatory Faucets shall not have a flow rate less than 0.8 gpm at 20 psi.

4.303.3 Plumbing fixtures and fittings. Plumbing fixtures (water closets and urinals) and fittings (faucets and showerheads) shall meet the standards referenced in Table 4.303.3.

TABLE 4.303.3
STANDARDS FOR PLUMBING FIXTURES AND FIXTURE FITTINGS

REQUIRED STANDARDS	
Water closets (toilets) – flushometer valve type single flush, maximum flush volume	ASME A112.19.2/CSA B45.1 – 1.28 gal (4.8 L)
Water closets (toilets) – flushometer valve type dual flush, maximum flush volume	ASME A112.19.14 and USEPA WaterSense Tank-Type High Efficiency Toilet Specification – 1.28 gal (4.8 L).
Water closets (toilets) – tank-type	U.S. EPA WaterSense Tank-Type High-Efficiency Toilet Specification
Urinals, maximum flush volume	ASME A112.19.2/CSA B45.1 – 0.5 gal (1.9 L)
Urinals, non-water urinals	ASME A112.19.19 (vitreous china) ANSI Z124.9–2004 or IAPMO Z124.9 (plastic)
Public lavatory faucets: Maximum flow rate – 0.5 gpm (1.9 L/min)	ASME A112.18.1/CSA B125.1
Public metering self-closing faucets: Maximum water use – 0.25 gal (1.0 L) per metering cycle	ASME A112.18.1/CSA B125.1
Residential bathroom lavatory sink faucets: Maximum flow rate – 1.5 gpm (5.7 L/min)	ASME A112.18.1/CSA B125.1

SECTION 4.304
OUTDOOR WATER USE

4.304.1 Irrigation controllers. Automatic irrigation system controllers for landscaping provided by the builder and installed at the time of final inspection shall comply with the following:

1. Controllers shall be weather- or soil moisture-based controllers that automatically adjust irrigation in response to changes in plants' needs as weather conditions change.
2. Weather-based controllers without integral rain sensors or communication systems that account for local rainfall shall have a separate wired or wireless rain sensor which connects or communicates with the controller(s). Soil moisture-based controllers are not required to have rain sensor input.

Note: More information regarding irrigation controller function and specifications is available from the Irrigation Association at http://www.irrigation.org/SWAT/Industry/ia-tested.asp.

SECTION 4.305
WATER REUSE SYTEMS
(Reserved)

one showerhead to be in operation at a time.

Exception: The maximum flow rate for shower heads when using the calculation method specified in Section 5.303.2.1, Item 2 is 2.5 gpm @ 80 psi.

TABLE 5.303.2.2 [BSC, DSA-SS]
INDOOR WATER USE BASELINE [4]

Fixture Type	Flow-rate[2]	Duration	Daily uses	Occupants[3, 4]
Showerheads	2.5 gpm @ 80 psi	8 min.	1	X
Lavatory Faucets Nonresidential	0.5 gpm @ 60 psi	.25 min.	3	X
Kitchen Faucets	2.2 gpm @ 60 psi	4 min.	1	X
Replacement Aerators	2.2 gpm @ 60 psi			X
Wash Fountains	2.2 [rim space (in.) / 20 gpm @ 60 psi]			X
Metering Faucets	0.25 gallons/cycle	.25 min.	3	X
Metering Faucets for Wash Fountains	.25 [rim space (in.) / 20 gpm @ 60 psi]	.25 min.		X
Gravity tank type Water Closets	1.6 gallons/flush	1 flush	1 male[1] 3 female	X
Flushometer Tank Water Closets	1.6 gallons/flush	1 flush	1 male[1] 3 female	X
Flushometer Valve Water Closets	1.6 gallons/flush	1 flush	1 male[1] 3 female	X
Electromechanical Hydraulic Water Closets	1.6 gallons/flush	1 flush	1 male[1] 3 female	X
Urinals	1.0 gallons/flush	1 flush	2 male	X

Fixture "Water Use" = Flow rate x Duration x Occupants x Daily uses

[1] The daily use number shall be increased to three if urinals are not installed in the room.
[2] The Flow-rate is from the CEC Appliance Efficiency Standards, Title 20 California Code of Regulations; where a conflict occurs, the CEC standards shall apply.
[3] Refer to Table A, Chapter 4, California Plumbing Code, for occupant load factors.
[4] Use Worksheet WS-1 to calculate base line water use.

TABLE 5.303.2.3 [BSC, DSA-SS]
FIXTURE FLOW RATES

Fixture Type	Flow-rate	Maximum flow rate at 20% Reduction
Showerheads	2.5 gpm @ 80 psi	2 gpm @ 80 psi
Lavatory Faucets Nonresidential	0.5 gpm @ 60 psi	0.4 gpm @ 60 psi
Kitchen Faucets	2.2 gpm @ 60 psi	1.8 gpm @ 60 psi
Wash Fountains	2.2 [rim space (in.) / 20 gpm @ 60 psi]	1.8 [rim space (in.) / 20 gpm @ 60 psi]
Metering Faucets	0.25 gallons/cycle	0.2 gallons/cycle
Metering Faucets for Wash Fountains	.25 [rim space (in.) / 20 gpm @ 60 psi]	.20 [rim space (in.) / 20 gpm @ 60 psi]
Gravity tank type Water Closets	1.6 gallons/flush	1.28 gallons/flush[1]
Flushometer Tank Water Closets	1.6 gallons/flush	1.28 gallons/flush[1]
Flushometer Valve Water Closets	1.6 gallons/flush	1.28 gallons/flush[1]
Electromechanical Hydraulic Water Closets	1.6 gallons/flush	1.28 gallons/flush[1]
Urinals	1.0 gallons/flush	.5 gallons/flush

[1] Includes single and dual flush water closets with an effective flush of 1.28 gallons or.
Single Flush Toilets - The effective flush volume shall not exceed 1.28 gallons (4.8 liters). The effective flush volume is the average flush volume when tested in accordance with ASME A112.19.233.2.
Dual Flush Toilets - The effective flush volume shall not exceed 1.28 gallons (4.8 liters). The effective flush volume is defined as the composite, average flush volume of two reduced flushes and one full flush. Flush volumes will be tested in accordance with ASME A112.19.2 and ASME A112.19.14.

5.303.4 Wastewater reduction. [BSC, DSA-SS] Each building shall reduce by 20% wastewater by one of the following methods:

1. **[BSC, DSA-SS]** The installation of water-conserving fixtures (water closets, urinals) meeting the criteria established in sections 5.303.2 or 5.303.3 or
2. **[BSC]** Utilizing non-potable water systems (captured rainwater, graywater, and municipally treated wastewater [recycled water] complying with the current edition of the California Plumbing Code or other methods described in Section A5.304).

5.303.6 Plumbing fixtures and fittings. [BSC, DSA-SS] Plumbing fixtures (water closets and urinals) and fittings (faucets and showerheads) shall meet the standards referenced in Table 5.503.6.

TABLE 5.303.6 [BSC, DSA-SS]
STANDARDS FOR PLUMBING FIXTURES AND FIXTURE FITTINGS

REQUIRED STANDARDS	
Water closets (toilets) – flushometer valve type single flush, maximum flush volume	ASME A112.19.2/CSA B45.1 – 1.28 gal (4.8 L)
Water closets (toilets) – flushometer valve type dual flush, maximum flush volume	ASME A112.19.14 and USEPA WaterSense Tank-Type High Efficiency Toilet Specification – 1.28 gal (4.8 L).
Water closets (toilets) – tank-type	U.S. EPA WaterSense Tank-Type High-Efficiency Toilet Specification
Urinals, maximum flush volume	ASME A112.19.2/CSA B45.1 – 0.5 gal (1.9 L)
Urinals, non-water urinals	ASME A112.19.19 (vitreous china) ANSI Z124.9-2004 or IAPMO Z124.9 (plastic)
Public lavatory faucets: Maximum flow rate – 0.5 gpm (1.9 L/min)	ASME A112.18.1/CSA B125.1
Public metering self-closing faucets: Maximum water use – 0.25 gal (1.0 L) per metering cycle	ASME A112.18.1/CSA B125.1
Residential bathroom lavatory sink faucets: Maximum flow rate – 1.5 gpm (5.7 L/min)[1]	ASME A112.18.1/CSA B125.1

SECTION 5.304 [BSC]
OUTDOOR WATER USE

5.304.1 Water budget. A water budget shall be developed for landscape irrigation use that conforms to the local water efficient landscape ordinance or to the California Department of Water Resources Model Water Efficient Landscape Ordinance where no local ordinance is applicable.

Note: Prescriptive measures to assist in compliance with the water budget are listed in Sections 492.5 through 492.8, 492.10 and 492.11 of the ordinance, which may be found at: http://www.owue.water.ca.gov/landscape/ord/ord.cfm

5.304.2 Outdoor potable water use. For new water service for landscaped areas between 1000 square feet and 5000 square feet (the level at which Water Code §535 applies), separate meters or submeters shall be installed for indoor and outdoor potable water use.

5.304.3 Irrigation design. In new nonresidential construction with between 1000 and 2500 square feet of landscaped area (the level at which the MLO applies), install irrigation controllers and sensors which include the following criteria, and meet manufacturer's recommendations.

5.304.3.1 Irrigation controllers. Automatic irrigation system controllers installed at the time of final inspection shall comply with the following:

1. Controllers shall be weather- or soil moisture-based controllers that automatically adjust irrigation in response to changes in plants' needs as weather conditions change.
2. Weather-based controllers without integral rain sensors or communication systems that account for local rainfall shall have a separate wired or wireless rain sensor which connects or communicates with the controller(s). Soil moisture-based controllers are not required to have rain sensor input.

Note: More information regarding irrigation controller function and specifications is available from the Irrigation Association at http://www.irrigation.org/SWAT/Industry/ia-tested.asp .

WATER REUSE SYSTEMS
(Reserved)

CHAPTER 8
COMPLIANCE FORMS AND WORKSHEETS

WORKSHEET (WS-1)
BASELINE WATER USE

BASELINE WATER USE CALCULATION TABLE											
Fixture Type	**Quantity**		**Flow-rate (gpm)**		**Duration**		**Daily uses**		**Occupants[3, 4]**		**Gallons per day**
Showerheads		X	2.5	X	5 min.	X	1	X		=	
Showerheads Residential		X	2.5	X	8 min.	X	1	X		=	
Lavatory Faucets Residential		X	2.2	X	.25 min.	X	3	X		=	
Kitchen Faucets		X	2.2	X	4 min.	X	1	X		=	
Replacement Aerators		X	2.2	X		X		X		=	
Wash Fountains		X	2.2	X		X		X		=	
Metering Faucets		X	0.25	X	.25 min.	X	3	X		=	
Metering Faucets for Wash Fountains		X	2.2	X	.25 min.	X		X		=	
Gravity tank type Water Closets		X	1.6	X	1 flush	X	1 male[1] 3 female	X		=	
Flushometer Tank Water Closets		X	1.6	X	1 flush	X	1 male[1] 3 female	X		=	
Flushometer Valve Water Closets		X	1.6	X	1 flush	X	1 male[1] 3 female	X		=	
Electromechanical Hydraulic Water Closets		X	1.6	X	1 flush	X	1 male[1] 3 female	X		=	
Urinals		X	1.0	X	1 flush	X	2 male	X			
Total daily baseline water use (BWU)										=	
_____ (BWU) X .80 = _____ Allowable water use											

[1] Except for low-rise residential occupancies, the daily use number shall be increased to three if urinals are not installed in the room.
[2] The Flow-rate is from the CEC Appliance Efficiency Standards, Title 20 California Code of Regulations; where a conflict occurs, the CEC standards shall apply.
[3] For low-rise residential occupancies, the number of occupants shall be based on two persons for the first bedroom, plus one additional person for each additional bedroom.
[4] For non-residential occupancies, refer to Table A, Chapter 4, 2010 California Plumbing Code, for occupant load factors.

WORKSHEET (WS-2)
20% REDUCTION WATER USE CALCULATION TABLE

20% REDUCTION WATER USE CALCULATION TABLE											
Fixture Type	**Quantity**		**Flow-rate (gpm)[2]**		**Duration**		**Daily uses**		**Occupants[3, 4]**		**Gallons per day**
Showerheads		X		X	5 min.	X	1	X		=	
Showerheads Residential		X		X	8 min.	X	1	X		=	
Lavatory Faucets Residential		X		X	.25 min.	X	3	X		=	
Kitchen Faucets		X		X	4 min.	X	1	X		=	
Replacement Aerators		X		X		X		X		=	
Wash Fountains		X		X		X		X		=	
Metering Faucets		X		X	.25 min.	X	3	X		=	
Metering Faucets for Wash Fountains		X		X	.25 min.	X		X		=	
Gravity tank type Water Closets		X		X	1 flush	X	1 male[1] 3 female	X		=	
HET[5] High Efficiency Toilet		X	1.28	X	1 flush	X	1 male[1] 3 female	X		=	
Flushometer Tank Water Closets		X		X	1 flush	X	1 male[1] 3 female	X		=	
Flushometer Valve Water Closets		X		X	1 flush	X	1 male[1] 3 female	X		=	
Electromechanical Hydraulic Water Closets		X		X	1 flush	X	1 male[1] 3 female	X		=	
Urinals		X		X	1 flush	X	2 male	X			
Urinals Non-Water Supplied		X	0.0	X	1 flush	X	2 male	X		=	
Proposed water use										=	
_____ (BWU from WS-1) X .80 = _____ Allowable water use											

[1] Except for low-rise residential occupancies, the daily use number shall be increased to three if urinals are not installed in the room.
[2] The Flow-rate is from the CEC Appliance Efficiency Standards, Title 20 California Code of Regulations; where a conflict occurs, the CEC standards shall apply.
[3] For low-rise residential occupancies, the number of occupants shall be based on two persons for the first bedroom, plus one additional person for each additional bedroom.
[4] For non-residential occupancies, refer to Table A, Chapter 4, 2010 California Plumbing Code, for occupant load factors.
[5] Includes single and dual flush water closets with an effective flush of 1.28 gallons or less
Single Flush Toilets - The effective flush volume shall not exceed 1.28 gallons (4.8 liters). The effective flush volume is the average flush volume when tested in accordance with ASME A112.19.233.2.
Dual Flush Toilets - The effective flush volume shall not exceed 1.28 gallons (4.8 liters). The effective flush volume is defined as the composite, average flush volume of two reduced flushes and one full flush. Flush volumes will be tested in accordance with ASME A112.19.2 and ASME A112.19.14.

Appendix E – South Folsom Properties – NCWMC Agreement

TERMS AND CONDITIONS OF

PURCHASE AND SALE OF WATER ENTITLEMENTS

THIS PURCHASE AND SALE AGREEMENT ("PSA") is made and effective as of the Effective Date by and between Natomas Central Mutual Water Company, a California corporation ("Natomas"), and South Folsom Properties, LLC, a California limited liability company ("SFP").

RECITALS

A. Natomas is a mutual water company organized and existing under California law. Natomas owns appropriative water rights and contractual entitlements to divert and use water from the Sacramento River.

B. SFP is a limited liability company organized and existing under California law. Members of SFP own interests in real property located south of the City of Folsom, which they propose to develop.

C. Natomas desires to sell and SFP desires to purchase, for ownership and use by the City of Folsom, 8,000 acre-feet of Natomas' Central Valley Project water entitlements, under the terms and conditions set forth in this PSA. In addition, Natomas wishes to have the option to sell to SFP up to an additional 7,000 acre-feet of Natomas' Central Valley Project water entitlements (for a maximum total of 15,000 af), in accordance with Section 3.2 of this PSA.

In this context, the Parties agree as follows:

SECTION 1. DEFINITIONS.

For purposes of the PSA, the following terms shall have the meanings stated below.

1.1 "Adjustment" means an adjustment of the Purchase Price if the purchase contemplated by the PSA is not completed prior to April 1, 2010. The amount of the Adjustment shall be calculated based on increases in the United States Department of Labor Consumer Price Index (CPI) San Francisco-Oakland-San Jose ALL ITEMS INDEX. The Base Index will be the April 1, 2009 Index. The first Comparison Index will be the April 1, 2010, Index, and the Adjustment will be equal to the percentage increase in the CPI comparing the Base Index to the first Comparison Index. The Adjustment shall be made on an annual basis on the Anniversary Date until the Transaction is closed or terminated, based on the annual increase in the CPI comparing the CPI for the year of the Adjustment with the previous year's CPI. If escrow has been opened prior to an Anniversary Date that would trigger an Adjustment, the amount of the Adjustment shall be prorated by a percentage determined by the number of days between the Anniversary Date and the date escrow closes divided by 365.

1.2 "Anniversary Date" means April 1 of each year following the Effective Date.

1.3 "Assigned Project Water" means not less than 8,000 acre-feet ("af") of Natomas' entitlement to "Project Water" (as that term is defined in Article 1(m) of the Natomas-USBR Contract) that will be assigned by Natomas to the City in accordance with this PSA. Natomas may elect to increase the amount of Assigned Project Water by up to 7,000 af in accordance with Section 3.2. In no event will the total amount of Assigned Project Water exceed 15,000 af.

1.4 "Break-up Fee" means the fee imposed in accordance with Section 10 of this PSA.

1.5 "City" means the City of Folsom.

1.6 "Effective Date" means the date on which the PSA is approved by a majority vote of the shareholders of Natomas and becomes binding and effective. The PSA will be executed by Natomas and SFP but will not become binding or effective unless and until it is approved by a majority vote of the shareholders of Natomas, which approval shall be a condition precedent to the effectiveness of the PSA. Approval of the PSA by the shareholders of Natomas shall occur, if at all, on or before November 1, 2007. The Parties acknowledge and agree that, prior to the shareholder vote on whether to approve this PSA, Natomas will be providing to its shareholders an engineer's report and associated hydrologic and economic analysis pertaining to Milestone A.

1.7 "Milestone A" means resolution, from a water quantity and cost perspective, to the satisfaction of Natomas, in its sole and absolute discretion, of the adequacy of Natomas' Critical Month Water Supply to meet the water supply needs of Natomas shareholders, considering the assignment of Assigned Project Water contemplated in this PSA. Natomas' determination in this regard may include, without limitation, (i) resolution, as between Natomas and USBR, of the nature and extent of Natomas' right to reschedule "Base Supply" (as defined in Article 1(a) of the Natomas – USBR Contract) into the months of July, August and September from other months, in accordance with Article 3(c) of the Natomas-USBR Contract; and (ii) resolution by Natomas of the economic feasibility of providing water to shareholders from alternative sources, as necessary to meet Critical Month Water Supply requirements. For purposes of this PSA, "Critical Month Water Supply" means the surface water supply available for use by Natomas during the months of July, August and September of each year.

1.8 "Milestone B" means the USBR's agreement to (i) reschedule the Assigned Project Water from an irrigation demand schedule to a municipal and industrial demand schedule; or (ii) otherwise make available to City, for example through exchange, on a municipal and industrial demand schedule, an amount of Central Valley Project water equivalent to the Assigned Project Water.

1.9 "Milestone C" means completion of all state and federal environmental review documents, permits, approvals, and other prerequisites to the assignment of the Assigned Project Water from Natomas to City, other than the USBR's conditional approval described in Section 1.10 of this PSA.

1.10 "Milestone D" means conditional approval by USBR of assignment of the Assigned Project Water from Natomas to City. The approval of USBR shall be conditioned only

upon obtaining written verification from Natomas of performance of all terms and conditions of the PSA by SFP.

1.11 "Natomas-USBR Contract" means water right settlement contract no. 14-06-200-885A-R-1, dated May 10, 2005, by and between Natomas and the United States of America.

1.12 "Parties" means Natomas and SFP.

1.13 "PSA" means this Purchase and Sale Agreement.

1.14 "Purchase Price" means the total price for the Assigned Project Water specified in Section 7.

1.15 "SFP Area" means the lands identified in Exhibit A to this PSA.

1.16 "SOI Area" means the lands identified in Exhibit B to this PSA.

1.17 "Transaction" means the entirety of the agreements, activities and actions contemplated in this PSA.

1.18 "USBR" means the Bureau of Reclamation, United States Department of the Interior.

SECTION 2. TERM.

Unless sooner terminated in accordance with Section 10.1, the PSA will become effective on the Effective Date and will continue in full force and effect until the five-year Anniversary Date. However, SFP may elect to extend the PSA beyond the five-year Anniversary Date in accordance with Section 8.7. In no event will the PSA remain in effect following the ten-year Anniversary Date.

SECTION 3. PURCHASE AND SALE.

3.1 **Assignment.** Subject to the terms and conditions of this PSA, Natomas shall permanently assign to City the Assigned Project Water.

3.2 **Put Option.** Natomas will have the option, in its sole and absolute discretion, to increase the amount of Assigned Project Water to be purchased by SFP from the initial amount of 8,000 af to an amount up to but not to exceed 15,000 af. Natomas will exercise its option (in one or more increments) under this Section 3.2, if at all, on or before December 31, 2007 by providing written notice to SFP on or before said date of Natomas' exercise of its option to increase the amount of Assigned Project Water. The written notice will specify the amount of the increase in Assigned Project Water. In the event of exercise by Natomas of its option to increase the amount of Assigned Project Water in accordance with this Section 3.2, SFP will be obligated to purchase the increased amount of Assigned Project Water at the Purchase Price of four thousand dollars per acre-foot ($4,000/af), subject to the provisions for Adjustment in Sections 8.5, 8.6 and 8.7, and in accordance with the other terms and conditions of this PSA.

3.3 **Reservation Water.**

(a) **Reservation.** Notwithstanding the provisions of Sections 3.1 and 3.2, to the extent that Natomas increases the amount of Assigned Project Water to be purchased by SFP above 10,000af, Natomas will have the right to utilize up to the total amount of Assigned Project Water in excess of 10,000 af (hereinafter "Reservation Water") within the service area of Natomas for up to five (5) years from the date of closing, as described in Section 14. The instruments of assignment prepared, executed and delivered in accordance with Section 14.2(c) of this PSA will reflect the continued rights of Natomas to utilize the Reservation Water in accordance with the preceding sentence, including the retention of Natomas' points of diversion and service area within the place of use as to the Reservation Water. Natomas shall provide written notice to City on or before March 15 of each year as to the portion of the Reservation Water, if any, that it intends to utilize for that year.

(b) **Rates and Charges.** Natomas shall pay all rates and charges imposed by USBR for the Reservation Water (including annual payment for at least 75% of the amount of Reservation Water up to 5,000 af, under Article 8(a) of the Natomas-USBR Contract); provided, however, that to the extent any portion of the Reservation Water is used by City or its designees, Natomas will be relieved of its obligation to pay rates and charges as to the portion of the Reservation Water so used.

(c) **Waiver.** Natomas may elect, in its sole and absolute discretion, to waive all rights to the Reservation Water by providing written notice of such waiver to SFP at or prior to the date of closing. In the event that Natomas elects to waive all rights to the Reservation Water in accordance with this Section 3.2(c), Natomas will be relieved of all obligations to pay rates and charges under Section 3.3(b).

3.4 **Sales or Transfers.** Except as otherwise expressly provided in Section 12, during the term of this PSA, and any extensions thereof, Natomas shall refrain from selling or otherwise transferring, will not suffer or allow to be sold or transferred, and will not enter into any agreements to sell or otherwise transfer, the Assigned Project Water to any other person or entity. Natomas and SFP acknowledge their understanding and agreement that the primary purposes of this PSA are to (i) reserve the Assigned Project Water for the benefit of SFP; (ii) compensate Natomas for the Assigned Project Water and for refraining from selling or offering to sell the Assigned Project Water to any third party; and (iii) set forth the terms and conditions upon which the assignment of the Assigned Project Water to the City will occur.

SECTION 4. CRITICAL YEAR REDUCTIONS.

SFP acknowledges and agrees that all of the Assigned Project Water will be subject to reduction during critical years in accordance with the terms and conditions of Article 5(a) of the Natomas-USBR Contract.

SECTION 5. PLACE OF USE.

Following closing of the Transaction in accordance with Section 14, Natomas will have no right, title or interest in the Assigned Project Water and City will have all rights and discretion

to use, transfer or otherwise dispose of the Assigned Project Water as it may determine to be in the City's best interest, subject to compliance with applicable law.

SECTION 6. DELIVERY POINT AND CONVEYANCE.

The Assigned Project Water will be deemed delivered at Natomas' diversion point(s) on the Sacramento River from which diversions are foregone. Natomas will have no responsibility for, and will not be obligated to bear any costs in connection with, the conveyance of the Assigned Project Water from the Sacramento River to its ultimate place(s) of use.

SECTION 7. PURCHASE PRICE.

Subject to the provisions for Adjustment of the Purchase Price in Sections 8.5, 8.6 and 8.7, the Purchase Price for the Assigned Project Water will be four thousand dollars per acre-foot ($4,000/af) of Assigned Project Water assigned to City.

SECTION 8. PRE-CLOSING PAYMENTS; ADJUSTMENT OF PURCHASE PRICE

8.1 Payment on Execution of PSA. SFP shall pay Natomas $200,000 upon the Effective Date.

8.2 Agreement That Milestone A Has Been Met. The Parties agree that Milestone A has been met as of the Effective Date for all purposes.

8.3 Payment on One-Year Anniversary Date. At the one-year Anniversary Date, if both Milestones A and B have been met, SFP shall pay Natomas an additional $500,000. If both of Milestones A and B have not been met, SFP shall pay Natomas an additional $100,000. If Milestones A and B are met at any time following the one-year Anniversary Date, then SFP shall pay Natomas an additional $400,000 within thirty (30) days from the date the last of the two Milestones is met.

8.4 Payment on Two-Year Anniversary Date. At the two-year Anniversary Date, if Milestones A, B and C have all been met, SFP shall pay Natomas an additional $1,000,000. If Milestones A, B and C have not all been met, SFP shall pay Natomas an additional $200,000. If Milestones A, B and C are all met at any time following the two-year Anniversary Date, SFP shall pay Natomas an additional $800,000 within thirty (30) days from the date the last of the three Milestones is met. If Milestones A, B, C and D are all met at any time following the two-year Anniversary Date, SFP shall pay Natomas an additional $5,000,000 within thirty (30) days from the date the last of the four Milestones is met.

8.5 Adjustment of Purchase Price and Payment on Three-Year Anniversary Date.

(a) At the three-year Anniversary Date, if the Transaction has not closed, there will be a Purchase Price Adjustment following the procedure set out in Section 1.1 of this PSA.

(b) At the three-year Anniversary Date, if Milestones A, B, C and D have not all been met, SFP shall pay Natomas an additional $300,000.

8.6 Adjustment of Purchase Price and Payment on Four-Year Anniversary Date.

(a) At the four-year Anniversary Date, if the Transaction has not closed, there will be a Purchase Price Adjustment following the procedure set out in Section 1.1 of this PSA.

(b) At the four-year Anniversary Date, if Milestones A, B, C and D have not all been completed, SFP shall pay Natomas an additional $400,000.

8.7 Extension of PSA. At the five-year Anniversary Date, if the closing has not occurred, the PSA will terminate automatically unless extended by SFP in accordance with this Section 8.7. SFP may elect to extend the PSA for up to five additional one-year periods by (i) notifying Natomas prior to the next Anniversary Date of its election to extend, and (ii) making an annual extension payment to Natomas ("Extension Payment") on or before the applicable Anniversary Date. The first Extension Payment will be made on or before the five-year Anniversary Date and will be in the amount of $1,000,000. For each subsequent extension, SFP will make an Extension Payment to Natomas on or before the next Anniversary Date in the amount of $1,000,000. If SFP elects to continue to extend the PSA, the last Extension Payment will be made on or before the nine-year Anniversary Date. In the event of extension of the PSA, the Adjustment will be made on an annual basis on the Anniversary Date until the Transaction is closed or terminated.

8.8 Form of Pre-Closing Payments. All pre-closing payments by SFP pursuant to Sections 8.1, 8.3, 8.4, 8.5, 8.6, and 8.7 shall be made in immediately available funds.

8.9 Disposition of Pre-Closing Payments. All pre-closing payments made or accrued prior to termination shall be (i) non-refundable and retained by Natomas in the event of termination of the PSA; and (ii) credited toward the Purchase Price in the event of closing; provided, however, that in the event of breach of the PSA by Natomas the provisions of Section 23.3 regarding the recovery of liquidated damages may apply.

8.10 Interest. In addition to the rights and remedies provided herein or by law or equity, if SFP fails to make any payment required under this PSA within ten (10) days of the payment due date, the unpaid amount will accrue interest at the rate of 10% per annum.

8.11 Examples of Preclosing Payments. For purposes of illustrating and clarifying the intent of the Parties regarding the obligation to make pre-closing payments, examples of pre-closing payment obligations are set forth in Exhibit C attached hereto and incorporated herein.

SECTION 9. PAYMENT OF BALANCE OF PURCHASE PRICE.

9.1 Payment of Purchase Price. Subject to the provisions of Section 9.2, at closing SFP shall pay Natomas the balance of the Purchase Price, less pre-closing payments, in immediately available funds.

9.2 Installments. Natomas may request to have the balance of the Purchase Price paid by SFP in installments. In the event that Natomas requests to have the balance of the Purchase Price paid in installments, the Parties shall meet and confer in good faith to determine a mutually acceptable schedule of payments and form of security, which will have the substantially equivalent present value as a cash payment of the balance of the Purchase Price. If the Parties cannot agree, the balance shall be paid in full at closing in immediately available funds. During the sixty (60) day period following written notice by SFP of its intent to close in accordance with Section 13.2, the Parties will determine the cash balance due at closing, in the event the Purchase Price will not be paid in installments.

SECTION 10. TERMINATION AND BREAK-UP FEE.

10.1 Termination. SFP may, by giving written notice to Natomas at least thirty (30) days prior to each Anniversary Date, terminate the PSA. Such termination will be subject to the terms and conditions of Sections 10.2 through 10.7.

10.2 Termination Where Milestones Cannot Be Met

(a) If the PSA is terminated by SFP prior to the five-year Anniversary Date, SFP shall pay Natomas a Break-up Fee in the amount of $2,000,000 unless it is determined, in accordance with the procedures described in Section 21, that any of the unmet Milestones cannot be met.

(b) If SFP concludes that, notwithstanding diligent effort, any or all of Milestones B, C and D cannot be met by the five-year Anniversary Date, SFP shall so notify Natomas and the Parties shall meet and confer in good faith to determine whether Natomas concurs with SFP's conclusion. If the Parties concur then it shall be conclusively established that the subject Milestone(s) cannot be met. If the Parties do not concur, then the Parties shall first attempt to resolve the dispute through mediation in accordance with Section 21.1. If the Parties cannot resolve the dispute through mediation they may submit the issue of whether SFP has an obligation to pay the Break-up Fee to judicial resolution pursuant to Section 21.2. Should it be determined that the Milestone(s) can reasonably be expected to be met on or before the five-year Anniversary Date, SFP will have the obligation either to continue with the PSA or to pay the Break-up Fee in the amount of $2,000,000. If after such a determination SFP elects to continue the PSA, SFP shall pay Natomas all accrued but unpaid amounts due under this PSA.

10.3 Termination at Five-Year Anniversary Date. Except as provided in Section 10.4, if SFP does not elect to extend the PSA annually so that this PSA terminates prior to the 10th Anniversary in accordance with Section 8.7, SFP shall pay Natomas a Break-up Fee in the amount of $2,000,000 if SFP or its affiliates or members or the City, within eighteen (18) months following termination of the PSA, enters into an agreement, memorandum of understanding or letter of intent to purchase water for the SFP Area from a third party.

10.4 Action by City. If Milestones A, B, C and D have not all been met at the time SFP terminates the PSA, SFP will not be required to pay a Break-up Fee if it terminates this PSA because the City legally cannot accept a conveyance of the Assigned Project Water or if the City determines that the SOI Area should not be annexed to the City. In the event City legally cannot

accept a conveyance of the Assigned Project Water, or the City decides not to annex the SOI Area, SFP shall provide written notice to Natomas within ten (10) days following such determination. However, if the City, within eighteen (18) months following the termination of the PSA, annexes the SOI Area and SFP or its affiliates or members or the City enters into a contract, memorandum of understanding, or letter of intent to purchase water for the SFP Area from a third party, then SFP shall pay Natomas a Break-up Fee in the amount of $2,000,000.

10.5 Termination After Having Achieved Milestones A, B, C and D. Notwithstanding any other provision of this PSA, if the PSA is terminated by SFP at any time after all of Milestones A, B, C and D have been met, SFP shall pay Natomas a Break-up Fee in the amount of $2,000,000.

10.6 Examples of Break-up Fee. For purposes of illustrating and clarifying the intent of the Parties regarding the obligation to pay a Break-up Fee, examples of Break-up Fee payment obligations are set forth in Exhibit C attached hereto and incorporated herein.

10.7 Personal Guaranty of Break-up Fee. On or before the Effective Date, Angelo K. Tsakopoulos shall execute and deliver to Natomas a personal guaranty and AKT Development Corporation shall execute and deliver to Natomas a corporate guaranty, each in the amount of $2,000,000, which shall guaranty SFP's obligation to pay the $2,000,000 Break-up Fee in accordance with this PSA. The personal guaranty shall be in the form attached hereto as Exhibit D-1 and the corporate guaranty shall be in the form of Exhibit D-2.

SECTION 11. BROKERS' FEES AND COMMISSIONS.

To the extent that Natomas is obligated to pay any finders, brokers, referral or similar fees or commissions in connection with the Transaction, such fees or commissions will be the sole responsibility of Natomas.

SECTION 12. PRE-CLOSING USE OR TRANSFER OF WATER.

Notwithstanding anything to the contrary contained in this PSA, prior to closing, Natomas shall retain all rights to use of the Assigned Project Water, including the right to transfer, for one or more years, all or any portion of the Assigned Project Water, so long as the transfer or use does not interfere with the ability of Natomas to assign the Assigned Project Water to City at the time of closing or authorize continued use of the Assigned Project Water by Natomas or any third party after the closing.

SECTION 13. CLOSING.

13.1 Duty to Close. If (i) Milestones A, B, C and D have all been met, (ii) the Sacramento County Local Agency Formation Commission (LAFCO) has approved annexation of the SOI Area to the City, and (iii) all other conditions precedent have been satisfied or waived, the closing shall occur within ninety (90) days following the occurrence of the last Milestone, approval, or condition; provided, however, that SFP may waive any condition established by this PSA for the benefit of SFP, and may also elect to close the Transaction prior to all of the Milestones being met or completion of the annexation approval process. Any such waiver or

agreement to close early shall be through a writing signed by an authorized representative of SFP. If SFP waives outstanding conditions and elects to proceed with closing, SFP shall give Natomas sixty (60) days prior written notice of the closing date.

13.2 Closing Date. Unless the PSA is extended in accordance with Section 8.7, the Transaction will close on or before April 1, 2012. Under no circumstance, unless otherwise expressly agreed to in writing by the Parties, shall the Transaction close later than April 1, 2017. SFP will provide Natomas with notice of intent to close at least 60 days prior to the proposed closing date.

13.3 Diligence. The Parties will diligently endeavor to satisfy all conditions precedent to the closing as soon as reasonably practicable.

SECTION 14. PROCEDURES FOR CLOSING.

14.1 Escrow Agent. The Parties will establish an escrow through which the funds and agreements needed to convey the Assigned Project Water will pass. The Parties, at the appropriate time, will select the escrow agent and provide joint instructions to the escrow agent to allow all monies and documents to be delivered by the Parties into escrow to allow for closing. References to the "escrow" in this PSA refer both to escrow arrangements established hereunder and any separate escrow agreements or instructions established to facilitate the conveyance of the Assigned Project Water. All escrow instructions shall be consistent with the terms of this PSA. In the event of a conflict between any escrow instruction and the terms of this PSA, the terms of this PSA shall control.

14.2 Duties. At the closing:

(a) SFP shall deliver to the escrow agent, in immediately available funds, the balance of the Purchase Price due and payable as of the date of closing. In the event that Natomas will receive installment payments in accordance with Section 9.2, SFP will deliver to Natomas the first installment payment in immediately available funds, and any agreed-to security instruments securing payment of the installments.

(b) Natomas will deliver to the escrow agent written confirmation of SFP's performance of all duties under this PSA and a fully executed original of the instrument(s) pursuant to which Natomas will assign the Assigned Project Water to the City, contingent only upon close of escrow. The assignment will be in a form approved by USBR, and will be consistent with the PSA. Natomas will also deliver to escrow agent a fully executed original of the instrument(s) pursuant to which USBR will assign the Assigned Project Water to City, contingent only upon close of escrow.

(c) The Parties will execute and deliver to the escrow agent all instruments necessary to effectuate the closing, including, but not limited to, all documents reasonably determined by SFP to be needed to assign the Assigned Project Water to the City.

14.3 Failure to Close. If the Transaction fails to close in accordance with the provisions of this PSA, or upon SFP's election to terminate in accordance with any provision of

this PSA, then the Parties will jointly provide written notice to USBR of the termination of the Transaction and the withdrawal of Natomas' request for assignment of the Assigned Project Water.

SECTION 15. COVENANTS, WARRANTIES AND REPRESENTATIONS.

15.1 **Natomas.** Natomas hereby makes the following covenants, representations and warranties:

(a) Natomas has the authority to enter into this PSA and the Transaction, assign the Assigned Project Water, and perform as set forth herein. This Transaction and Natomas' compliance with this PSA have been duly authorized by all required action.

(b) Natomas' execution of this PSA and performance of its obligations hereunder will not violate any contract, transaction, option, covenant, condition, obligation or undertaking of Natomas, nor to the best of Natomas' knowledge, without the duty of inquiry or investigation, will it violate any law, ordinance, statute, order, or regulation.

(c) Natomas is not a "foreign person" as defined in Section 1445(f) of the Internal Revenue Code of 1986, as amended.

(d) This PSA and all documents required hereby to be executed by Natomas are and shall be valid, legally binding obligations enforceable against Natomas in accordance with their terms.

(e) Subject to the provisions of Section 12, Natomas has not previously sold, transferred, or assigned the Assigned Project Water and Natomas has not entered into any executory contracts for sale or assignment of the Assigned Project Water (other than this PSA) nor do there exist any rights of first refusal or options to purchase the Assigned Project Water (other than contained in this PSA).

(f) Natomas is not aware of any action, suits, proceedings or governmental investigations pending or to the best of Natomas' knowledge, without the duty of inquiry or investigation, threatened against or affecting the Assigned Project Water or this PSA in law or equity, other than *Natural Resources Defense Council v. Kempthorne*, United States District Court, Eastern District of California, Case No. 1:05-CV-01207 OWW (TAG), in which the plaintiffs have requested rescission of the Natomas-USBR Contract.

15.2 **SFP.** SFP warrants that, subject to the conditions precedent expressly set forth in this PSA:

(a) SFP has the authority to enter into this PSA and the Transaction, and perform as set forth herein. This Transaction and SFP's compliance with this PSA have been duly authorized by all required action.

(b) SFP's execution of this PSA and performance of its obligations hereunder will not violate any contract, transaction, option, covenant, condition, obligation or undertaking

of SFP, nor to the best of SFP's knowledge will it violate any law, ordinance, statute, order, or regulation.

(c) SFP is not a "foreign person" as defined in Section 1445(f) of the Internal Revenue Code of 1986, as amended.

(d) This PSA and all documents required hereby to be executed by SFP are and shall be valid, legally binding obligations enforceable against SFP in accordance with their terms.

(e) SFP is not aware of any action, suits, proceedings or governmental investigations pending or threatened against or affecting the Transaction, in law or equity.

15.3 **Covenants, Warranties and Representations as Conditions.** The satisfaction, truth, accuracy and completeness of each of the covenants, warranties and representations of Natomas and SFP contained in this PSA, as of the date hereof and as of the closing, shall constitute a condition precedent to the obligations of Natomas and SFP respectively, hereunder. Neither party shall take any voluntary action, and each of the Parties shall use best efforts to cure the results of any involuntary actions, that would affect the truth, accuracy, and completeness of any of the covenants, warranties, and representations at the time of closing.

SECTION 16. USBR APPROVAL PROCESS.

SFP, in cooperation with City, will be responsible for obtaining all necessary approvals from USBR for the Transaction. Natomas will participate in all USBR approval and environmental review processes relating to the Transaction. To the extent not confidential in nature, Natomas will reasonably provide SFP with copies of all applications, correspondence, and other communication related to the approval and environmental review process. The Parties will use their best efforts to inform each other, on a timely basis, as to the status of the USBR process relating to the Transaction and SFP will have the right to attend and participate in all regulatory proceedings.

SECTION 17. ENVIRONMENTAL REVIEW.

The Parties expect that the City will serve as lead agency for purposes of environmental review of the Transaction under the California Environmental Quality Act and that the USBR will carry out all duties under the National Environmental Policy Act and the federal Endangered Species Act. The Parties will cooperate to complete environmental review for the assignment of the Assigned Project Water on a timely basis.

SECTION 18. INDEMNIFICATION.

18.1 SFP shall indemnify, defend with counsel reasonably satisfactory to Natomas, and hold harmless Natomas and its directors, officers, shareholders, employees, or agents, and their respective heirs, successors, personal representatives and assigns, from and against any suits, causes of action, legal or administrative proceedings, claims, demands, actual damages, punitive damages, losses, costs, liabilities, interest, attorneys' fees or expenses of whatever kind and

nature, in law or in equity, brought or asserted by any third party, whether against Natomas or SFP, arising out of or relating to: (i) a breach of any representation of warrantee by SFP; (ii) the entitlement or development of the properties owned by SFP or its Members or Affiliates; or (iii) any regulatory approval of the transfer of the Assigned Project Water including, for example, but not by way of limitation, a challenge to the validity of any EIR or EIS or USBR approval. Such indemnity shall pertain to all known or unknown, discovered or undiscovered, claims in any way falling within this indemnity. In the event of litigation to which Natomas becomes a party, SFP shall fully indemnify and hold harmless Natomas from and against all liability, including, without limitation, reasonable attorneys' fees.

18.2 Natomas shall indemnify, defend with counsel reasonably satisfactory to SFP, and hold harmless SFP and its directors, officers, shareholders, employees, or agents, and their respective heirs, successors, personal representatives and assigns, from and against any suits, causes of action, legal or administrative proceedings, claims, demands, actual damages, punitive damages, losses, costs, liabilities, interest, attorneys' fees or expenses of whatever kind and nature, in law or in equity, brought or asserted by any third party, whether against SFP or Natomas, arising out of or relating to: (i) a breach of any representation of warranty by Natomas; or (ii) Natomas shareholder suits over Natomas' relationship with American States Water Company or American States Utility Services, Inc. Such indemnity shall pertain to all known or unknown, discovered or undiscovered, claims falling within this indemnity. In the event of litigation to which SFP becomes a party, Natomas shall fully indemnify and hold harmless SFP from and against all liability, including, without limitation, reasonable attorneys' fees.

SECTION 19. CONDITIONS PRECEDENT TO OBLIGATIONS TO PERFORM.

19.1 Natomas. Natomas' obligation to perform as set forth herein is hereby expressly conditioned on satisfaction or waiver of each and every one of the following conditions precedent:

(a) SFP shall have timely performed each of the acts to be performed by it hereunder.

(b) Each of SFP's representations and warranties set forth herein shall be true at the closing as if affirmatively made at that time.

(c) The Natomas-USBR Contract shall remain in full force and effect.

19.2 SFP. SFP's obligation to perform as set forth herein is hereby expressly conditioned on satisfaction or waiver of each and every one of the following conditions precedent:

(a) Natomas shall have timely performed each of the acts to be performed by it hereunder.

(b) Each of Natomas' representations and warranties set forth herein shall be true at the closing as if affirmatively made at that time.

(c) SFP shall not have timely exercised any right set forth in the PSA to terminate the Transaction.

(d) Milestones A, B, C and D have all been met.

(e) The Sacramento County Local Agency Formation Commission has approved annexation of the SOI Area to City.

SECTION 20. PAYMENT OF COSTS AND EXPENSES BY SFP.

20.1 Duty. Excluding brokers' and similar fees and commissions as described in Section 11, SFP shall pay all reasonable expenses incurred by Natomas relating to implementation of the Transaction including, without limitation, all legal, engineering, accounting and other consulting services and all regulatory fees, but excluding Natomas overhead or staff time.

20.2 Budget. Natomas will submit to SFP, on a quarterly basis, a budget of anticipated reasonable expenses relating to the Transaction. The first budget will be submitted to SFP on or before the Effective Date. In the event of a dispute between SFP and Natomas regarding the reasonableness of any expense(s) proposed by Natomas, the Parties shall submit the matter to mediation in accordance with Section 21.1.

SECTION 21. DISPUTE RESOLUTION.

21.1 Mediation. If either of the Parties reasonably determines that the other party has, or is about to, materially breach this PSA, or if either of the Parties encounters difficulties in the working relationship that do not amount to a breach and that have not been resolved informally then the complaining party shall describe its concerns in writing and deliver same to the other party. The Parties shall meet and confer within ten (10) days following delivery of the notice and shall attempt in good faith to resolve the issues identified by the complaining party and any additional issues identified by the other party. If the Parties are unable to resolve the issues through the meet and confer process they shall jointly select a neutral mediator to provide mediation services. The costs of mediation shall be shared equally between the Parties.

21.2 Judicial Review. In the event of a dispute between the Parties relating to the PSA that has not been resolved within ninety days (90) following the commencement of mediation in accordance with Section 21.1, either of the Parties may commence a civil action in a court of competent jurisdiction in order to resolve the dispute. Compliance with Section 21.1 is a prerequisite to the commencement of any civil action to interpret or enforce the PSA.

SECTION 22. DEFAULT.

An event of default shall be deemed to occur if Natomas or SFP shall fail to perform any of its obligations as and when required to be performed under this PSA; provided, that the non-defaulting party shall have demanded in writing that the defaulting party cure such non-performance and the defaulting party shall have failed to do so within thirty (30) days after the receipt of such demand. If any default for which notice has been provided cannot by its nature

be cured within thirty (30) days, the defaulting party shall not be deemed in default if it commences cure within thirty (30) days and thereafter diligently prosecutes it to completion.

SECTION 23. SPECIFIC PERFORMANCE; LIQUIDATED DAMAGES.

23.1 Specific Performance. The Parties stipulate and agree that the Assigned Project Water is a unique asset due to its character as Central Valley Project water that has certain priority rights that may be transferred to the City, which is a current Central Valley Project customer. The Parties further stipulate and agree that damages for default of this PSA by Natomas would be difficult or impossible to determine. Except as provided in Section 23.3, the Parties have agreed that SFP's sole remedy will be specific performance in the event of a failure by Natomas to perform its obligations under this PSA and Natomas hereby consents to that remedy.

23.2 Liquidated Damages: Default by SFP. The Parties recognize that it would be extremely difficult and impractical to ascertain the extent of detriment that would result from a default of this PSA by SFP. The Parties have therefore determined and agree that, in the event of default of this PSA by SFP, SFP shall pay to Natomas the sum of $2,000,000, which sum, together with the deposits made by SFP or accrued pursuant to Sections 8.1, 8.3, 8.4, 8.5, 8.6 and 8.7 of this PSA, are believed by the Parties to be a reasonable estimate of costs and damages that would be incurred by Natomas in the event of default by SFP. Nothing in the foregoing provision shall be construed in any manner to limit the amount of damages obtainable pursuant to an action to enforce the indemnification, defense, or hold harmless provisions contained in Section 18.

Natomas _____ SFP _____

23.3 Liquidated Damages: Default by Natomas. The Parties recognize that it would be extremely difficult and impractical to ascertain the extent of detriment that would result from a default of the PSA by Natomas. The Parties have therefore determined and agree that, in the event of intentional, willful or grossly negligent default of the PSA by Natomas, and in the event that a reviewing court declines to grant specific performance pursuant to Section 23.1, Natomas shall pay to SFP (i) all deposits made by SFP pursuant to Sections 8.1, 8.3, 8.4, 8.5, 8.6 and 8.7; and (ii) up to but not to exceed $250,000 in costs actually paid by SFP in accordance with Section 20, which sums are believed by the Parties to be a reasonable estimate of the costs and damages that would be incurred by SFP in the event of breach by Natomas. In the event of a final determination by a court of competent jurisdiction that Natomas is in default of the PSA, Natomas shall have the right to pay to SFP any damages awarded under this Section 23.3 over a period of five years following such final determination. The unpaid amount will accrue interest at the rate of 10% per annum from the date of final determination by the court. Nothing in the foregoing provision shall be construed in any manner to limit SFP's right to seek specific performance or the amount of damages obtainable pursuant to an action to enforce the indemnification, defense or hold harmless provisions contained in Section 18. It is the intent of the Parties that the remedies provided under Sections 23.1 and 23.3 shall not be cumulative and that the remedy of liquidated damages shall be available to SFP only in the event that a reviewing court declines to grant specific performance.

Natomas _____ SFP _____

SECTION 24. MISCELLANEOUS PROVISIONS.

24.1 Termination of Natomas' Interests Upon Sale of Assigned Project Water to SFP. Except as otherwise expressly provided in Section 3.3, any sale and assignment of Assigned Project Water to City under this PSA shall terminate, and be free and clear of, all rights and interests of Natomas in the Assigned Project Water.

24.2 Relationship of the Parties. It is understood, agreed and intended by the Parties that in performing this PSA the Parties are each separately and independently carrying out their respective businesses and that this PSA does not and shall not create or constitute a partnership or joint venture between the Parties. It is further understood, agreed and intended by the Parties that neither is the employee or agent of the other. This PSA shall at all times be read, interpreted and applied in accordance with such intention.

24.3 Entire Transaction. This PSA and documents expressly incorporated herein contain all of the Transaction of the Parties hereto with respect to the matters contained herein, and no prior agreement or understanding pertaining to any such matter shall be effective for any purpose. No provisions hereof may be amended or modified in any manner whatsoever except by a written instrument signed by duly authorized representatives of each of the Parties hereto.

24.4 Successors; Assignments. The terms, covenants and conditions hereof shall be binding upon and shall inure to the benefit of the successors and assignees of the Parties. This PSA is assignable by SFP to the City, without the consent of Natomas, and to others with the written consent of Natomas, which consent may not be unreasonably withheld.

24.5 Further Action. The Parties agree to perform all further acts, and to execute, acknowledge, and deliver any documents that may be reasonably necessary, appropriate or desirable to carry out the purposes of this PSA.

24.6 Choice of Law; Venue. This PSA shall be governed by the laws of the State of California and any question arising hereunder shall be construed or determined according to such laws. Venue for any action to interpret or enforce the PSA shall be the County of Sacramento.

24.7 Waiver. The failure by either Party to enforce any of the covenants, terms or conditions of this PSA shall not be deemed a waiver thereof, unless such waiver shall have been made in writing.

24.8 Natomas Water Rights. The Parties stipulate and agree that this PSA shall have no effect on Natomas' water rights or Project Water entitlements other than the Assigned Project Water.

24.9 References. The Section headings in this PSA are provided for convenience only, and shall not be considered in the interpretation hereof or thereof.

24.10 No Third Party Beneficiaries. This PSA does not create, and shall not be construed to create, any rights enforceable by any person, partnership, corporation, joint venture, limited liability company or other form of organization or association of any kind that is not a Party to this PSA.

24.11 Counterparts. This PSA may be executed in any number of counterparts, each of which shall be deemed an original, and such counterparts shall together constitute but one and the same instrument.

24.12 Construction and Interpretation. The Parties stipulate and agree that this PSA has been prepared and drafted by both Parties and that each Party has had a full and fair opportunity to revise the terms of this PSA. As a result, the normal rule of construction that any ambiguities are to be resolved against the drafting Party shall not apply in the construction or interpretation of this Agreement.

24.13 Attorneys' Fees. In the event of litigation arising from or relating to the terms and conditions of this PSA, including but not limited to judicial proceedings under Section 21.2, the prevailing party shall be entitled to an award of reasonable attorneys' fees and costs including, without limitation, reasonable expert witness costs.

24.14 Notices. All notices under this PSA shall be effective (i) when personally delivered to SFP or Natomas, as the case may be, (ii) when sent by facsimile on a business day between the hours of 9 a.m. and 3 p.m. (with written confirmation of transmission) to SFP or Natomas, as the case may be, provided that a copy is mailed as indicated below, or (iii) when actually received after deposit in the United States mail, registered or certified, postage fully prepaid and addressed to the respective Parties at the addresses shown below or such other address or facsimile number as the Parties may from time to time designate in writing. As a matter of convenience, however, notices delivered between SFP and Natomas shall, to the extent feasible, be conducted orally by telephone or in person, with such notices to be confirmed and made effective in writing as set forth above provided no such oral notice shall be effective unless so confirmed in writing. All notices under this PSA shall be sent to the following:

Natomas:
General Manager
Natomas Central Mutual Water Company
2601 West Elkhorn
Rio Linda, CA 95673

with a copy to:
Kevin M. O'Brien
Downey Brand LLP
555 Capitol Mall, 10th Floor
Sacramento, CA 95814
Voice: 916-444-1000
Fax: 916-444-2100

Belan Wagner
Wagner, Kirkman, Blaine,
Klomparens & Youmans LLP
10640 Mather Blvd., Suite 200
Mather, CA 95655
Voice: (916) 920-5286
Fax: (916) 920-8608

SFP:

Michael J. McDougall
Robert Thomas
South Folsom Properties
1037 Suncast Lane, Suite 111
El Dorado Hills, CA 95762

with a copy to:

Clifford W. Schulz
Kronick, Moskovitz, Tiedemann & Girard
400 Capitol Mall, 27th Floor
Sacramento, CA 95814

IN WITNESS WHEREOF, the Parties have executed this PSA as of the Effective Date.

Natomas Central Mutual Water Company

By: _____
Dan Spangler

Title: President

Date: 7/31/07

ATTEST:

By: Jim Smith

Title: Vice President

Date: 8/2/2007

South Folsom Properties, LLC

By: _____
Michael J. McDougall

Title: Managing Member

Date: 7/30/07

ATTEST:

By: _____

Title: _____

Date: _____

ACKNOWLEDGMENT

State of California
County of Sacramento

On July 30, 2007 before me, Lynne S. Banez, Notary Public,
(here insert name and title of the officer)

personally appeared Michael J. McDougall

personally known to me (or proved to me on the basis of satisfactory evidence) to be the person~~(s)~~ whose name~~(s)~~ is/~~are~~ subscribed to the within instrument and acknowledged to me that he/~~she/they~~ executed the same in his/~~her/their~~ authorized capacity~~(ies)~~, and that by his/~~her/their~~ signature~~(s)~~ on the instrument the person~~(s)~~, or the entity upon behalf of which the person~~(s)~~ acted, executed the instrument.

WITNESS my hand and official seal.

Signature Lynne S Banez

LYNNE S. BANEZ
Commission # 1453853
Notary Public - California
Sacramento County
My Comm. Expires Dec 2, 2007

(Seal)

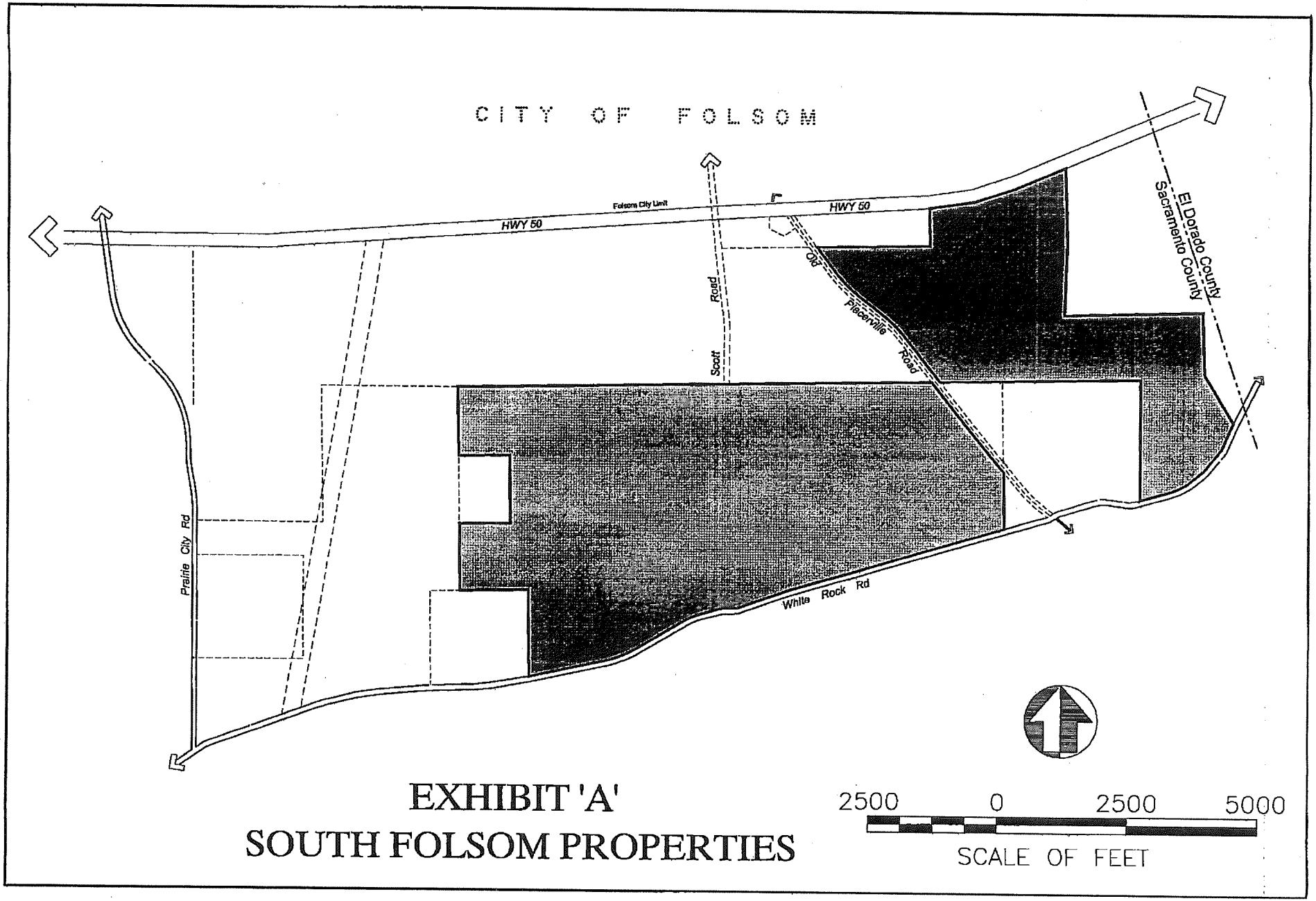

EXHIBIT 'A'
SOUTH FOLSOM PROPERTIES

PSOMAS

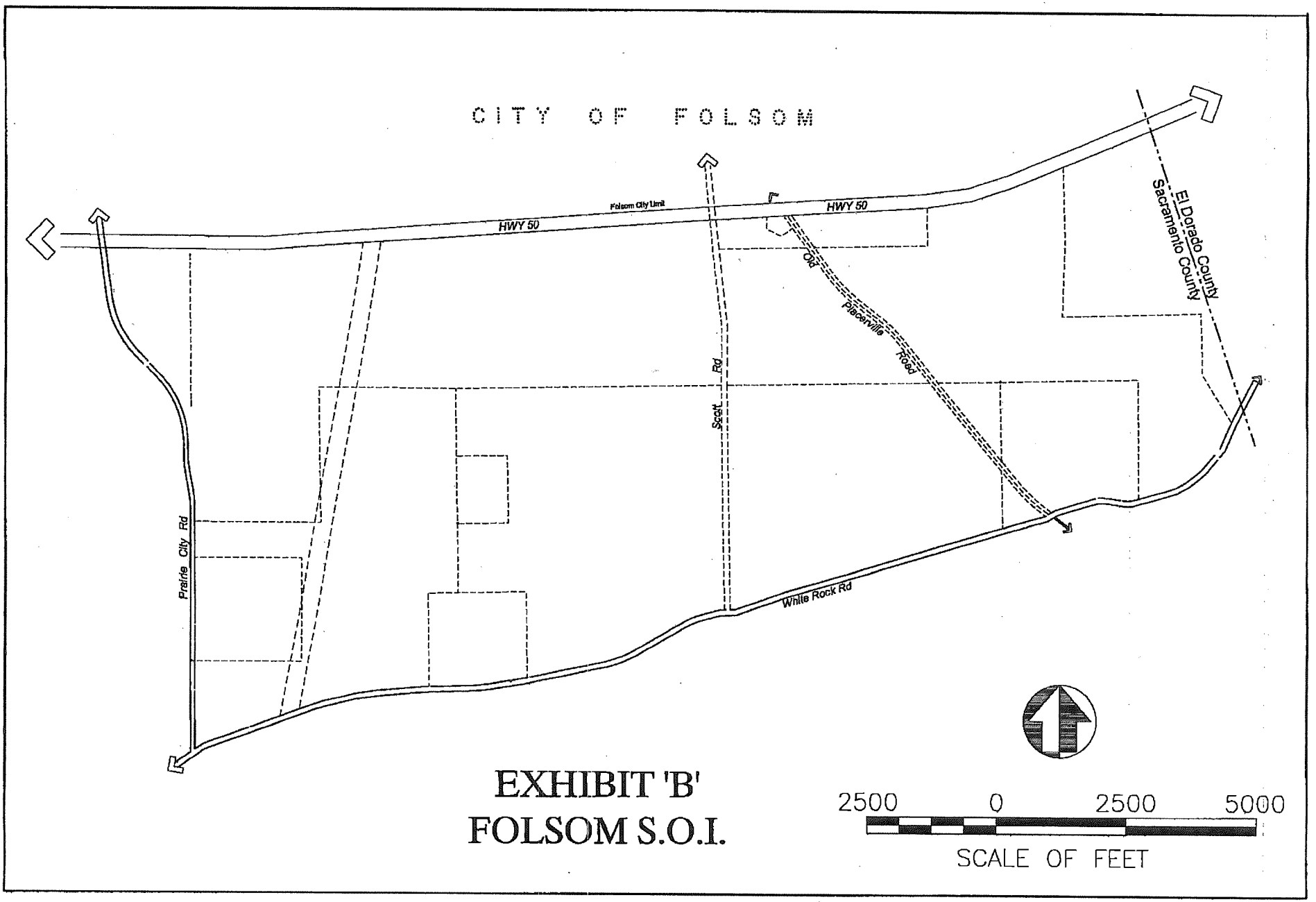

EXHIBIT 'B'
FOLSOM S.O.I.

PSOMAS

EXHIBIT C

EXAMPLES OF PRE-CLOSING PAYMENTS AND BREAK-UP FEE PAYMENT OBLIGATIONS

SECTION 8. PRE-CLOSING PAYMENTS.

Section 8.3. Example: Payment on One-Year Anniversary. If on or before April 1, 2008 (the One-Year Anniversary Date), Natomas and SFP have resolved, to the Parties' satisfaction: Milestone (A) the adequacy of the Natomas Critical Month Water Supply, including any resolution of Natomas' rights to reschedule base supply, and Milestone (B) the rescheduling of Natomas Assigned Project Water from an irrigation demand schedule to a municipal and industrial demand schedule, then SFP will be required to pay Natomas the sum of Five Hundred Thousand Dollars ($500,000).

If, however, one or more of the Milestones A or B remains incomplete on April 1, 2008, the amount due under Section 8.3 shall be paid in two (2) installments. A payment of One Hundred Thousand Dollars ($100,000) will be paid on April 1, 2008. The balance of Four Hundred Thousand Dollars ($400,000) shall be paid within thirty (30) days of when Milestones A and B are achieved. As such, if Milestone A is achieved on August 1, 2008 and Milestone B is achieved on May 1, 2009, SFP will pay Natomas One Hundred Thousand Dollars ($100,000) on April 1, 2008, and pay the remaining Four Hundred Thousand Dollars ($400,000) within 30 days of May 1, 2009.

Section 8.4 Example: Payment on Two-Year Anniversary Date. If on or before April 1, 2009 (the Two-Year Anniversary Date), Natomas and SFP have resolved, to both parties satisfaction: Milestone (A) the adequacy of the Natomas Critical Month Water Supply, including any resolution of Natomas' rights to reschedule base supply, Milestone (B) the rescheduling of Natomas Assigned Project Water from an irrigation demand schedule to a municipal and industrial demand schedule, and Milestone (C) completion of all state and federal environmental review documents for the assignment of Assigned Project Water from Natomas to City, then SFP will be required to pay Natomas the sum of One Million Dollars ($1,000,000).

If, however, one or more of the Milestones A, B, or C remains incomplete on April 1, 2009, the amount due under Paragraph 8.4 shall be paid in two (2) installments. A payment of Two Hundred Thousand Dollars ($200,000) will be paid on April 1, 2009. The balance of Eight Hundred Thousand Dollars ($800,000) shall be paid within 30 days of the date when Milestones A, B, and C are completed. If Milestones A, B, C and D are all met at any time following the Two-Year Anniversary Date, SFP shall pay Natomas an additional $5,000,000 within thirty (30) days from the date the final Milestone is met.

Assuming no termination pursuant to Section 10 and that (a) Milestone A was achieved on May 1, 2008, (b) Milestone B was achieved on August 1, 2009, (c) Milestone C was achieved on August 1, 2011, and (d) Milestone D was achieved on December 1, 2011, then SFP would be obligated to make the following payments to Natomas:

1. $200,000 on the Effective Date;
2. $100,000 on April 1, 2008;
3. $200,000 on April 1, 2009;
4. $400,000 within 30 days of completion of Milestone B on August 1, 2009;
5. $300,000 on April 1, 2010 (as set forth in Section 8.5);
6. $400,000 on April 1, 2011 (as set forth in Section 8.6);
7. $800,000 within 30 days of completion of Milestone C on August 1, 2011; and
8. $5,000,000 within thirty (30) days of completion of Milestone D on December 1, 2011.

Section 8.5 Example: Adjustment of Purchase Price and Payment on Three-Year Anniversary. If, by April 1, 2010 (the Three-Year Anniversary Date), any of Milestones A, B, C or D have not been completed, SFP shall pay to Natomas an additional Three Hundred Thousand Dollars ($300,000) on April 1, 2010.

Section 8.6 Example: Payment on Four-Year Anniversary. If, by April 1, 2011 (the Four-Year Anniversary Date), any of the Milestone A, B, C or D have not been completed, SFP shall pay to Natomas an additional Four Hundred Thousand Dollars ($400,000) on April 1, 2011.

Section 8.7 Example: Extension Payments. If SFP elected to extend the PSA until March 31, 2013, SFP would be required to make an Extension Payment of One Million Dollars ($1,000,000) to Natomas on April 1, 2012. If SFP then elected to extend the PSA an additional year, until March 31, 2014, SFP would be required to make another payment of One Million Dollars ($1,000,000) by April 1, 2013. As an alternative, SFP could make a single election to extend the PSA for two years, in which case it would make two (2) Extension Payments to Natomas in the amounts of $1,000,000 on or before April 1, 2012 and $1,000,000 on or before April 1, 2013 for such two-year extension. Further extensions could be made in the same manner to extend the PSA to a date that is not later than April 1, 2017.

SECTION 10. TERMINATION AND BREAK-UP FEE

Section 10.3 Example: Termination at Five-Year Anniversary Date. Assuming that any or all of Milestones A, B, C or D have not been completed on or before April 1, 2012 (the Five-Year Anniversary Date), if SFP elects not to extend the PSA on April 1, 2012, Natomas shall not be entitled to a Break-up Fee of Two Million Dollars ($2,000,000) unless SFP, or its affiliates or members or the City, enters into a contract, memorandum of understanding or letter of intent to purchase water for the SFP Area from a third-party on or before October 1, 2013.

EXHIBIT D-1

PERSONAL GUARANTY

(Angelo K. Tsakopoulos)

This Personal Guaranty (this "Guaranty"), dated for reference purposes only, July 30, 2007, is entered into by and between Angelo K. Tsakopoulos ("Guarantor"), in favor of Natomas Central Mutual Water Company, a California corporation ("Seller").

RECITALS

A. On or about July 30, 2007, Seller and South Folsom Properties, LLC ("Buyer"), executed an agreement entitled: Terms and Conditions of Purchase and Sale of Water Entitlements (the "Purchase Agreement"). The Purchase Agreement is subject to the approval of the shareholders of Seller, which approval is a condition precedent to the effectiveness of the Purchase Agreement.

B. Under the Purchase Agreement, Seller may be obligated to pay to Seller as "Break Up Fee" of Two Million Dollars ($2,000,000).

C. Guarantor will derive substantial direct and indirect benefits from Seller entering into the Purchase Agreement.

NOW, THEREFORE, to induce Seller to enter into the Purchase Agreement and in consideration thereof, Guarantor unconditionally guarantees and agrees as follows:

AGREEMENT

1. Guaranty. Guarantor hereby guarantees Buyer's due and punctual payment and performance of its obligation (the "Break Up Fee") to pay to Seller pursuant to Section 10 of the Purchase Agreement. Guarantor promises, on demand, to pay in lawful money of the United States, in immediately available funds, all amounts due and payable in respect of the Break Up Fee, together with interest at the maximum rate permitted by law, and all costs of collection thereon (including, but not limited to, attorneys' fees and court costs). Guarantor shall be jointly and severally liable for the payment and performance of the Break Up Fee. This is a guaranty of payment and performance and not a guaranty of collection.

2. Remedies. If Guarantor fails to promptly perform his obligations under this Guaranty, Seller may from time to time, and without first requiring performance by Buyer or exhausting any or all security for the Break Up Fee, bring an action at law or in equity or both to compel Guarantor to perform his obligations hereunder, and to collect in any such action compensation for all loss, cost, damage, injury and expense sustained or incurred by Seller as a direct or indirect consequence of the failure of Guarantor to perform his obligations, together with interest at the maximum rate permitted by law.

3. Rights of Seller. Guarantor authorizes Seller, without giving notice to Guarantor or obtaining Guarantor's consent and without affecting the liability of Guarantor, from time to time to do the following:

A. Renew or extend all or any portion of the Break Up Fee;

B. Make material or non-material changes in the dates specified for payment of the Break Up Fee;

C. Take and hold security for the performance of the Break Up Fee, and exchange, enforce, waive and release any such security;

D. Release, substitute or add any one or more endorsers of the Break Up Fee or guarantors of Buyer's obligations under the Purchase Agreement.

E. Apply payments received by Seller from Buyer in such order as Seller shall determine in its sole discretion, whether or not any such obligations are covered by this Guaranty.

4. Guarantor's Waivers. Guarantor hereby waives each of the following:

A. Any defense based upon any legal disability or other defense of Buyer, any other guarantor or other person, or by reason of the cessation or limitation of the liability of Buyer from any cause other than full payment of all sums payable under the Break Up Fee;

B. Any defense based upon any lack of authority of the officers, directors, members, partners or agents acting or purporting to act on behalf of Buyer or any principal of Buyer or any defect in the formation of Buyer or any principal of Buyer;

C. Any defense based upon Seller's failure to provide Guarantor any information concerning Buyer's financial condition or any other circumstances bearing on Buyer's ability to pay and perform the Break Up Fee;

D. Any defense based upon any statute or rule of law which provides that the obligation of a surety must be neither larger in amount nor in any other respects more burdensome than that of a principal;

E. Any defense based upon any borrowing or any grant of a security interest under Section 364 of the Federal Bankruptcy Code;

F. Any right of subrogation, any right to enforce any remedy which Seller may have against Buyer and any right to participate in, or benefit from, any security for the Break Up Fee now or hereafter held by Seller;

G. Presentment, demand, protest and notice of any kind;

H. The benefit of any statute of limitations affecting the liability of Guarantor hereunder or the enforcement hereof;

I. Any obligation of Seller to exhaust its remedies, or pursue its remedies, against Buyer prior to proceeding against Guarantor; and

J. Without limiting the generality of the foregoing, to the fullest extent permitted by law, any defenses or benefits that may be derived from or afforded by applicable law limiting the liability of or exonerating guarantors or sureties, or which may conflict with the terms of this Guaranty.

Guarantor agrees that the payment of the Break Up Fee or any part thereof or other act which tolls any statute of limitations applicable to the Break Up Fee shall similarly operate to toll the statute of limitations applicable to Guarantor's liability hereunder. Without limiting the generality of the foregoing or any other provision hereof, Guarantor expressly waives to the extent permitted by law any and all rights and defenses which might otherwise be available to Guarantor under California Civil Code Sections 2787 to 2855, inclusive, 2899 and 3433 and under California Code of Civil Procedure Sections 580a, 580b, 580d and 726, or any of such sections.

5. Guarantor's Warranties. Guarantor warrants and acknowledges that (i) Seller would not enter into the Purchase Agreement but for this Guaranty, (ii) there are no conditions precedent to the effectiveness of this Guaranty, (iii) Guarantor has established adequate means of obtaining from sources other than Seller, on a continuing basis, financial and other information regarding Buyer's financial condition, Buyer's activities relating thereto and the status of Buyer's performance of the Break Up Fee, and Guarantor agrees to keep adequately informed from such means of any facts, events or circumstances which might in any way affect Guarantor's risks hereunder and Seller has made no representation to Guarantor as to any such matters, and (iv) Guarantor's obligations hereunder are separate from those of Buyer under the Purchase Agreement.

6. Subordination. Guarantor subordinates all present and future indebtedness owing by Buyer to Guarantor to the Break Up Fee at any time owing by Buyer to Seller. Guarantor shall make no claim for such indebtedness until the Break Up Fee has been fully discharged. Guarantor further agrees not to assign all or any part of such indebtedness unless Seller is given prior notice and such assignment is expressly made subject to the terms of this Guaranty.

7. Bankruptcy of Buyer. In any bankruptcy or other proceeding in which the filing of claims is required by law, Guarantor shall file all claims which Guarantor may have against Buyer relating to any indebtedness of Buyer to Guarantor and assign to Seller all rights of Guarantor thereunder. If Guarantor does not file any such claim, Seller, as attorney-in-fact for Guarantor, is hereby authorized to do so in the name of Guarantor or, in Seller's discretion, to assign the claim to a nominee and cause proof of claim to be filed in the name of Seller's nominee. The foregoing power of attorney is coupled with an interest and cannot be revoked. Seller or its nominee shall have the right, in its reasonable discretion, to accept or reject any plan proposed in such proceeding and to take any other action which a party filing a claim is entitled

to do. In all such cases, whether in administration, bankruptcy or otherwise, the person or persons authorized to pay such claim shall pay to Seller the amount payable on such claim and, to the full extent necessary for that purpose, Guarantor hereby assigns to Seller all his rights to any such payments or distributions; provided, however, Guarantor's obligations hereunder shall not be satisfied except to the extent that Seller receives cash by reason of any such payment or distribution. If Seller receives anything hereunder other than cash, the same shall be held as collateral for amounts due hereunder. If all or any portion of the obligations guaranteed hereunder are paid or performed, the obligations of Guarantor hereunder shall continue and shall remain in full force and effect in the event that all or any part of such payment or performance is avoided or recovered directly or indirectly from Sellers a preference, fraudulent transfer or otherwise under the Bankruptcy Code or other similar laws, irrespective of (i) any notice of revocation given by Guarantor prior to such avoidance or recovery, or (ii) full payment and performance of all of the Break Up Fee.

8. Additional, Independent and Unsecured Obligations. This Guaranty is independent of Buyer's obligations under the Purchase Agreement. This is a Guaranty of payment and not of collection and the obligations of Guarantor hereunder shall be in addition to and shall not limit or in any way affect the obligations of Guarantor under any other existing or future guaranties unless said other guaranties are expressly modified or revoked in writing. Seller may bring a separate action to enforce the provisions hereof against Guarantor without taking action against Buyer or any other party or joining Buyer or any other party as a party to such action.

9. Attorneys' Fees. In the event any of the parties shall commence legal proceedings for the purpose of enforcing any provision or condition hereof, or by reason of any breach arising under the provisions hereof, then the successful party in such proceeding shall be entitled to court costs and reasonable attorneys' fees to be determined by the Court. Without limiting the generality of the foregoing: (i)the prevailing party shall be entitled to recover its attorneys' fees and other legal expenses incurred in connection with a bankruptcy or other insolvency-related proceeding of the other party (and including such fees and expenses incurred in efforts, whether successful or not, to obtain adequate protection, annulment, modification or termination of the automatic stay); and (ii)the prevailing party shall be entitled, in addition to and separately from the amounts recoverable under clause"(i)," to the payment by the losing party of the prevailing party's reasonable attorneys' fees, court costs and litigation expenses incurred in connection with any appellate review of the judgment rendered or of any other ruling in such action or proceeding, and any proceeding to enforce a judgment in such action and proceeding. It is the intent of the parties that the provisions of clause"(ii)" be distinct and severable from the other rights of the parties under this Agreement, shall survive the entry of judgment in any action or proceeding and shall not be merged into such judgment.

EXHIBIT D-2

CORPORATE GUARANTY

(AKT Development Corporation)

This Corporate Guaranty (this "Guaranty"), dated for reference purposes only, July 30, 2007, is entered into by and between AKT Development Corporation ("Guarantor"), in favor of Natomas Central Mutual Water Company ("Seller").

RECITALS

A. On or about July 30, 2007, Seller and South Folsom Properties, LLC ("Buyer"), a company that is affiliated with Guarantor, executed an agreement entitled:Terms and Conditions of Purchase and Sale of Water Entitlements (the "Purchase Agreement"). The Purchase Agreement is subject to the approval of the shareholders of Seller, which approval is a condition precedent to the effectiveness of the Purchase Agreement.

B. Under the Purchase Agreement, Buyer may be obligated to pay to Seller a "Break Up Fee" of Two Million Dollars ($2,000,000).

C. Guarantor will derive substantial direct and indirect benefits from Seller entering into the Purchase Agreement.

NOW, THEREFORE, to induce Seller to enter into the Purchase Agreement and in consideration thereof, Guarantor unconditionally guarantees and agrees as follows:

AGREEMENT

1. Guaranty. Guarantor hereby guarantees Buyer's due and punctual payment and performance of its obligation (the "Break Up Fee") to pay to Seller pursuant to the terms and conditions of the Purchase Agreement. Guarantor promises, on demand, to pay in lawful money of the United States, in immediately available funds, all amounts due and payable in respect of the Break Up Fee, together with interest at the maximum rate permitted by law, and all costs of collection thereon (including, but not limited to, attorneys' fees and court costs). Guarantor shall be jointly and severally liable for the payment and performance of the Break Up Fee. This is a guaranty of payment and performance and not a guaranty of collection.

2. Remedies. If Guarantor fails to promptly perform their obligations under this Guaranty, Seller may from time to time, and without first requiring performance by Buyer or exhausting any or all security for the Break Up Fee, bring an action at law or in equity or both to compel Guarantor to perform its obligations hereunder, and to collect in any such action compensation for all loss, cost, damage, injury and expense sustained or incurred by Seller as a direct or indirect consequence of the failure of Guarantor to perform its obligations, together with interest at the maximum rate permitted by law.

3. Rights of Seller. Guarantor authorizes Seller, without giving notice to Guarantor or obtaining Guarantor's consent and without affecting the liability of Guarantor, from time to time to do the following:

A. Renew or extend all or any portion of the Break Up Fee;

B. Make material or non-material changes in the dates specified for payment of the Break Up Fee;

C. Take and hold security for the performance of the Break Up Fee, and exchange, enforce, waive and release any such security;

D. Release, substitute or add any one or more endorsers of the Break Up Fee or guarantors of Buyer's obligations under the Purchase Agreement.

E. Apply payments received by Seller from Buyer in such order as Seller shall determine in its sole discretion, whether or not any such obligations are covered by this Guaranty.

4. Guarantor's Waivers. Guarantor hereby waives each of the following:

A. Any defense based upon any legal disability or other defense of Buyer, any other guarantor or other person, or by reason of the cessation or limitation of the liability of Buyer from any cause other than full payment of all sums payable under the Break Up Fee;

B. Any defense based upon any lack of authority of the officers, directors, members, partners or agents acting or purporting to act on behalf of Buyer or any principal of Buyer or any defect in the formation of Buyer or any principal of Buyer;

C. Any defense based upon Seller's failure to provide Guarantor any information concerning Buyer's financial condition or any other circumstances bearing on Buyer's ability to pay and perform the Break Up Fee;

D. Any defense based upon any statute or rule of law which provides that the obligation of a surety must be neither larger in amount nor in any other respects more burdensome than that of a principal;

E. Any defense based upon any borrowing or any grant of a security interest under Section 364 of the Federal Bankruptcy Code;

F. Any right of subrogation, any right to enforce any remedy which Seller may have against Buyer and any right to participate in, or benefit from, any security for the Break Up Fee now or hereafter held by Seller;

G. Presentment, demand, protest and notice of any kind;

H. The benefit of any statute of limitations affecting the liability of Guarantor hereunder or the enforcement hereof;

I. Any obligation of Seller to exhaust its remedies, or pursue its remedies, against Buyer prior to proceeding against Guarantor; and

J. Without limiting the generality of the foregoing, to the fullest extent permitted by law, any defenses or benefits that may be derived from or afforded by applicable law limiting the liability of or exonerating guarantors or sureties, or which may conflict with the terms of this Guaranty.

Guarantor agrees that the payment of the Break Up Fee or any part thereof or other act which tolls any statute of limitations applicable to the Break Up Fee shall similarly operate to toll the statute of limitations applicable to Guarantor's liability hereunder. Without limiting the generality of the foregoing or any other provision hereof, Guarantor expressly waives to the extent permitted by law any and all rights and defenses which might otherwise be available to Guarantor under California Civil Code Sections 2787 to 2855, inclusive, 2899 and 3433 and under California Code of Civil Procedure Sections 580a, 580b, 580d and 726, or any of such sections.

5. Guarantor's Warranties. Guarantor warrants and acknowledges that (i) Seller would not enter into the Purchase Agreement but for this Guaranty, (ii) there are no conditions precedent to the effectiveness of this Guaranty, (iii) Guarantor has established adequate means of obtaining from sources other than Seller, on a continuing basis, financial and other information regarding Buyer's financial condition, Buyer's activities relating thereto and the status of Buyer's performance of the Break Up Fee, and Guarantor agrees to keep adequately informed from such means of any facts, events or circumstances which might in any way affect Guarantor's risks hereunder and Seller has made no representation to Guarantor as to any such matters, and (iv) Guarantor's obligations hereunder are separate from those of Buyer under the Purchase Agreement.

6. Subordination. Guarantor subordinates all present and future indebtedness owing by Buyer to Guarantor to the Break Up Fee at any time owing by Buyer to Seller. Guarantor shall make no claim for such indebtedness until the Break Up Fee has been fully discharged. Guarantor further agrees not to assign all or any part of such indebtedness unless Seller is given prior notice and such assignment is expressly made subject to the terms of this Guaranty.

7. Bankruptcy of Buyer. In any bankruptcy or other proceeding in which the filing of claims is required by law, Guarantor shall file all claims which Guarantor may have against Buyer relating to any indebtedness of Buyer to Guarantor and assign to Seller all rights of Guarantor thereunder. If Guarantor does not file any such claim, Seller, as attorney-in-fact for Guarantor, is hereby authorized to do so in the name of Guarantor or, in Seller's discretion, to assign the claim to a nominee and cause proof of claim to be filed in the name of Seller's nominee. The foregoing power of attorney is coupled with an interest and cannot be revoked. Seller or its nominee shall have the right, in its reasonable discretion, to accept or reject any plan proposed in such proceeding and to take any other action which a party filing a claim is entitled to do. In all such cases, whether in administration, bankruptcy or otherwise, the person or persons authorized to pay such claim shall pay to Seller the amount payable on such claim and, to the full extent necessary for that purpose, Guarantor hereby assigns to Seller all its rights to any such payments or distributions; provided, however, Guarantor's obligations hereunder shall

not be satisfied except to the extent that Seller receives cash by reason of any such payment or distribution. If Seller receives anything hereunder other than cash, the same shall be held as collateral for amounts due hereunder. If all or any portion of the obligations guaranteed hereunder are paid or performed, the obligations of Guarantors hereunder shall continue and shall remain in full force and effect in the event that all or any part of such payment or performance is avoided or recovered directly or indirectly from Sellers a preference, fraudulent transfer or otherwise under the Bankruptcy Code or other similar laws, irrespective of (i) any notice of revocation given by Guarantor prior to such avoidance or recovery, or (ii) full payment and performance of all of the Break Up Fee.

8. Additional. Independent and Unsecured Obligations. This Guaranty is independent of Buyer's obligations under the Purchase Agreement. This is a Guaranty of payment and not of collection and the obligations of Guarantor hereunder shall be in addition to and shall not limit or in any way affect the obligations of Guarantor under any other existing or future guaranties unless said other guaranties are expressly modified or revoked in writing. Seller may bring a separate action to enforce the provisions hereof against Guarantors without taking action against Buyer or any other party or joining Buyer or any other party as a party to such action.

9. Attorneys' Fees. In the event any of the parties shall commence legal proceedings for the purpose of enforcing any provision or condition hereof, or by reason of any breach arising under the provisions hereof, then the successful party in such proceeding shall be entitled to court costs and reasonable attorneys' fees to be determined by the Court. Without limiting the generality of the foregoing: (i) the prevailing party shall be entitled to recover its attorneys' fees and other legal expenses incurred in connection with a bankruptcy or other insolvency-related proceeding of the other party (and including such fees and expenses incurred in efforts, whether successful or not, to obtain adequate protection, annulment, modification or termination of the automatic stay); and (ii) the prevailing party shall be entitled, in addition to and separately from the amounts recoverable under clause "(i)," to the payment by the losing party of the prevailing party's reasonable attorneys' fees, court costs and litigation expenses incurred in connection with any appellate review of the judgment rendered or of any other ruling in such action or proceeding, and any proceeding to enforce a judgment in such action and proceeding. It is the intent of the parties that the provisions of clause "(ii)" be distinct and severable from the other rights of the parties under this Agreement, shall survive the entry of judgment in any action or proceeding and shall not be merged into such judgment.

SELLER:	BUYER:
Natomas Central Mutual Water Company	South Folsom Properties, LLC

GUARANTOR:

AKT Development Corporation

By: _____

Its: _____

AMENDMENT NO. 1 TO

TERMS AND CONDITIONS OF

PURCHASE AND SALE OF WATER ENTITLEMENTS

Natomas Central Mutual Water Company, a California corporation ("Natomas"), and South Folsom Properties, LLC, a California limited liability company ("SFP"), hereby agree to amend that certain instrument entitled "Terms and Conditions of Purchase and Sale of Water Entitlements" executed by Natomas on July 31, 2007 and by SFP on July 30, 2007 (hereinafter "PSA") as follows:

1. Amendment.

Section 1.6 of the PSA is hereby amended in its entirety to read as follows:

"Effective Date" means the date on which the PSA is approved by a majority vote of the shareholders of Natomas and becomes binding and effective. The PSA will be executed by Natomas and SFP but will not become binding or effective unless and until it is approved by a majority vote of the shareholders of Natomas, which approval shall be a condition precedent to the effectiveness of the PSA. Approval of the PSA by the shareholders of Natomas shall occur, if at all, on or before December 17, 2007. The Parties acknowledge and agree that, prior to the shareholder vote on whether to approve this PSA, Natomas will be providing to its shareholders an engineer's report and associated hydrologic and economic analysis pertaining to Milestone A.

2. Entire Agreement as to Amendment of PSA.

This instrument (i) constitutes the entire agreement of Natomas and SFP as to the amendment of the PSA; and (ii) supercedes all other agreements or understandings relating to amendment of the PSA. This instrument may only be modified by a written instrument executed by Natomas and SFP.

3. Remainder of PSA to Remain in Full Force and Effect.

With the exception of the amendments set forth in paragraph 1 of this instrument, all other provisions of the PSA shall remain unchanged and in full force and effect in accordance with the terms and conditions of the PSA.

IN WITNESS WHEREOF, the Parties have executed this Amendment No. 1 to the PSA as of the last date of execution written below.

Natomas Central Mutual Water Company

By: _____
Dan Spangler

Title: President

Date: 11/7/07

ATTEST:

By: _____

Title: General Manager

Date: 11/7/07

South Folsom Properties, LLC

By: _____
Michael J. McDougall

Title: Managing Member

Date: 11/7/07

ATTEST:

By: _____

Title: _____

Date: _____

CALIFORNIA ALL-PURPOSE CERTIFICATE OF ACKNOWLEDGMENT

State of California)

County of Sacramento)

On November 7, 2007 before me, Tawny Por, Notary Public
(here insert name and title of the officer)

personally appeared Michael J. McDougall

personally known to me (~~or proved to me on the basis of satisfactory evidence~~) to be the person(~~s~~) whose name(~~s~~) is/~~are~~ subscribed to the within instrument and acknowledged to me that he/~~she/they~~ executed the same in his/~~her/their~~ authorized capacity(~~ies~~), and that by his/~~her/their~~ signature(~~s~~) on the instrument the person(~~s~~), or the entity upon behalf of which the person(~~s~~) acted, executed the instrument.

WITNESS my hand and official seal.

Signature of Notary Public

TAWNY POR
COMM. # 1750175
NOTARY PUBLIC - CALIFORNIA
SACRAMENTO COUNTY
My Comm. Expires June 10, 2011

(Seal)

ADDITIONAL OPTIONAL INFORMATION

DESCRIPTION OF THE ATTACHED DOCUMENT

(Title or description of attached document)

(Title or description of attached document continued)

Number of Pages _____ Document Date _____

(Additional information)

CAPACITY CLAIMED BY THE SIGNER

- ☐ Individual (s)
- ☐ Corporate Officer

(Title)

- ☐ Partner(s)
- ☐ Attorney-in-Fact
- ☐ Trustee(s)
- ☐ Other _____

INSTRUCTIONS FOR COMPLETING THIS FORM

Any acknowledgment completed in California must contain verbiage exactly as appears above in the notary section or a separate acknowledgment form must be properly completed and attached to that document. The only exception is if a document is to be recorded outside of California. In such instances, any alternative acknowledgment verbiage as may be printed on such a document so long as the verbiage does not require the notary to do something that is illegal for a notary in California (i.e. certifying the authorized capacity of the signer). Please check the document carefully for proper notarial wording and attach this form if required.

- State and County information must be the State and County where the document signer(s) personally appeared before the notary public for acknowledgment.
- Date of notarization must be the date that the signer(s) personally appeared which must also be the same date the acknowledgment is completed.
- The notary public must print his or her name as it appears within his or her commission followed by a comma and then your title (notary public).
- Print the name(s) of document signer(s) who personally appear at the time of notarization.
- Indicate the correct singular or plural forms by crossing off incorrect forms (i.e. ~~he~~/she/~~they,~~ is /~~are~~) or circling the correct forms. Failure to correctly indicate this information may lead to rejection of document recording.
- The notary seal impression must be clear and photographically reproducible. Impression must not cover text or lines. If seal impression smudges, re-seal if a sufficient area permits, otherwise complete a different acknowledgment form.
- Signature of the notary public must match the signature on file with the office of the county clerk.
  - Additional information is not required but could help to ensure this acknowledgment is not misused or attached to a different document.
  - Indicate title or type of attached document, number of pages and date.
  - Indicate the capacity claimed by the signer. If the claimed capacity is a corporate officer, indicate the title (i.e. CEO, CFO, Secretary).
- Securely attach this document to the signed document

Appendix F – City – SFP MOU

CITY OF FOLSOM
FOLSOM SOUTH AREA GROUP
MEMORANDUM OF UNDERSTANDING
CONCERNING WATER SUPPLY INVESTIGATIONS FOR SOI AREA

This Memorandum of Understanding ("MOU") is made, entered into and effective this ___ day of _____, 2008, by and between the City of Folsom, a municipal corporation ("City"), and Folsom South Area Group, an unincorporated association ("Landowners"). The City and Landowners are collectively referred to herein as "the Parties."

RECITALS

A. At the November 2, 2004 election, the people of the City approved Measure W ("Measure W"), which added an amendment to the City's charter setting forth various actions to be taken by the City prior to approval of annexation of certain property south of Highway 50 by the Sacramento County Local Agency Formation Commission ("LAFCO"). Measure W states in part: "The City Council shall take the following actions prior to approval by the Local Agency Formation Commission. ... A. Water Supply. Identify and secure the source of water supplies to serve the Area. This new water supply shall not cause a reduction in the water supplies designated to serve existing water users north of Highway 50 and the new water supply shall not be paid for by Folsom residents north of Highway 50."

B Landowners are pursuing the annexation of approximately 3,593 acres of land located in Sacramento County, south of the existing City limits and bounded by Highway 50, White Rock Road, Prairie City Road, and the El Dorado County line, which is within the City's Sphere of Influence ("SOI Property"), as approved by LAFCO.

C. Landowners have entered into an "Agreement for Advance of Funds for City of Folsom Annexation Proceedings," dated May 4, 2006 (including any amendment thereof or extension thereto; "Funding Agreement"), to fund all of the City's costs and expenses associated with annexation and development of the SOI Property, including, but not limited to, preparation of all documentation, agreements, studies, analyses, legal services and any other activity reasonably associated with the project, as specified in the Funding Agreement. Terms that are defined in the Funding Agreement will have the same meaning in this MOU, unless otherwise indicated.

D. Some of the landowners who comprise the Landowners have entered into an agreement (executed on July 31, 2007, and effective on December 17, 2007 upon its approval by a majority vote of the shareholders of Natomas; "Natomas Agreement") with Natomas Central Mutual Water Company ("Natomas") under which Natomas will sell to these landowners for conveyance to the City a portion of Natomas' Central Valley Project contractual water entitlement, which Natomas currently diverts from the Sacramento River.

E. The Parties desire to investigate the feasibility of conveying the Natomas Agreement water supply to the SOI Property, and to set forth in this MOU certain activities they intend to pursue in furtherance of the requirements of Measure W, with respect to identifying and securing a water supply for the SOI Property that does not cause a reduction in the water supplies

designated to serve existing water users in the City north of Highway 50 and does not increase the cost of water supplies in the City north of Highway 50.

F. Subject to the results of the investigation and analyses referred to in this MOU, the Parties, and other affected parties, expect to enter into a separate development agreement regarding the SOI Property, and separate agreements regarding the acquisition and conveyance of a water supply for the SOI Property, including provisions that deal with costs associated therewith.

G. The City is a signatory to the January 2000 Water Forum Agreement ("Water Forum Agreement"), and the City supports the Water Forum's coequal objectives to: (1) provide a reliable and safe water supply for the region's economic health and planned development to the year 2030; and (2) preserve the fishery, wildlife, recreational and aesthetic values of the lower American River. The activities referred to in this MOU will focus on evaluating alternatives that would convey the Natomas Agreement water supply from the Sacramento River to the SOI Property rather than from the lower American River.

H. The City has entered into a Memorandum of Understanding, dated November 14, 2000, with LAFCO ("LAFCO MOU") concerning the process for annexing the SOI Property to the City. The Parties intend that the activities under this MOU be consistent with the City's obligations under the LAFCO MOU.

I. The Parties concur that it will be important to take steps to consult with interested parties, collaborate and coordinate with other agencies and provide the public adequate and timely information concerning the activities covered in this MOU.

MEMORANDUM OF UNDERSTANDING

NOW, THEREFORE, the City and Landowners agree as follows:

1. Recitals Incorporated. The foregoing Recitals are true and correct, and are incorporated herein by reference.

2. Term of MOU. The term of this MOU will commence on the date it has been executed by all the Parties, and, unless terminated earlier under the provisions of this MOU, will continue through the completion or cancellation of the Project and the conclusion of any legal challenge thereto. This MOU will terminate upon: (1) the termination of the Funding Agreement; or (2) when this MOU is superseded by a development or other agreement executed by the Parties, whichever is later.

3. Reimbursement of Costs. Performance of this MOU by the City will be subject to all costs incurred by the City in furtherance of this MOU being reimbursed under the terms and conditions of the Funding Agreement.

4. Water Supply Investigation Activities. The City will take the following actions to assist Landowners in identifying the water supply and related facilities (e.g., water diversion,

conveyance and treatment facilities) needed to provide a water supply for the Property that meets the requirements of Measure W:

a. Evaluate the ability to assign the Natomas Agreement water supply to the City for use as a municipal and industrial water supply for the Property.

b. Evaluate the technical feasibility of rescheduling the Natomas Agreement water supply (which currently is available during the months of July and August) for delivery on a year-round municipal and industrial use pattern.

c. Evaluate the technical feasibility of diverting the Natomas Agreement water supply from the Sacramento River at the Freeport Regional Water Authority's ("FRWA") diversion facilities.

d. Evaluate the technical feasibility of conveying the Natomas Agreement water supply to the Property using the FRWA conveyance facilities.

e. Identify technically-feasible alternatives for conveying the Natomas Agreement water supply from the FRWA conveyance facilities to the Property.

f. Identify technically-feasible alternatives for treating the Natomas Agreement water supply for municipal and industrial use on the Property.

g. Identify the regulatory permits and approvals, and agreements with other agencies and entities that would be necessary to implement the diversion, conveyance, and treatment alternatives referred to in this section.

h. Identify potential alternatives to using the diversion, conveyance and treatment facilities referred to above.

i. Identify technically-feasible alternatives for providing and delivering an interim water supply to the Property prior to the time that facilities are developed for delivering the water supply from the FRWA conveyance facilities to the Property.

j. Identify the adequacy of the Natomas water supply to meet the needs of developing the SOI Property, and determine the potential need to acquire additional quantities of water.

k. Take the lead in coordinating activities under this MOU with other public agencies and interested persons and entities.

l. Take the lead in confirming that the water supply identified for the Property will be consistent with the City's Water Forum Agreement, and will not result in adverse impacts to the lower American River.

m. Develop and implement a public information program to ensure that interested parties and the general public receive timely and adequate information about the activities referred to in this MOU.

n. Act as "lead agency" under the California Environmental Quality Act ("CEQA") with respect to the development of the Property and transfer of the Natomas Agreement water supply to the City.

o. Act as the lead agency with respect to do any other activities required in support of the above-referenced actions.

5. Acquisition of Adequate Water Supplies for SOI Property. The Landowners will be responsible for acquiring water supplies in addition to the water supplies (if any) under the Natomas Agreement that are necessary for development of the SOI Property.

6. Consistency with LAFCO MOU. The Parties intend that the activities under this MOU be consistent with the City's obligations under the LAFCO MOU.

7. Compliance with CEQA. Nothing in this MOU or any other agreement between the Parties: (a) commits either the City or Landowners to any particular decision regarding annexation to the City or development of the Property; (b) confers any vested rights on Landowners; (c) restricts the City's discretion with respect to the Property; or (d) requires the City to accept the assignment of the Natomas Agreement water supply for the SOI Property. In addition, the Parties intend that CEQA, and all other applicable environmental-compliance laws, be fully complied with prior to any such decisions with respect to the Property. (See *Concerned McCloud Citizens v. McCloud CSD* (2007 DJAR 1560).)

8. Not a Binding Agreement. This MOU is not a binding agreement between the Parties but rather is an expression of intent regarding the Parties' respective roles concerning the water supply investigations for the Folsom SOI Area.

9. Status of Natomas. This MOU will not be construed in any way as an assignment to the City of any of Landowners' rights or interests under the Natomas Agreement, such rights and interests remaining the exclusive property of the Landowners unless and until the City has: (a) complied with all applicable laws; (b) made a formal decision relative to such assignment; and (c) a definitive, formal agreement regarding the assignment of the Natomas Agreement has been executed by City and Landowners. Unless and until all these conditions have been satisfied, the City will not take any action that may affect in any way Landowners' rights and interests under the Natomas Agreement.

10. General Provisions. The provisions of Sections 12 through 22 of the Funding Agreement are hereby made a part of and will apply to this MOU, except that, when used therein, the term "Agreement" will refer to this MOU.

IN WITNESS WHEREOF, the parties hereto have caused this Agreement to be duly executed.

Date:_____ City of Folsom

_____
Kerry L. Miller, City Manager

Approved As To Content:

_____ _____
Kenneth V. Payne, Utilities Director Date

Approved As To Form:

_____ _____
Bruce C. Cline, City Attorney Date

Attest:

_____ _____
Christa Schmidt, City Clerk Date

_____ _____
Folsom Area Group Date

Appendix G – NCMWC – Bureau of Reclamation Contract No. 14-06-200-885A

Long Form – Irrigation and M&I
Contract No.
14-06-200-885A-R-1

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF RECLAMATION
Central Valley Project, California

CONTRACT BETWEEN THE UNITED STATES AND NATOMAS CENTRAL MUTUAL WATER COMPANY, DIVERTER OF WATER FROM SACRAMENTO RIVER SOURCES, SETTLING WATER RIGHTS DISPUTES AND PROVIDING FOR PROJECT WATER

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UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF RECLAMATION
Central Valley Project, California

CONTRACT BETWEEN THE UNITED STATES AND
NATOMAS CENTRAL MUTUAL WATER COMPANY,
DIVERTER OF WATER FROM SACRAMENTO RIVER SOURCES,
SETTLING WATER RIGHTS DISPUTES AND
PROVIDING FOR PROJECT WATER

THIS CONTRACT, hereinafter referred to as "Settlement Contract," is entered into by THE UNITED STATES OF AMERICA, hereinafter referred to as the United States, made this 10th day of May, 2005, pursuant to the applicable authority granted to it generally in the Act of June 17, 1902 (32 Stat. 388), and acts amendatory or supplementary thereto, including, but not limited to, the Acts of August 26, 1937 (50 Stat. 844), as amended and supplemented, August 4, 1939 (53 Stat. 1187), as amended and supplemented, including, but not limited to, Sections 9 and 14 thereto, July 2, 1956 (70 Stat. 483), June 21, 1963 (77 Stat. 68), October 12, 1982 (96 Stat. 1263), October 27, 1986 (100 Stat. 3050), as amended, and Title XXXIV of the Act of October 30, 1992 (106 Stat. 4706), all collectively hereinafter referred to as Federal Reclamation law, and NATOMAS CENTRAL MUTUAL WATER COMPANY, hereinafter referred to as the Contractor, a corporation, acting pursuant to Sections 12003 and 12004 of the California Water Code, with its principal place of business in California;

WITNESSETH, that:

EXPLANATORY RECITALS

[1st] WHEREAS, the United States has constructed and is operating the Central Valley Project, California, for multiple purposes pursuant to its statutory authority; and

[2nd] WHEREAS, the Contractor has rights to divert, is diverting, and will continue to divert for reasonable beneficial use, water from the natural flow of the Sacramento River and tributaries thereto, that would have been flowing therein if the Central Valley Project were not in existence;

[3rd] WHEREAS, the construction and operation of the integrated and coordinated Central Valley Project has changed and will further change the regimen of the Sacramento, American, San Joaquin, and Trinity Rivers and the Sacramento-San Joaquin Delta from unregulated flow to regulated flow; and

[4th] WHEREAS, the United States has rights to divert, is diverting, and will continue to divert waters from said Rivers and said Delta in connection with the operation of said Central Valley Project; and

[5th] WHEREAS, the Contractor and the United States had a dispute over the respective rights of the parties to divert and use water from the regulated flow of the Sacramento River which threatened to result in litigation, and as a means to settle that dispute entered into Contract No. 14-06-200-885A, as revised, hereinafter referred to as the Existing Contract, which established terms for the delivery to the Contractor of Central Valley Project Water, and the quantities of Base Supply the United States and the Contractor agreed may be diverted by the Contractor from the Sacramento River pursuant to such contract; and

[6th] WHEREAS, the United States and the Contractor disagree with respect to the authority of the United States to change the quantities of Base Supply and/or Project Water

specified as available for diversion in this Settlement Contract from the quantities specified in the Existing Contract, and other issues related thereto. That dispute was the subject of litigation in a lawsuit entitled *Glenn-Colusa Irrigation District, et al. v. United States, et al.* [Civ. No. S-01-1816 GEB/JFM (E.D. Cal.)], but that litigation was dismissed, without prejudice, pursuant to a stipulation of dismissal filed by the parties thereto on August 29, 2002. Notwithstanding that dismissal, the Contractor and the United States enter into this Settlement Contract to renew the Existing Contract, pursuant to the terms of the Existing Contract, Federal Reclamation law, and the laws of the State of California; and

[7th] WHEREAS, to assure the Contractor of the enjoyment and use of the regulated flow of the said Rivers and the Delta, and to provide for the economical operation of the Central Valley Project by, and the reimbursement to, the United States for expenditures made for said Project.

NOW, THEREFORE, in consideration of the performance of the herein contained provisions, conditions, and covenants, it is agreed as follows:

DEFINITIONS

1. When used herein, unless otherwise expressed or incompatible with the intent hereof, the term:

(a) "Base Supply" shall mean the quantity of Surface Water established in Articles 3 and 5 which may be diverted by the Contractor from the Sacramento River each month during the period April through October of each Year without payment to the United States for such quantities diverted;

(b) "Basin-Wide Water Management Plan" shall mean the mutually agreeable Sacramento River Basinwide Water Management Plan, dated October 11, 2004, developed by

Glenn-Colusa Irrigation District, Maxwell Irrigation District, Natomas Central Mutual Water Company, Pelger Mutual Water Company, Princeton-Codora-Glenn Irrigation District, Provident Irrigation District, Reclamation District 108, Sutter Mutual Water Company, Anderson-Cottonwood Irrigation District, Meridian Farms Water Company, Reclamation District 1004, and the U.S. Bureau of Reclamation;

(c) "Charges" shall mean the payments for Project Water that the Contractor is required to pay to the United States in addition to the "Rates" specified in this Settlement Contract. The Contracting Officer will, on an annual basis, determine the extent of these Charges. The type and amount of each Charge shall be specified in Exhibit D;

(d) "Contract Total" shall mean the sum of the Base Supply and Project Water available for diversion by the Contractor for the period April 1 through October 31;

(e) "Critical Year" shall mean any Year in which either of the following eventualities exists:

(1) The forecasted full natural inflow to Shasta Lake for the current Water Year, as such forecast is made by the United States on or before February 15 and reviewed as frequently thereafter as conditions and information warrant, is equal to or less than 3.2 million acre-feet; or

(2) The total accumulated actual deficiencies below 4 million acre-feet in the immediately prior Water Year or series of successive prior Water Years each of which had inflows of less than 4 million acre-feet, together with the forecasted deficiency for the current Water Year, exceed 800,000 acre-feet.

For the purpose of determining a Critical Year, the computation of inflow to Shasta Lake shall be performed in a manner that considers the extent of upstream development

above Shasta Lake during the year in question, and shall be used as the full natural flow to Shasta Lake. In the event that major construction has occurred or occurs above Shasta Lake after September 1, 1963, and which has materially altered or alters the regimen of the stream systems contributing to Shasta Lake, the computed inflow to Shasta Lake used to define a Critical Year will be adjusted to eliminate the effect of such material alterations. After consultation with the State of California, the National Weather Service, and other recognized forecasting agencies, the Contracting Officer will select the forecast to be used and will make the details of it available to the Contractor. The same forecasts used by the United States for the operation of the Project shall be used to make the forecasts hereunder;

(f) "CVPIA" shall mean the Central Valley Project Improvement Act, Title XXXIV of the Act of October 30, 1992 (106 Stat. 4706);

(g) "Eligible Lands" shall mean all lands to which Project Water may be delivered in accordance with Section 204 of the Reclamation Reform Act of October 12, 1982 (96 Stat. 1263), as amended, hereinafter referred to as RRA;

(h) "Excess Lands" shall mean all lands in excess of the limitations contained in Section 204 of the RRA, other than those lands exempt from acreage limitation under Federal Reclamation law;

(i) "Full Cost Rate" shall mean that water rate described in Sections 205(a)(3) or 202(3) of the RRA, whichever is applicable;

(j) "Ineligible Lands" shall mean all lands to which Project Water may not be delivered in accordance with Section 204 of the RRA;

(k) "Landholder" shall mean a party that directly or indirectly owns or leases nonexempt land, as provided in 43 CFR 426.2;

(l) "Project" shall mean the Central Valley Project owned by the United States and managed by the Department of the Interior, Bureau of Reclamation;

(m) "Project Water" shall mean all Surface Water diverted or scheduled to be diverted each month during the period April through October of each Year by the Contractor from the Sacramento River which is in excess of the Base Supply. The United States recognizes the right of the Contractor to make arrangements for acquisition of water from projects of others than the United States for delivery through the Sacramento River and tributaries subject to written agreement between Contractor and the United States as to identification of such water which water when so identified shall not be deemed Project Water under this Settlement Contract;

(n) "Rates" shall mean the payments for Project Water determined annually by the Contracting Officer in accordance with the then current applicable water ratesetting policies for the Project, as described in subdivision (a) of Article 8 of this Settlement Contract;

(o) "Secretary" or "Contracting Officer" shall mean the Secretary of the Interior, a duly appointed successor, or an authorized representative acting pursuant to any authority of the Secretary and through any agency of the Department of the Interior;

(p) "Surface Water" shall mean only those waters that are considered as surface water under California law;

(q) "Water Year" shall mean the period commencing with October 1 of one year and extending through September 30 of the next; and

(r) "Year" shall mean a calendar year.

TERM OF SETTLEMENT CONTRACT

2. (a) This Settlement Contract shall become effective April 1, 2005, and shall remain in effect until and including March 31, 2045; Provided, that under terms and conditions mutually agreeable to the parties hereto, renewals may be made for successive periods not to exceed 40 years each. The terms and conditions of each renewal shall be agreed upon not later than one year prior to the expiration of the then existing Settlement Contract.

(b) With respect to Project Water and the portions of this Settlement Contract pertaining thereto, upon written request by the Contractor of the Secretary made not later than one year prior to the expiration of this Settlement Contract, whenever, account being taken of the amount then credited to the costs of construction of water supply works, the remaining amount of construction costs of water supply work which is properly assignable for ultimate return by the Contractor as established by the Secretary of the Interior pursuant to (3) of Section 1 of Public Law 643 (70 Stat. 483), probably can be repaid to the United States within the term of a contract under subsection 9(d) of the 1939 Reclamation Project Act (53 Stat. 1187), the relevant portions of this Settlement Contract may be converted to a contract under said subsection 9(d) upon terms and conditions mutually agreeable to the United States and the Contractor. The Secretary shall make a determination ten years after the date of execution of this Settlement Contract, and every five years thereafter, of whether a conversion to a contract under said subsection 9(d) can be accomplished pursuant to Public Law 643. Notwithstanding any provision of this Settlement Contract, the Contractor reserves and shall have all rights and benefits under Public Law 643.

WATER TO BE FURNISHED TO CONTRACTOR

3. (a) Subject to the conditions, limitations, and provisions hereinafter expressed, the Contractor is hereby entitled and authorized to divert from the Sacramento River

at the locations shown in Exhibit A, for beneficial use within the area delineated on Exhibit B, (both Exhibits are attached hereto and made a part hereof), the Contract Total designated in Exhibit A, or any revision thereof, in accordance with the monthly operating schedule required by Article 3(c) of this Settlement Contract. The quantity of any water diverted under this Settlement Contract from the Sacramento River, during the period April through October, for use on any lands delineated on Exhibit B, by the owner of such lands or otherwise shall constitute a part of the Contract Total as shown on Exhibit A and shall be subject to all the provisions of this Settlement Contract relating to such Contract Total as if such diversion were made by the Contractor.

(b) The Contractor may have acquired rights to divert water from the Sacramento River during the period April through October, that were obtained after the date of execution of the Existing Contract, or the Contractor may acquire such rights in the future. All diversions made from the Sacramento River, pursuant to such rights, during the period April through October, shall not be considered a part of the quantity of Base Supply and Project Water specified in Exhibit A; Provided, that the quantities diverted pursuant to the above rights shall be identified on the schedule submitted pursuant to Article 3(c) below, and shall not be substituted for any Base Supply or Project Water; Provided, further, that any such identified quantities of other acquired rights may be diverted by the Contractor before incurring any fee pursuant to Article 3(c)(1), below.

(c) Before April 1 and before the first day of each month thereafter when a revision is needed, the Contractor shall submit a written schedule to the Contracting Officer indicating the Contract Total to be diverted by the Contractor for agricultural and municipal and industrial purposes during each month under this Settlement Contract. The United States shall

furnish water to the Contractor in accordance with the monthly operating schedule or any revisions thereof. However, the United States recognizes the need of the Contractor to change from time to time its monthly diversions of water from the quantities shown in Exhibit A; the Contractor may make such changes, provided:

(1) that for the quantity of Base Supply diverted in excess of the monthly quantity shown in Exhibit A, and as may be reduced in accordance with Article 5(a), during June, July, August, September, or October of any Water Year, the Contractor shall be charged a rescheduling fee equal to 50 percent of the sum of the storage operations and maintenance rate and the storage capital rate components of the Project ratesetting policy.

(2) that in no event shall the total quantity scheduled for diversion by the Contractor from the Sacramento River:

(i) During the period April through October exceed the aggregate of the Contract Total for that period shown in Exhibit A or any revision thereof;

(ii) During the period July through September exceed the aggregate of the Contract Total for that period shown in Exhibit A or any revision thereof.

(d) In the event conditions warrant, the Contracting Officer reserves the right to require the Contractor to submit, at least 72 hours prior to the beginning of each weekly period, its estimate of daily diversion requirements for each such period from the Sacramento River; Provided, however, that changes during any such period may be made upon the giving of 72 hours' notice thereof to the Contracting Officer.

(e) No sale, transfer, exchange, or other disposal of any of the Contract Total designated in Exhibit A or the right to the use thereof for use on land other than that shown on Exhibit B shall be made by the Contractor without first obtaining the written consent of the Contracting Officer. Such consent will not be unreasonably withheld and a decision will be rendered in a timely manner. For short-term actions that will occur within one year or less, the decision will be rendered within 30 days after receipt of a complete written proposal. For long-term actions that will occur in a period longer than one year, the decision will be rendered within 90 days after receipt of a complete written proposal. For a proposal to be deemed complete by the Contracting Officer, it must comply with all provisions required by State and Federal law, including information sufficient to enable the Contracting Officer to comply with the National Environmental Policy Act, the Endangered Species Act, and applicable rules or regulations then in effect; Provided, that such consent does not authorize the use of Federal facilities to facilitate or effectuate the sale, transfer, exchange, or other disposal of Base Supply. Such use of Federal facilities will be the subject of a separate agreement to be entered into between the Contractor and Reclamation.

(f) For the purpose of determining whether Section 3405(a)(1)(M) of the CVPIA applies to the Contractor as a transferor or transferee of Project Water, the Contracting Officer acknowledges that the Contractor is within a county, watershed, or other area of origin, as those terms are utilized under California law.

(g) Nothing herein contained shall prevent the Contractor from diverting water during the months of November through March for beneficial use on the land shown on Exhibit B or elsewhere to the extent authorized under the laws of the State of California.

(h) The United States assumes no responsibility for and neither it nor its officers, agents, or employees shall have any liability for or on account of:

(1) The quality of water to be diverted by the Contractor;

(2) The control, carriage, handling, use, disposal, or distribution of water diverted by the Contractor outside the facilities constructed and then being operated and maintained by or on behalf of the United States;

(3) Claims of damage of any nature whatsoever, including but not limited to, property loss or damage, personal injury, or death arising out of or connected with the control, carriage, handling, use, disposal, or distribution of said water outside of the hereinabove referred to facilities; and

(4) Any damage whether direct or indirect arising out of or in any manner caused by a shortage of water whether such shortage be on account of errors in operation, drought, or unavoidable causes.

(i) In addition to the provisions of subdivision (h) of Article 3 of this Contract, if there is a shortage of Project Water because of actions taken by the Contracting Officer to meet legal obligations then, except as provided in subdivision (a) of Article 30 of this Contract, no liability shall accrue against the United States or any of its officers, agents, or employees for any damage, direct or indirect, arising therefrom.

RETURN FLOW

4. Nothing herein shall be construed as an abandonment or a relinquishment by the United States of any right it may have to the use of waste, seepage, and return flow water derived from water diverted by the Contractor hereunder and which escapes or is discharged beyond the boundaries of the lands shown on Exhibit B; Provided, that this shall not be construed as

claiming for the United States any right to such water which is recovered by the Contractor pursuant to California law from within the boundaries of the lands shown on Exhibit B, and which is being used pursuant to this Settlement Contract for surface irrigation or underground storage for the benefit of the lands shown on Exhibit B by the Contractor.

CONSTRAINTS ON THE AVAILABILITY OF WATER

5. (a) In a Critical Year, the Contractor's Base Supply and Project Water agreed to be diverted during the period April through October of the Year in which the principal portion of the Critical Year occurs and, each monthly quantity of said period shall be reduced by 25 percent.

(b) The amount of any overpayment by the Contractor shall, at its option, be refunded or credited upon amounts to become due to the United States from the Contractor under the provisions hereof in the ensuing Year. To the extent of such deficiency such adjustment of overpayment shall constitute the sole remedy of the Contractor.

INTEGRATED WATER MANAGEMENT AND PARTNERSHIPS

6. The Contractor and United States desire to work together to maximize the reasonable beneficial use of water for their mutual benefit. As a consequence, the United States and the Contractor will work in partnership and with others within the Sacramento Valley, including other contractors, to facilitate the better integration within the Sacramento Valley of all water supplies including, but not limited to, the better management and integration of surface water and groundwater, the development and better utilization of surface water storage, the effective utilization of waste, seepage and return flow water, and other operational and management options that may be identified in the future.

USE OF WATER FURNISHED TO CONTRACTOR

7. (a) The parties anticipate that, during the term of this Settlement Contract, a gradual change in the purpose of use of water will occur within the place of water use shown in Exhibit B from predominantly agricultural purposes to a mixture of municipal and industrial, wildlife habitat and agricultural purposes, and the parties agree to work cooperatively to accommodate and facilitate such change. Project Water furnished to the Contractor pursuant to this Settlement Contract may be delivered or furnished by the Contractor for agricultural or municipal and industrial purposes; Provided, however, that the Contractor shall not deliver or furnish Project Water for municipal and industrial purposes outside those areas delineated on Exhibit B, as approved for such purposes by the Contracting Officer, without the written consent of the Contracting Officer. Such consent will not be unreasonably withheld and a decision will be provided in a timely manner following completion of any environmental review required under applicable law. For purposes of this Settlement Contract, "agricultural purposes" includes, but is not restricted to, the irrigation of crops, the watering of livestock, incidental domestic use including related landscape irrigation, and underground water replenishment; and "municipal and industrial purposes" includes, but is not limited to, the watering of landscaping or pasture for animals (e.g., horses) which are kept for personal enjoyment or water delivered to landholdings operated in units of less than five acres unless the Contractor establishes to the satisfaction of the Contracting Officer that the use of Project Water is for agricultural purposes.

(b) The Contractor shall comply with requirements applicable to the Contractor in biological opinion(s) prepared as a result of a consultation regarding the execution of this Settlement Contract undertaken pursuant to Section 7 of the Endangered Species Act of 1973, as amended, that are within the Contractor's legal authority to implement. The Existing

Contract, which evidences in excess of 40 years of diversions, for agricultural uses, of the quantities of water provided for in Article 3, and the underlying water rights of the Contractor will be considered in developing an appropriate base-line for the Biological Assessment prepared pursuant to the Endangered Species Act, and in any other needed environmental review. Nothing herein shall be construed to prevent the Contractor from challenging or seeking judicial relief in a court of competent jurisdiction with respect to any biological opinion or other environmental documentation referred to in this Article.

RATE AND METHOD OF PAYMENT FOR WATER

8. (a) The Contractor shall make payments to the United States as provided in this Article for all Project Water shown in Exhibit A as follows:

(1) 75 percent of the amount shown as Project Water shall be paid for by the Contractor in each Year; and in addition

(2) the Contractor shall pay for Project Water actually diverted in excess of 75 percent of the amount shown as Project Water.

Such payments shall be at Rates and Charges established in accordance with: (i) the Secretary's then-current ratesetting policies for the Project; and (ii) applicable Reclamation law and associated rules and regulations, or policies; Provided, that if the Contractor desires to use Project Water for other than agricultural purposes the Rates and Charges set forth above will be adjusted by the Contracting Officer to the applicable Rates and Charges for such purposes; Provided, further, that to enable the Contracting Officer to compute the applicable Rates and Charges for Project Water diverted by the Contractor for other than agricultural use, including, but not limited to diversions for municipal and industrial uses and diversions for direct application to wildlife habitat (not including re-use of tailwater for habitat purposes), prior to

initiating any such diversions, the Contractor shall provide the Contracting Officer with an estimate of the annual quantities of Project Water to be diverted or furnished for such purposes through the end of the CVP repayment period as identified in the then-current ratesetting policies. The Rates and Charges applicable to the Contractor upon execution of this Settlement Contract are set forth in Exhibit D, as may be revised annually. The Secretary's ratesetting policies for the Project shall be amended, modified, or superseded only through a public notice and comment procedure. The Contracting Officer shall adjust the amount of Project Water for which payment is required to the extent of any reduction in diversions of Project Water made in accordance with the water conservation provisions of Article 29(e).

(b) The Contracting Officer shall notify the Contractor of the Rates and Charges as follows:

(1) Prior to July 1 of each Year, the Contracting Officer shall provide the Contractor an estimate of the Charges for Project Water that will be applied to the period October 1, of the current Year, through September 30, of the following Year, and the basis for such estimate. The Contractor shall be allowed not less than two months to review and comment on such estimates. On or before September 15 of each Year, the Contracting Officer shall notify the Contractor in writing of the Charges to be in effect during the period October 1 of the current Year, through September 30, of the following Year, and such notification shall revise Exhibit D.

(2) Prior to October 1 of each Year, the Contracting Officer shall make available to the Contractor an estimate of the Rates for Project Water for the following Year and the computations and cost allocations upon which those Rates are based. The Contractor shall be allowed not less than two months to review and comment on such computations and cost allocations. By December 31 of each Year, the Contracting Officer shall provide the Contractor

with the final Rates to be in effect for the upcoming Year, and such notification shall revise Exhibit D.

(c) The Contractor shall pay the United States for Project Water in the following manner:

(1) With respect to Rates, prior to May 1 of each Year, the Contractor shall pay the United States one-half the total amount payable pursuant to subdivision (a) of this Article and the remainder shall be paid prior to July 1 or such later date or dates as may be specified by the United States in a written notice to the Contractor; Provided, however, that if at any time during the Year the amount of Project Water diverted by the Contractor shall equal the amount for which payment has been made, the Contractor shall pay for the remaining amount of such water as shown in Exhibit A in advance of any further diversion of Project Water.

(2) With respect to Charges, the Contractor shall also make a payment to the United States, in addition to the Rate(s) in subdivision (c)(1) of this Article, at the Charges then in effect, before the end of the month following the month of delivery or transfer. The payments shall be consistent with the quantities of Project Water delivered or transferred. Adjustment for overpayment or underpayment of Charges shall be made through the adjustment of payments due to the United States for Charges for the next month. Any amount to be paid for past due payment of Charges shall be computed pursuant to Article 13 of this Settlement Contract.

(d) Payments to be made by the Contractor to the United States under this Settlement Contract may be paid from any revenues available to the Contractor. All revenues received by the United States from the Contractor relating to the delivery of Project Water or the delivery of non-Project Water through Project facilities shall be allocated and applied in

accordance with Federal Reclamation law and the associated rules or regulations, and the then current Project ratesetting policies for irrigation water.

(e) The Contracting Officer shall keep its accounts pertaining to the administration of the financial terms and conditions of its long-term water service and Settlement Contracts, in accordance with applicable Federal standards, so as to reflect the application of Project costs and revenues. The Contracting Officer shall, each Year upon request of the Contractor, provide to the Contractor a detailed accounting of all Project and Contractor expense allocations, the disposition of all Project and Contractor revenues, and a summary of all water delivery information. The Contracting Officer and the Contractor shall enter into good faith negotiations to resolve any discrepancies or disputes relating to accountings, reports, or information.

(f) The parties acknowledge and agree that the efficient administration of this Settlement Contract is their mutual goal. Recognizing that experience has demonstrated that mechanisms, policies, and procedures used for establishing Rates and Charges and/or for making and allocating payments, other than those set forth in this Article may be in the mutual best interest of the parties, it is expressly agreed that the parties may enter into agreements to modify the mechanisms, policies, and procedures for any of those purposes while this Settlement Contract is in effect without amendment of this Settlement Contract.

(g) For the term of this Settlement Contract, Rates under the respective ratesetting policies for the Project will be established to recover only reimbursable operation and maintenance (including any deficits) and capital costs of the Project, as those terms are used in the then current Project ratesetting policies, and interest, where appropriate, except in instances where a minimum Rate is applicable in accordance with the relevant Project ratesetting policy.

Proposed changes of significance in practices which implement the ratesetting policies for the Project will not be implemented until the Contracting Officer has provided the Contractor an opportunity to discuss the nature, need, and impact of the proposed change. The Contractor retains all rights to challenge the validity of Rates and Charges imposed pursuant to this Settlement Contract, including but not limited to operation and maintenance expenses and operation and maintenance deficits, in an appropriate administrative or judicial proceeding.

(h) Except as provided in subsection 3405(a)(1)(B) of the CVPIA, the Rates for Project Water transferred, exchanged, or otherwise disposed of, by the Contractor shall be the Contractor's Rates adjusted upward or downward to reflect the changed costs of delivery (if any) of the transferred, exchanged, or otherwise disposed of Project Water to the transferee's point of delivery in accordance with the then-current ratesetting policies for the Project. Except as provided in subsection 3407(d)(2)(A) of the CVPIA, the Charges for Project Water transferred, exchanged, or otherwise disposed of, by the Contractor shall be the Contractor's Charges specified in Exhibit D. If the Contractor is receiving lower Rates and Charges because of inability to pay and is transferring, exchanging, or otherwise disposing of Project Water to another entity whose Rates and Charges are not adjusted due to inability to pay, the Rates and Charges for transferred, exchanged, or otherwise disposed of Project Water shall be the Contractor's Rates and Charges unadjusted for ability to pay.

(i) Pursuant to the Act of October 27, 1986 (100 Stat. 3050), the Contracting Officer is authorized to adjust determinations of ability to pay every five years.

(j) Each payment to be made pursuant to subdivisions (a) and (c) of this Article shall be made at the office of the Bureau of Reclamation, MP Region: Mid-Pacific,

P.O. Box 894242, Los Angeles, CA 90189-4242, or at such other place as the United States may designate in a written notice to the said Contractor. Payments shall be made by cash transaction, wire, or any other mechanism as may be agreed to in writing by the Contractor and the Contracting Officer. In the event there should be a default in the payment of the amount due, the delinquent payment provisions of Article 13 shall apply. The Contractor shall not be relieved of the whole or any part of its said obligation by, on account of, or notwithstanding, as the case may be:

(1) Its failure, refusal, or neglect to divert 75 percent of the quantity of Project Water shown on Exhibit A;

(2) The default in payment to it by any water user of assessments, tolls, or other charges levied by or owing to said Contractor;

(3) Any judicial determination that any assessment, toll, or other charge referred to in subsection 8(c)(2) of this Settlement Contract is irregular, void, or ineffectual; or

(4) Any injunctive process enjoining or restraining the Contractor from making or collecting any such assessment, toll, or other charge referred to in subsection 8(c)(2) of this Settlement Contract.

AGREEMENT ON WATER QUANTITIES

9. (a) During the term of this Settlement Contract and any renewals thereof:

(1) It shall constitute full agreement as between the United States and the Contractor as to the quantities of water and the allocation thereof between Base Supply and Project Water which may be diverted by the Contractor from the Sacramento River for beneficial use on the land shown on Exhibit B from April 1 through October 31, which said diversion, use,

and allocation shall not be disturbed so long as the Contractor shall fulfill all of its obligations hereunder;

(2) Neither party shall claim any right against the other in conflict with the provisions of Article 9(a)(1) hereof.

(b) Nothing herein contained is intended to or does limit rights of the Contractor against others than the United States or of the United States against any person other than the Contractor; Provided, however, that in the event the Contractor, the United States, or any other person shall become a party to a general adjudication of rights to the use of water of the Sacramento River system, this Settlement Contract shall not jeopardize the rights or position of either party hereto or of any other person and the rights of all such persons in respect to the use of such water shall be determined in such proceedings the same as if this Settlement Contract had not been entered into; and if final judgment in any such general adjudication shall determine that the rights of the parties hereto are different from the rights as assumed herein, the parties shall negotiate an amendment to give effect to such judgment. In the event the parties are unable to agree on an appropriate amendment they shall, within 60 days of determining that there is an impasse, employ the services of a neutral mediator, experienced in resolving water rights disputes, to assist in resolving the impasse. The cost of the mediation will be shared equally. A failure to reach agreement on an amendment within 60 days of the end of mediation will cause the immediate termination of this Settlement Contract.

(c) In the event that the California State Water Resources Control Board or a court of competent jurisdiction issues a final decision or order modifying the terms and conditions of the water rights of either party to this Settlement Contract in order to impose Bay-Delta water quality obligations, the Contractor and the United States shall promptly meet to

455 determine whether or not to modify any of the terms of this Settlement Contract to comply with
456 the final decision or order, including, but not limited to, the applicability of the rescheduling
457 charge in Article 3(c)(1) of this Settlement Contract. If within 60 days of the date of the issuance
458 of the final decision or order the parties are not able to reach agreement regarding either the need
459 to modify this Settlement Contract or the manner in which this Settlement Contract is to be
460 modified, the parties shall promptly retain a neutral mediator, experienced in resolving water
461 right disputes, to assist the parties in resolving their dispute. The cost of the mediator shall be
462 shared equally. In the event that either of the parties to this Settlement Contract determines that
463 the parties will not be able to develop mutually-agreeable modification(s) to this Settlement
464 Contract even with the assistance of a mediator, either of the parties to this Settlement Contract
465 may attempt to resolve the impasse by seeking appropriate judicial relief including, but not
466 limited to, filing a general adjudication of the rights to the use of water in the Sacramento River
467 system. The foregoing provisions of this sub-article shall only apply to the incremental
468 obligations contained within a final decision or order of the State Water Resources Control
469 Board that reflects a modification to the obligations imposed in State Water Resources Control
470 Board Revised Water Rights Decision 1641 dated March 15, 2000, and its associated 1995 Water
471 Quality Control Plan which, taken together, will be considered the baseline for the application of
472 the provisions of this sub-article.

473 (d) In the event this Settlement Contract terminates, the rights of the parties to
474 thereafter divert and use water shall exist as if this Settlement Contract had not been entered into;
475 and the fact that as a compromise settlement of a controversy as to the respective rights of the
476 parties to divert and use water and the yield of such rights during the term hereof, this Settlement
477 Contract places a limit on the Contract Total to be diverted annually by the Contractor during the

Settlement Contract term and segregates it into Base Supply and Project Water shall not jeopardize the rights or position of either party with respect to its water rights or the yield thereof at all times after the Settlement Contract terminates. It is further agreed that the Contractor at all times will first use water to the use of which it is entitled by virtue of its own water rights, and neither the provisions of this Settlement Contract, action taken thereunder, nor payments made thereunder to the United States by the Contractor shall be construed as an admission that any part of the water used by the Contractor during the term of this Settlement Contract was in fact water to which it would not have been entitled under water rights owned by it nor shall receipt of payments thereunder by the United States from the Contractor be construed as an admission that any part of the water used by the Contractor during the term of this Settlement Contract was in fact water to which it would have been entitled under water rights owned by it.

MEASUREMENT OF WATER

10. (a) All water diverted by the Contractor from the Sacramento River will be diverted at the existing point or points of diversion shown on Exhibit A or at such other points as may be mutually agreed upon in writing by the Contracting Officer and the Contractor.

(b) All water diverted from the Sacramento River pursuant to this Settlement Contract will be measured or caused to be measured by the United States at each point of diversion with existing equipment or equipment to be installed, operated, and maintained by the United States, and/or others, under contract with and at the option of the United States. The equipment and methods used to make such measurement shall be in accordance with sound engineering practices. Upon request of the Contractor, the accuracy of such measurements will be investigated by the Contracting Officer and any errors appearing therein will be corrected.

(c) The right of ingress to and egress from all points of diversion is hereby granted to all authorized employees of the United States. The Contractor also hereby grants to the United States the right to install, operate, maintain, and replace such equipment on diversion or carriage facilities at each point of diversion as the Contracting Officer deems necessary.

(d) The Contractor shall not modify, alter, remove, or replace diversion facilities or do any other act which would alter the effectiveness or accuracy of the measuring equipment installed by the United States or its representatives unless and until the Contracting Officer has been notified with due diligence and has been given an opportunity to modify such measuring equipment in such manner as may be necessary or appropriate. In the event of an emergency the Contractor shall notify the United States within a reasonable time thereafter as to the existence of the emergency and the nature and extent of such modification, alteration, removal, or replacement of diversion facilities.

(e) The Contractor shall pay the United States for the costs to repair, relocate, or replace measurement equipment when the Contractor modifies, alters, removes, or replaces diversion or carriage facilities.

(f) Contractor and Contracting Officer shall develop a mutually agreeable surface water delivery water measurement program which shall be implemented by the Contractor, and such measurement program shall be consistent with the conservation and efficiency criteria for evaluating water conservation plans as provided in Article 29(a).

(g) All new surface water delivery systems installed within the lands delineated on Exhibit B after the effective date of this Settlement Contract shall also comply with the measurement provisions described in this Article.

(h) The Contractor shall inform the Contracting Officer on or before the 10th calendar day of each month of the quantity of Contract Total diverted or furnished for agricultural and municipal and industrial purposes during the preceding month.

RULES AND REGULATIONS

11. The parties agree that the delivery of Project Water for irrigation use or use of Federal facilities pursuant to this Settlement Contract is subject to Federal Reclamation law, including but not limited to, the Reclamation Reform Act of 1982 (43 U.S.C. 390aa et seq.), as amended and supplemented, and the rules and regulations promulgated by the Secretary of the Interior under Federal Reclamation law.

GENERAL OBLIGATION--BENEFITS CONDITIONED UPON PAYMENT

12. (a) The obligation of the Contractor to pay the United States as provided in this Settlement Contract is a general obligation of the Contractor notwithstanding the manner in which the obligation may be distributed among the Contractor's water users and notwithstanding the default of individual water users in their obligations to the Contractor.

(b) The payment of Charges becoming due hereunder is a condition precedent to receiving benefits under this Settlement Contract. The United States shall not make water available to the Contractor through Project facilities during any period in which the Contractor may be in arrears in the advance payment of water Rates due the United States. The Contractor shall not furnish water made available pursuant to this Settlement Contract for lands or parties which are in arrears in the advance payment of water rates levied or established by the Contractor.

(c) With respect to subdivision (b) of this Article, the Contractor shall have no obligation to require advance payment for water Rates which it levies.

CHARGES FOR DELINQUENT PAYMENTS

13. (a) The Contractor shall be subject to interest, administrative and penalty charges on delinquent installments or payments. When a payment is not received by the due date, the Contractor shall pay an interest charge for each day the payment is delinquent beyond the due date. When a payment becomes 60 days delinquent, the Contractor shall pay an administrative charge to cover additional costs of billing and processing the delinquent payment. When a payment is delinquent 90 days or more, the Contractor shall pay an additional penalty charge of six percent per year for each day the payment is delinquent beyond the due date.

Further, the Contractor shall pay any fees incurred for debt collection services associated with a delinquent payment.

(b) The interest charge rate shall be the greater of the rate prescribed quarterly in the Federal Register by the Department of the Treasury for application to overdue payments, or the interest rate of one-half of one percent per month prescribed by Section 6 of the Reclamation Project Act of 1939 (Public Law 76-260). The interest charge rate shall be determined as of the due date and remain fixed for the duration of the delinquent period.

(c) When a partial payment on a delinquent account is received, the amount received shall be applied, first to the penalty, second to the administrative charges, third to the accrued interest, and finally to the overdue payment.

QUALITY OF WATER

14. The operation and maintenance of Project facilities shall be performed in such manner as is practicable to maintain the quality of raw water made available through such facilities at the highest level reasonably attainable as determined by the Contracting Officer. The United States does not warrant the quality of water and is under no obligation to construct or furnish water treatment facilities to maintain or better the quality of water.

WATER AND AIR POLLUTION CONTROL

15. The Contractor, in carrying out this Settlement Contract, shall comply with all applicable water and air pollution laws and regulations of the United States and the State of California, and shall obtain all required permits or licenses from the appropriate Federal, State, or local authorities.

EQUAL OPPORTUNITY

16. During the performance of this Settlement Contract, the Contractor agrees as follows:

(a) The Contractor will not discriminate against any employee or applicant for employment because of race, color, religion, sex, or national origin. The Contractor will take affirmative action to ensure that applicants are employed, and that employees are treated during employment, without regard to their race, color, religion, sex, or national origin. Such action shall include, but not be limited to, the following: Employment, upgrading, demotion, or transfer; recruitment or recruitment advertising; layoff or termination, rates of payment or other

forms of compensation; and selection for training, including apprenticeship. The Contractor agrees to post in conspicuous places, available to employees and applicants for employment, notices to be provided by the Contracting Officer setting forth the provisions of this nondiscrimination clause.

(b) The Contractor will, in all solicitations or advertisements for employees placed by or on behalf of the Contractor, state that all qualified applicants will receive consideration for employment without discrimination because of race, color, religion, sex, or national origin.

(c) The Contractor will send to each labor union or representative of workers with which it has a collective bargaining agreement or other contract or understanding, a notice, to be provided by the Contracting Officer, advising the said labor union or workers' representative of the Contractor's commitments under Section 202 of Executive Order No. 11246 of September 24, 1965, as amended, and shall post copies of the notice in conspicuous places available to employees and applicants for employment.

(d) The Contractor will comply with all provisions of Executive Order No. 11246 of September 24, 1965, as amended, and of the rules, regulations, and relevant orders of the Secretary of Labor.

(e) The Contractor will furnish all information and reports required by said amended Executive Order and by the rules, regulations, and orders of the Secretary of Labor, or pursuant thereto, and will permit access to its books, records, and accounts by the Contracting Officer and the Secretary of Labor for purposes of investigation to ascertain compliance with such rules, regulations, and orders.

(f) In the event of the Contractor's noncompliance with the nondiscrimination clauses of this Settlement Contract or with any of the said rules, regulations, or orders, this Settlement Contract may be canceled, terminated, or suspended, in whole or in part, and the Contractor may be declared ineligible for further Government contracts in accordance with procedures authorized in said amended Executive Order, and such other sanctions may be imposed and remedies invoked as provided in said Executive Order, or by rule, regulation, or order of the Secretary of Labor, or as otherwise provided by law.

(g) The Contractor will include the provisions of paragraphs (a) through (g) in every subcontract or purchase order unless exempted by the rules, regulations, or orders of the Secretary of Labor issued pursuant to Section 204 of said amended Executive Order, so that such provisions will be binding upon each subcontractor or vendor. The Contractor will take such action with respect to any subcontract or purchase order as may be directed by the Secretary of Labor as a means of enforcing such provisions, including sanctions for noncompliance: Provided, however, that in the event the Contractor becomes involved in, or is threatened with, litigation with a subcontractor or vendor as a result of such direction, the Contractor may request the United States to enter into such litigation to protect the interests of the United States.

COMPLIANCE WITH CIVIL RIGHTS LAWS AND REGULATIONS

17. (a) The Contractor shall comply with Title VI of the Civil Rights Act of 1964 (42 U.S.C. 2000d), Section 504 of the Rehabilitation Act of 1975 (P.L. 93-112, as amended), the Age Discrimination Act of 1975 (42 U.S.C. 6101, et seq.) and any other applicable civil rights laws, as well as with their respective implementing regulations and guidelines imposed by the U.S. Department of the Interior and/or Bureau of Reclamation.

(b) These statutes require that no person in the United States shall, on the grounds of race, color, national origin, handicap, or age, be excluded from participation in, be denied the benefits of, or be otherwise subjected to discrimination under any program or activity receiving financial assistance from the Bureau of Reclamation. By executing this Settlement Contract, the Contractor agrees to immediately take any measures necessary to implement this obligation, including permitting officials of the United States to inspect premises, programs, and documents.

(c) The Contractor makes this agreement in consideration of and for the purpose of obtaining any and all Federal grants, loans, contracts, property discounts, or other Federal financial assistance extended after the date hereof to the Contractor by the Bureau of Reclamation, including installment payments after such date on account of arrangements for Federal financial assistance which were approved before such date. The Contractor recognizes and agrees that such Federal assistance will be extended in reliance on the representations and agreements made in this Article, and that the United States reserves the right to seek judicial enforcement thereof.

MINGLING OF CONTRACTOR'S PROJECT AND NON-PROJECT WATER

18. (a) Project Water must of necessity be transported by the Contractor to its water users by means of the same works and channels used for the transport of its non-Project Water including Base Supply. Notwithstanding such mingling of water, the provisions of Article 11 hereof shall be applicable only to Project Water, and such mingling of water shall not in any manner subject to the provisions of Article 11 hereof the Contractor's non-Project Water including Base Supply.

(b) If required in accordance with subdivision (c) of this Article, the Contractor shall install and maintain such measuring equipment and distribution facilities and maintain such records as may be necessary to determine the amounts of water delivered to Excess Lands served by the Contractor. The Contractor shall not within any month deliver to

Ineligible Lands water in excess of the non-Project Water, including Base Supply, for that month. The Contracting Officer or authorized representative shall have the right at all reasonable times to inspect such records and measuring equipment.

(c) The Contractor will not be considered in violation of the requirement that Project Water be delivered only to Eligible Lands during any month of the irrigation season that the water requirement for beneficial use on Eligible Lands for that month is equal to or in excess of the Project Water for that month as shown on Exhibit A or any revision thereof pursuant to subdivision (c) of Article 3. The water requirement for beneficial use on Eligible Lands will be determined by multiplying:

(1) the number of irrigable acres of the particular types of crops grown in that year on the acreage designated as eligible by

(2) the Unit Duties as set forth in Exhibit C attached hereto and made a part hereof, or by such other Unit Duties mutually agreed upon by the Contractor and the Contracting Officer. In order to make the computation of the water requirement for Eligible Lands, on April 1 of each Year and concurrently with its order for water for the irrigation season, the Contractor shall designate the acreage of and type of crops to be grown on its Eligible Lands that irrigation season. During any month the water requirement as above determined for crops growing on Eligible Lands during such month is equal to or in excess of the Project Water for that month as provided herein the Contractor shall not be required to measure the water delivered to Excess Lands. Any month the said water requirement is less than the amount of Project Water as provided herein, the Contractor will be required to measure water delivered to excess land in accordance with subdivision (b) hereof.

BOOKS, RECORDS, AND REPORTS

19. The Contractor shall establish and maintain accounts and other books and records pertaining to administration of the terms and conditions of this Settlement Contract, including: the Contractor's financial transactions, water supply data, and Project land and right-of-way agreements; the water users' land-use (crop census), land ownership, land-leasing and water use data; and other matters that the Contracting Officer may require. Reports thereon shall be furnished to the Contracting Officer in such form and on such date or dates as the Contracting Officer may require. Subject to applicable Federal laws and regulations, each party to this Settlement Contract shall have the right during office hours to examine and make copies of each other's books and official records relating to matters covered by this Settlement Contract.

CHANGE OF PLACE OF USE OR ORGANIZATION

20. (a) Unless the written consent of the United States is first obtained no change shall be made in the place of water use shown on Exhibit B.

(b) While this Settlement Contract is in effect, no change shall be made in the area of the Contractor as shown on its Exhibit B, by inclusion, exclusion, annexation, or detachment of lands, by dissolution, consolidation, or merger or otherwise, except upon the Contracting Officer's written consent thereto. Such consent will not be unreasonably withheld and a decision will be provided in a timely manner.

(c) In the event lands are annexed to or detached from the area of the Contractor, as provided herein, the quantity of Project Water to be diverted may be increased or decreased, as may be appropriate, pursuant to a supplemental agreement to be executed in respect thereto.

CONSOLIDATION OF CONTRACTING ENTITIES

21. Consolidation of Contractors may be approved by the Contracting Officer provided: (i) the Contracting Officer approves the form and organization of the resulting entity and the utilization by it of the Contract Total; and (ii) the obligations of the Contractors are assumed by such entity.

No such consolidation shall be valid unless and until approved by the Contracting Officer.

NOTICES

22. Any notice, demand, or request authorized or required by this Settlement Contract shall be deemed to have been given, on behalf of the Contractor, when mailed, postage prepaid, or delivered to the Area Manager, Northern California Area Office, Bureau of Reclamation, 16349 Shasta Dam Boulevard, Shasta Lake, California 96019, and on behalf of the United States, when mailed, postage prepaid, or delivered to the Board of Directors of the Natomas Central Mutual Water Company, 2601 West Elkhorn Boulevard, Rio Linda, California 95673. The designation of the addressee or the address may be changed by notice given in the same manner as provided in this Article for other notices.

ASSIGNMENT LIMITED--SUCCESSORS AND ASSIGNS OBLIGATED

23. (a) The provisions of this Settlement Contract shall apply to and bind the successors and assigns of the parties hereto, but no assignment or transfer of this Settlement Contract or any right or interest therein shall be valid until approved in writing by the Contracting Officer.

(b) The assignment of any right or interest in this Settlement Contract by either party shall not interfere with the rights or obligations of the other party to this Settlement Contract absent the written concurrence of said other party.

(c) The Contracting Officer shall not unreasonably condition or withhold his approval of any proposed assignment.

OFFICIALS NOT TO BENEFIT

24. (a) No Member of or Delegate to Congress, Resident Commissioner, or official of the Contractor shall benefit from this Settlement Contract other than as a water user or landowner in the same manner as other water users or landowners.

(b) No officer or member of the governing board of the Contractor shall receive any benefit that may arise by reason of this Settlement Contract other than as a landowner within the Contractor's Service Area and in the same manner as other landowners within the said service area.

CONTINGENT UPON APPROPRIATION OR ALLOTMENT OF FUNDS

25. The expenditure or advance of any money or the performance of any obligation of the United States under this Settlement Contract shall be contingent upon appropriation or allotment of funds. Absence of appropriation or allotment of funds shall not relieve the Contractor from any obligations under this Settlement Contract. No liability shall accrue to the United States in case funds are not appropriated or allotted.

CONFIRMATION OF SETTLEMENT CONTRACT

26. The Contractor, after the execution of this Settlement Contract, shall promptly seek to secure a decree of a court of competent jurisdiction of the State of California, if appropriate, confirming the execution of this Settlement Contract. The Contractor shall furnish the United States a certified copy of the final decree, the validation proceedings, and all pertinent supporting records of the court approving and confirming this Settlement Contract, and decreeing and adjudging it to be lawful, valid, and binding on the Contractor. This Settlement Contract shall not be binding on the United States until such final decree has been secured.

UNAVOIDABLE GROUNDWATER PERCOLATION

27. To the extent applicable, the Contractor shall not be deemed to have delivered Project Water to Excess Lands or Ineligible Lands if such lands are irrigated with groundwater that reaches the underground strata as an unavoidable result of the delivery of Project Water by the Contractor to Eligible Lands.

PRIVACY ACT COMPLIANCE

28. (a) The Contractor shall comply with the Privacy Act of 1974 (5 U.S.C. 552a) (the Act) and the Department of the Interior rules and regulations under the Act (43 CFR 2.45 et seq.) in maintaining Landholder acreage certification and reporting records, required to be submitted to the Contractor for compliance with Sections 206 and 228 of the Reclamation Reform Act of 1982 (96 Stat. 1266), and pursuant to 43 CFR 426.18.

(b) With respect to the application and administration of the criminal penalty provisions of the Act (5 U.S.C. 552a(i)), the Contractor and the Contractor's employees responsible for maintaining the certification and reporting records referenced in (a) above are considered to be employees of the Department of the Interior. See 5 U.S.C. 552a(m).

(c) The Contracting Officer or a designated representative shall provide the Contractor with current copies of the Interior Department Privacy Act regulations and the Bureau of Reclamation Federal Register Privacy Act System of Records Notice (Acreage Limitation--Interior, Reclamation-31) which govern the maintenance, safeguarding, and disclosure of information contained in the Landholder's certification and reporting records.

(d) The Contracting Officer shall designate a full-time employee of the Bureau of Reclamation to be the System Manager who shall be responsible for making decisions on denials pursuant to 43 CFR 2.61 and 2.64 amendment requests pursuant to 43 CFR 2.72. The Contractor is authorized to grant requests by individuals for access to their own records.

(e) The Contractor shall forward promptly to the System Manager each proposed denial of access under 43 CFR 2.64; and each request for amendment of records filed under 43 CFR 2.71; notify the requester accordingly of such referral; and provide the System Manager with information and records necessary to prepare an appropriate response to the requester. These requirements do not apply to individuals seeking access to their own certification and reporting forms filed with the Contractor pursuant to 43 CFR 426.18, unless the requester elects to cite the Privacy Act as a basis for the request.

WATER CONSERVATION

29. (a) Prior to the diversion of Project Water, the Contractor shall be implementing an effective water conservation and efficiency program based on the Basin-Wide Water Management Plan and/or Contractor's water conservation plan that has been determined by the Contracting Officer to meet the conservation and efficiency criteria for evaluating water conservation plans established under Federal law. The water conservation and efficiency program shall contain definite water conservation objectives, appropriate economically feasible water conservation measures, and time schedules for meeting those objectives. Continued diversion of Project Water pursuant to this Settlement Contract shall be contingent upon the Contractor's continued implementation of such water conservation program. In the event the Contractor's water conservation plan or any revised water conservation plan completed pursuant to subdivision (c) of Article 29 of this Settlement Contract have not yet been determined by the Contracting Officer to meet such criteria, due to circumstances which the Contracting Officer determines are beyond the control of the Contractor, Project Water deliveries shall be made under this Settlement Contract so long as the Contractor diligently works with the Contracting Officer to obtain such determination at the earliest practicable date, and thereafter the Contractor

immediately begins implementing its water conservation and efficiency program in accordance with the time schedules therein.

(b) The Contractor shall submit to the Contracting Officer a report on the status of its implementation of the water conservation plan on the reporting dates specified in the then existing conservation and efficiency criteria established under Federal law.

(c) At five-year intervals, the Contractor shall revise its water conservation plan to reflect the then current conservation and efficiency criteria for evaluating water conservation plans established under Federal law and submit such revised water management plan to the Contracting Officer for review and evaluation. The Contracting Officer will then determine if the water conservation plan meets Reclamation's then current conservation and efficiency criteria for evaluating water conservation plans established under Federal law.

(d) If the Contractor is engaged in direct groundwater recharge, such activity shall be described in the Contractor's water conservation plan.

(e) In order to provide incentives for water conservation, the Contractor may reduce the amount of Project Water for which payment is required under Article 8(a) in accordance with the provisions of this Article 29(e).

(1) On or before February 15 of any Water Year, the Contractor may file with Reclamation an offer to reduce Project Water use, hereinafter referred to as Offer. The Offer shall specify the maximum quantity of Project Water to be diverted by the Contractor for each month that Project Water is available for that Water Year under this Settlement Contract. The Contracting Officer shall provide the Contractor with a decision, in writing, to the Offer on or before March 15 of that Water Year. The dates specified in this Article 29(e)(1) can be changed if mutually agreed to, in writing, by the Contractor and Contracting Officer.

(2) If Reclamation accepts the Offer, the Contractor's payment obligation under Article 8(a)(1) shall be reduced to the maximum quantity of Project Water to be diverted by the Contractor as specified in the Offer. The Contractor shall not divert Project Water in excess of the quantities set forth in the Offer; Provided, however, if the Contractor's diversions of Project Water exceed the quantities set forth in the Offer, the Contractor shall pay to Reclamation the applicable Rates and Charges plus an amount equal to the applicable Rates and Charges, unadjusted for ability to pay, for each acre-foot of Project Water diverted in excess of the quantities set forth in the Offer.

(3) If Reclamation decides not to accept the Offer, the Contractor's payment obligation will remain as specified in Article 8(a)(1).

(4) The provisions of this Article 29(e) shall be in addition to and shall not affect the provisions of Article 3(e) pertaining to the sale, transfer, exchange, or other disposal of the Contract Total designated in Exhibit A.

OPINIONS AND DETERMINATIONS

30. (a) Where the terms of this Settlement Contract provide for actions to be based upon the opinion or determination of either party to this Settlement Contract, said terms shall not be construed as permitting such action to be predicated upon arbitrary, capricious, or unreasonable opinions or determinations. Both parties, notwithstanding any other provisions of this Settlement Contract, expressly reserve the right to seek relief from and appropriate adjustment for any such arbitrary, capricious, or unreasonable opinion or determination. Each opinion or determination by either party shall be provided in a timely manner. Nothing in subdivision (a) of Article 30 of this Settlement Contract is intended to or shall affect or alter the

standard of judicial review applicable under Federal law to any opinion or determination implementing a specific provision of Federal law embodied in statute or regulation.

(b) The Contracting Officer shall have the right to make determinations necessary to administer this Settlement Contract that are consistent with the provisions of this Settlement Contract, the laws of the United States and of the State of California, and the rules and regulations promulgated by the Secretary of the Interior. Such determinations shall be made in consultation with the Contractor to the extent reasonably practicable.

CONTRACTOR TO PAY CERTAIN MISCELLANEOUS COSTS

31. (a) In addition to all other payments to be made by the Contractor pursuant to this Settlement Contract, the Contractor shall pay to the United States, within 60 days after receipt of a bill and detailed statement submitted by the Contracting Officer to the Contractor for such specific items of direct cost incurred by the United States for work requested by the Contractor associated with this Settlement Contract plus indirect costs in accordance with applicable Bureau of Reclamation policies and procedures. All such amounts referred to in this Article shall not exceed the amount agreed to in writing in advance by the Contractor. This Article shall not apply to costs for routine contract administration.

(b) All advances for miscellaneous costs incurred for work requested by the Contractor pursuant to Article 31 of this Settlement Contract shall be adjusted to reflect the actual costs when the work has been completed. If the advances exceed the actual costs incurred, the difference will be refunded to the Contractor. If the actual costs exceed the Contractor's advances, the Contractor will be billed for the additional costs pursuant to Article 31 of this Settlement Contract.

WAIVER OF DEFAULT

32. The waiver by either party to this Settlement Contract as to any default shall not be construed as a waiver of any other default or as authority of the other party to continue such default or to make, do, or perform, or not to make, do, or perform, as the case may be, any act or thing which would constitute a default.

IN WITNESS WHEREOF, the parties hereto have executed this Settlement Contract as of the day and year first hereinabove written.

THE UNITED STATES OF AMERICA

APPROVED AS TO LEGAL FORM AND SUFFICIENCY
OFFICE OF REGIONAL SOLICITOR
DEPARTMENT OF THE INTERIOR

By: _____
Regional Director, Mid-Pacific Region
Bureau of Reclamation

(SEAL)

NATOMAS CENTRAL MUTUAL WATER COMPANY

By: _____
President

ATTEST:

_____
Secretary

(H:\public\Sac River Final LTRC's\2005-01-31 Natomas Central MWC Final Draft Contract with exhibits.doc)

Exhibit A

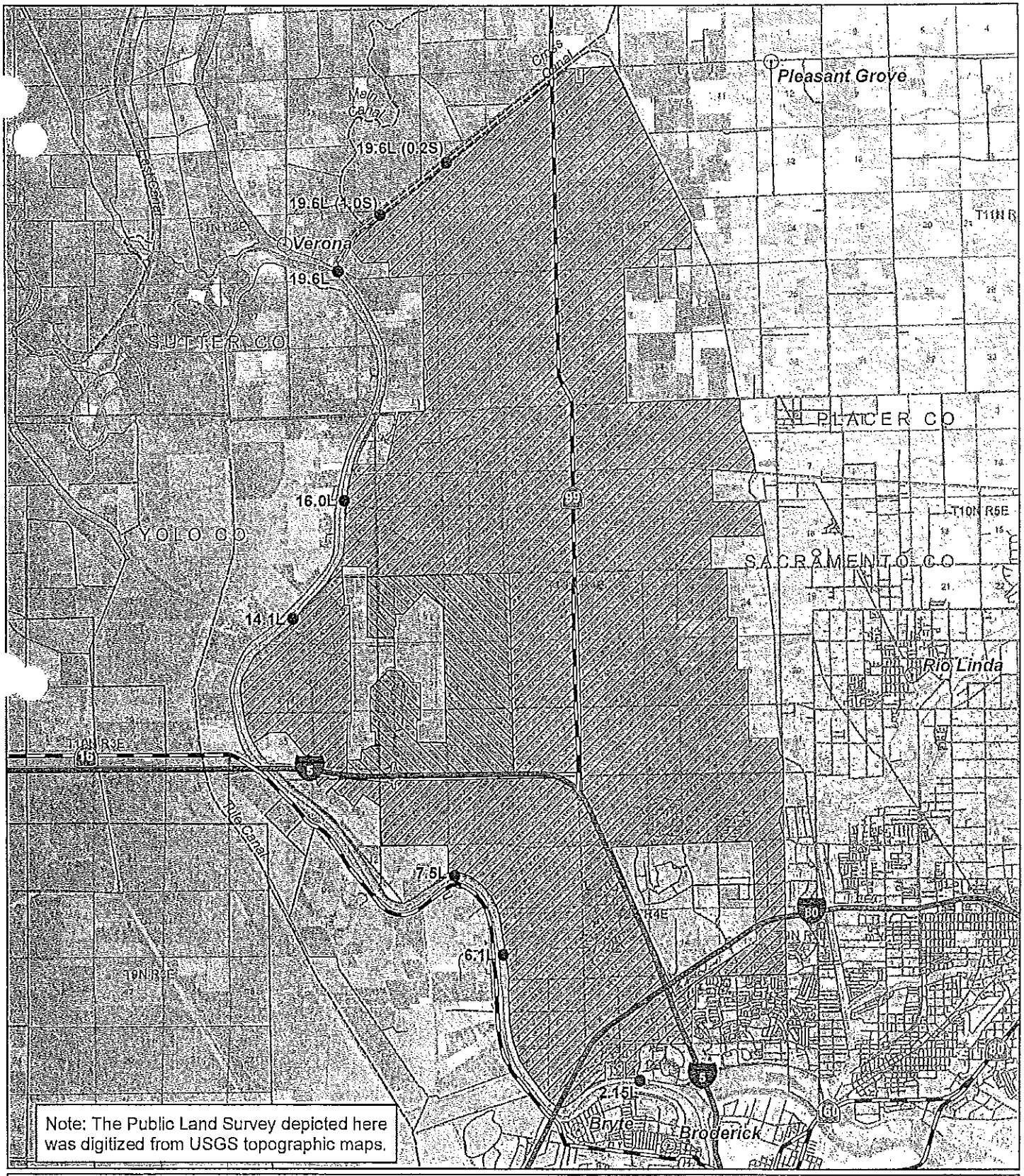
NATOMAS CENTRAL MUTUAL WATER COMPANY
Sacramento River

SCHEDULE OF MONTHLY DIVERSIONS OF WATER

	Base Supply (acre-feet)	Project Water (acre-feet)	Contract Total (acre-feet)
April	14,000	0	14,000
May	27,700	0	27,700
June	23,000	0	23,000
July	11,500	7,200	18,700
August	3,900	14,800	18,700
September	16,100	0	16,100
October	2,000	0	2,000
Total	98,200	22,000	120,200

Points of Diversion: 2.15L, 6.1L, 7.5L, 14.1L, 16.0L, 19.6L (Cross Canal 1.0S & 2.0S)

Dated: 01-31-2005



Contractor's Service Area - Ag Only
Contractor's Service Area - Ag and/or M&I
District Boundary
Point of Diversion

Natomas Central Mutual Water Co.

Contract No. 14-06-200-885A-R-1
Exhibit B

Miles
0 0.5 1 2 3

Date: 3/7/05, Revised 4/11/05
File Name: N:\d\districts\contracts\natomas_central\natomas_central.mxd

725-202-35

Exhibit C

NATOMAS CENTRAL MUTUAL WATER COMPANY
Sacramento River

UNIT DUTY

(In Acre-Feet Per Acre)

	Rice	Alfalfa and Irrigated Pasture	General Crops
June	1.70	0.80	0.60
July	1.80	1.00	0.70
August	1.70	0.80	0.70
September	0.50	0.60	0.40

Dated: 01-31-2005

Exhibit D

NATOMAS CENTRAL MUTUAL WATER COMPANY
Sacramento River
2005 Water Rates and Charges per Acre-Foot

	Cost of Service		Calculated Payment Capacity 1/
	Irrigation	M&I	Irrigation
COST OF SERVICE RATES:			
Capital Rate			
Storage	$4.57	$9.70	$0.00
O&M Rates:			
Water Marketing	$6.61	$3.89	$6.61
Storage	$5.93	$6.67	$5.93
Deficit Rates:			
Interest Bearing	$0.00	$0.00	$0.00
CFO/PFR Adjustment Rate 2/	$0.00	$0.00	$0.00
TOTAL	$17.11	$20.26	$12.54
RESCHEDULING FEE:	$5.59	$8.19	$5.59
FULL-COST RATES:			
Section 202(3) Rate is applicable to a Qualified Recipient or to a Limited Recipient receiving irrigation water on or before October 1, 1981.	$21.47	N/A	$21.47
Section 205(a)(3) Rate is applicable to a Limited Recipient that did not receive irrigation water on or before October 1, 1981.	$23.82	N/A	$23.82
CHARGES UNDER P.L. 102-575 TO THE RESTORATION FUND 3/			
Restoration Payments (3407(d)(2)(A))	$7.93	$15.87	$0.00

1/ Established pursuant to the Sutter, Natomas and Pelger MWC Payment Capacity Analysis dated October, 2001.

2/ Chief Financial Officer (CFO) adjustment and Provision for Replacement (PFR) expense is being distributed over a 5-year period beginning in FY 2003 for those contractors that requested those costs be deferred.

3/ These surcharges are payments in addition to the water rates and are determined pursuant to Title XXXIV of P.L. 102-575. Restoration Fund surcharges under P.L. 102-575 are on a fiscal year basis (10/1 -9/30). Contractors with ability to pay relief do not pay Restoration Fund charges for agricultural water.

BOARD OF DIRECTORS

NATOMAS CENTRAL MUTUAL WATER COMPANY

RESOLUTION NO. 2005-03-02

RESOLUTION APPROVING LONG-TERM RENEWAL OF CONTRACT BETWEEN THE UNITED STATES AND NATOMAS CENTRAL MUTUAL WATER COMPANY, DIVERTER OF WATER FROM SACRAMENTO RIVER SOURCES, SETTLING WATER RIGHTS DISPUTES AND PROVIDING FOR PROJECT WATER

WHEREAS Natomas Central Mutual Water Company (the "Company") has, since 1964, held a settlement contract with the United States Department of the Interior, Bureau of Reclamation ("Reclamation") bearing Contract No. 14-06-200-885A (the "Original Contract").

WHEREAS the Original Contract would have expired on March 31, 2004.

WHEREAS in advance of that expiration, the Company and Reclamation entered into negotiations for a long-term renewal of the Original Contract.

WHEREAS by Act of Congress, the Original Contract was extended for a period of two years, because the negotiations and related procedures had not been completed by March 31, 2004.

WHEREAS the negotiations and related procedures have now been completed, and Reclamation has presented to the Company the agreed-upon final form of renewal contract bearing Contract No. 14-06-200-885A-R1 (the "Renewal Contract").

WHEREAS the Board of Directors of the Company finds and determines that it is in the best interest of the Company to approve the Renewal Contract and to authorize the General Manager and staff of the Company to carry out any actions necessary to implement the Renewal Contract.

NOW, THEREFORE, BE IT RESOLVED that:

1. The Board of Directors of the Company hereby approves the Renewal Contract between Reclamation and the Company with the correction of Exhibit B to include the 428 acres of airport land into Natomas' contractual service area.

2. The General Manager and staff of the Company are authorized and directed to take any other action necessary to implement the terms of the Renewal Contract.

PASSED AND ADOPTED by unanimous written consent of the Board of Directors on April 21, 2005.

By _____
Dan F. Spangler
President, Board of Directors

By _____
Herb Niederberger, Jr.
Vice President, Board of Directors

By _____
Mark Enes
Secretary, Board of Directors

By _____
Jim Sopwith
Board of Directors

By _____
Doug Ose
Board of Directors

By _____
Michael George
Board of Directors

By _____
Rod Rosa
Board of Directors

Appendix H – Memorandum of Understanding Between the City of Folsom and Sacramento County Water Agency Concerning Folsom Sphere of Influence Area and Sharing of Freeport Project Capacity

MEMORANDUM OF UNDERSTANDING BETWEEN THE CITY OF FOLSOM AND SACRAMENTO COUNTY WATER AGENCY CONCERNING FOLSOM SPHERE OF INFLUENCE AREA AND SHARING OF FREEPORT PROJECT CAPACITY

This Memorandum of Understanding ("MOU") is entered into on _____, 2009 by and between the City of Folsom, a charter city (the "City"), and the Sacramento County Water Agency, the agency created by the Sacramento County Water Agency Act (codified at West's Water Code Appendix, §§ 66-1 to 66-55) (the "Agency"). The City and the Agency are individually referenced as a "Party" and collectively as the "Parties."

Recitals

A. On November 14, 2000, the Sacramento Local Agency Formation Commission adopted Resolution No. LAFC 1196 approving the inclusion in the City's sphere of influence of all the real property lying south of Highway 50, and bounded by Prairie City Road to the west, White Rock Road to the south and the Sacramento/El Dorado County boundary to the east (the "SOI"), comprising approximately 3,500 acres south of the City's existing limits.

B. At the November 2, 2004 election, the City's voters approved Measure W, which added a section to the City's charter that generally requires that the City, among other things, identify and implement water sources additional to the City's existing water sources before seeking to annex the SOI.

C. On December 17, 2007, South Folsom Properties, LLC ("SFP"), and Natomas Central Mutual Water Company ("Natomas Central") entered into an agreement entitled "Terms and Conditions of Purchase and Sale of Water Entitlements," under which Natomas Central agreed to assign to SFP up to 15,000 acre-feet per year ("afy") of water ("Natomas Water") to which Natomas Central has rights under a May 10, 2005 Contract Between the United States and Natomas Central Mutual Water Company,

Diverter of Water from Sacramento River Sources, Settling Water Rights Disputes and Providing for Project Water.

D. On _____, 2008, the City and SFP signed a memorandum of understanding that contemplates that SFP will assign the Natomas Water to the City for use as a new water supply in the SOI upon the completion of all legal requirements.

E. The most convenient place for the Natomas Water to be diverted from the Sacramento River for use in the SOI would be at the intake facility that the Freeport Regional Water Authority (the "Authority") is building on the River in Sacramento County just north of the community of Freeport. The most convenient manner for the Natomas Water to be conveyed from the Authority's intake to the SOI would be through conveyance facilities being constructed by the Authority. Exhibit A to this MOU depicts the location of the Authority's intake and conveyance facilities (the "FRWA Facilities"), as well as the SOI. The Agency is a member of the Authority, along with East Bay Municipal Utility District ("EBMUD"), and owns 85 million gallons per day ("mgd") of capacity in the Authority's intake and conveyance facilities ("Agency FRWA Capacity").

F. Conveying and delivering Natomas Water through the Agency's FRWA Capacity could have many potential benefits besides providing the SOI water supply required by Measure W, including without limitation augmenting the safe yield of relevant groundwater aquifers, addressing the impact of local groundwater contamination and improving the reliability of the Agency's water systems.

G. The City is preparing an environmental impact report ("EIR") for the SOI and desires to include conveyance of all or portions of the Natomas Water through the Agency FRWA Capacity as part of the project under the California Environmental Quality Act (Pub. Res. Code §§ 21000-21177 ("CEQA")) and the Agency would not object to such an EIR under the terms of this MOU.

H. The City and the Agency desire to state conditions under which they will work together toward the goal of implementing diversion and conveyance of all or portions of the Natomas Water through the Agency FRWA Capacity to the SOI and also other related matters, subject to the review of any resulting projects or agreements under CEQA and compliance with all applicable laws.

Understandings

1. Incorporation of Recitals. The foregoing recitals are incorporated by reference into this MOU's Understandings.

2. Definitions. For purposes of this MOU:

2.1. AFY. The term "afy" has the meaning stated in Recital C.

2.2. Agency. The term "Agency" has the meaning stated in this Agreement's introductory text.

2.3. Agency FRWA Capacity. The term "Agency FRWA Capacity" has the meaning stated in Recital E.

2.4. Authority. The term "Authority" has the meaning stated in Recital E.

2.5. Basin. The term "Basin" has the meaning stated in Section 3.3.2(B).

2.6. Bifurcation. The term "Bifurcation" has the meaning stated in Section 6.4.

2.7. CEQA. The term "CEQA" has the meaning stated in Recital G.

2.8. City. The term "City" has the meaning stated in this Agreement's introductory text.

2.9. City-Agency Agreement. The term "City-Agency Agreement" has the meaning stated in Section 3.

2.10. Delivery Agreement. The term "Delivery Agreement" has the meaning stated in Section 5.

2.11. EBMUD. The term "EBMUD" has the meaning stated in Recital E.

2.12. EIR. The term "EIR" has the meaning stated in Recital G.

2.13. FRWA Facilities. The term "FRWA Facilities" has the meaning stated in Recital E.

2.14. MGD. The term "mgd" has the meaning stated in Recital E.

2.15. MOU. The term "MOU" has the meaning stated in this Agreement's introductory text.

2.16. Natomas Central. The term "Natomas Central" has the meaning stated in Recital C.

2.17. Natomas Water. The term "Natomas Water" has the meaning stated in Recital C.

2.18. SFP. The term "SFP" has the meaning stated in Recital C.

2.19. SOI. The term "SOI" has the meaning stated in Recital A.

2.20. Sunk Costs. The term "Sunk Costs" has the meaning stated in Section 6.2.

3. Cooperation and SOI EIR. The Parties will cooperate during this MOU's term to develop mutually-agreeable conditions under which the City may convey Natomas Water through the Agency FRWA Capacity, with the common goal of eventually executing a binding agreement concerning that subject ("City-Agency Agreement"). Consistent with this cooperation, and to expedite the Parties' ultimate approval of a City-Agency Agreement, the Parties agree that the City may include conveyance of up to 10,000 afy of Natomas Water through the Agency FRWA Capacity at a maximum daily capacity of 13 mgd as a project component in the City's EIR for the SOI and the related water supply assessment under Water Code sections 10910-10912,.

3.1. Uncertainty and *Vineyard* Analysis. The Parties acknowledge that the availability of 13 mgd for the conveyance of Natomas Water through the Agency FRWA Capacity is subject to many factors and may range as low as 6.5 mgd. The Parties accordingly agree that the City's SOI EIR will need to address water-supply uncertainty in that EIR in accordance with *Vineyard Area Citizens for Responsible Growth, Inc. v. City of Rancho Cordova* (2007) 40 Cal.4th 412. The Parties intend that the ultimate City-Agency Agreement will specify the portion of the Agency FRWA Capacity that the City may use to convey Natomas Water in terms of both mgd (daily maximum use) and afy (annual maximum use).

3.2. Raw and Treated Water Alternatives. The Parties are discussing the possibility that conveyance of Natomas Water through the Agency FRWA Capacity to the SOI could include the Agency treating that Natomas Water to drinking-water standards before delivering it to the City. The Parties accordingly agree that the City's SOI EIR will include project alternatives that involve the Agency treating the Natomas Water to drinking-water standards, and associated facilities, pursuant to section 15126.6

of the CEQA Guidelines. This MOU uses the term "CEQA Guidelines" to refer to sections 15000-15387 of title 14 of the California Code of Regulations. The Parties intend that the ultimate City-Agency Agreement will specify whether the Agency will provide drinking-water treatment for the Natomas Water and, if such treatment is to be provided, how.

3.3. Parties' Criteria. Each Party understands that the other Party has identified certain criteria that may affect its ability to ultimately execute a City-Agency Agreement, including without limitation: (A) the amount of Agency FRWA Capacity that the Agency can commit to diverting and conveying Natomas Water; and (B) the costs that the City can pay for using Agency FRWA Capacity.

3.3.1. City Criteria. The City's criteria may include, without limitation:

(A) Ensuring adequate and reliable water supplies for, and minimizing costs to, the potential City residents who would live in the SOI.

(B) Successfully integrating the operation of the City's water system with the water systems associated with the City's use of the Natomas Water and the Agency FRWA Capacity.

(C) Successfully addressing impacts of the contamination of groundwater aquifers within the City's water service area.

ANY OTHER CITY-SPECIFIC CRITERIA?

3.3.2. Agency Criteria. The Agency's criteria may include, without limitation:

(A) The delivery of water to improve system reliability for Agency customers.

(B) The protection of the Sacramento County Central Groundwater Basin (the "Basin") by maintaining the basin balance through facilitating conjunctive use.

(C) Addressing the impacts of groundwater contamination in the basin through the recovery of treated groundwater.

(D) The minimization of Agency capital and operational costs for the FRWA intake and conveyance facilities.

(E) Opportunities to provide regional water supply benefit to additional agencies consistent with approved plans and programs.

(F) Energy savings through possible power curtailments and other related opportunities.

3.3.3. Joint Criteria. The criteria that both the City and the Agency may consider may include, without limitation:

(A) The need for a water supply for use within the SOI prior to the availability of Natomas Water within the SOI.

(B) The effect of any state legislation concerning water conservation that takes effect on or after January 1, 2010.

(C) Potential projects under Section 4 below.

4. Related Projects.

4.1. Coordinated Analyses. The Parties will prepare coordinated analyses of the following factors that may affect the availability of Agency FRWA Capacity to convey Natomas Water: (A) the Parties' respective water sources that are available to serve the SOI or the Agency's Zone 40, as well as the amounts of water available from those sources; and (B) methods of optimizing facilities operations for regional benefit.

4.2. Non-Potable Water. The Parties are developing plans to implement non-potable water supplies for uses that do not require potable water within the Parties' relevant service areas, namely the SOI for the City and Zone 40 for the Agency. The Parties intend that the following conditions concerning non-potable water will be included in their ultimate City-Agency Agreement:

(A) The City will require that a non-potable water service system be installed in the SOI.

(B) The City will apply non-potable water to its own properties like medians and parks in the SOI in accordance with the non-potable water use policies set by the Agency and the City in their respective service areas.

(C) The City will not be required to apply, or to require the application of, non-potable water for any indoor use even if the Agency's present or future non-potable water policy requires such indoor use of non-potable water.

(D) The City will be responsible for acquiring non-potable water supplies for use in the SOI.

4.3. Conjunctive Use. The City and the Agency will jointly study potential conjunctive use projects designed to augment water supplies within the Basin by: (A) direct injection or percolation of surface water into the Basin's aquifers; (B) in-lieu recharge involving delivery of surface water to groundwater users to reduce pumping from the Basin's aquifers; or (C) other integrated uses of groundwater and surface water that are agreeable to the Parties. The City will pay for this study, as well any resulting pilot projects that are necessary to implement this MOU.

4.4. Environmental Project. The City and the Agency will jointly investigate the viability of environmentally beneficial projects that could benefit the region.

5. Term and Consistency with FRWA Agreements. The term of the City-Agency Agreement will be the same as the term of the FRWA Agreement for Delivery of Water, dated _____, between the Agency and EBMUD ("Delivery Agreement"). If a party to the Delivery Agreement terminates that Agreement according to its terms, then the City-Agency Agreement will terminate at the same time.

5.1. Agreement Extension. If the Authority Board of Directors elects to extend the Delivery Agreement's term, then the City-Agency Agreement will be automatically extended for the same term as the Delivery Agreement. If the Authority Board of Directors elects not to extend the Delivery Agreement's term and EBMUD and the Agency instead decide to negotiate a successor to the Delivery Agreement, then the City-Agency Agreement will be extended for the term of that successor agreement and will be amended to be consistent with that successor agreement.

5.2. Dissolution of Authority. If the Authority ever dissolves, then the City will retain its right to use the Agency FRWA Capacity to divert and convey Natomas Water under the City-Agency Agreement. The Agency will ensure that any new governance arrangements for the Authority will incorporate the City's rights to use the Agency FRWA Capacity. Upon the Authority's dissolution, the City and the Agency

will renegotiate the City-Agency Agreement to adjust the City's obligation to pay operations and maintenance costs associated with the City's use of the Agency FRWA Capacity to reflect any changes to the operation of the FRWA Facilities generally.

6. Costs of City Use of Agency FRWA Capacity. If the City and the Agency sign a City-Agency Agreement, then it will reflect the following cost-allocation terms.

6.1. Feasibility Studies. The City will pay all costs for technical evaluations to determine whether conveying the Natomas Water through the Agency FRWA Capacity is technically feasible, including without limitation all costs of modifying the Agency's pipelines to accommodate any new conveyance facilities desired by the City.

6.2. Proportionate Sunk Costs. The City will pay a share of the total costs that the Agency has incurred to implement the FRWA Facilities ("Sunk Costs") that is proportionate to the share of the Agency FRWA Capacity that the City-Agency Agreement authorizes the City to use. The Sunk Costs include the Agency's planning, design and construction costs for the FRWA Facilities, but do not include the Agency's costs to acquire water that the Agency conveys through the FRWA Facilities.

6.3. Implementation Costs. The City will pay all costs associated with integrating any new facilities that the City will construct into the facilities by which the Agency conveys water from the FRWA Facilities. The costs for which the City will be responsible under this Section 6.3 will include, without limitation: (A) design costs; (B) construction costs; (C) technical modification costs (including any costs associated with modifying the FRWA Facilities); and (D) transaction costs (including environmental compliance costs). The City will be responsible for obtaining all permits associated with the implementation of any City-Agency Agreement and preparing all environmental documents required for such implementation, including without limitation the SOI EIR. The Parties acknowledge that the City's SOI EIR also will serve as an environmental impact statement under the National Environmental Policy Act.

6.4. City Delivery Costs. Unless otherwise agreed in the City-Agency Agreement, the City shall be responsible for constructing all facilities necessary for, and all costs associated with, the conveyance of water from the point at which the Agency delivers Natomas Water conveyed through the Agency FRWA Capacity into the City's control (the "Bifurcation") to the SOI or any other location where the City will use the Natomas Water. The costs for which the City will be responsible under this Section 6.4 will include, without limitation, feasibility-study, design, permitting, environmental-documentation and construction costs. The City and the Agency believe that it will be necessary to secure rights of way for the City to deliver water from the Bifurcation to the SOI or any other location where the City will use the Natomas Water.

6.5. Operations and Maintenance Costs. In proportion to the City's partial use of the capacity of the Agency FRWA Capacity and, if separate, the FRWA Facilities, the City will pay a share of the total fixed and variable operation and maintenance costs (as defined in the Delivery Agreement) for the facilities associated with the Agency FRWA Capacity and, if separate, for the FRWA Facilities. The Parties acknowledge that the energy costs associated with operating those facilities, including without limitation "peaking" energy costs, may be a special category of operations and maintenance costs that may require special treatment in the City-Agency Agreement. The Agency will invoice the City monthly for all costs that the Agency incurs for its operation and maintenance of the portion of the Agency FRWA Capacity through which the City conveys Natomas Water, including both fixed and variable operations and maintenance costs as defined in the Delivery Agreement.

7. Delivery Scheduling. Under any City-Agency Agreement and by February 15 of each year, the City will deliver to the Agency a schedule of monthly deliveries of Natomas Water that the City requests for the fiscal year beginning the following July 1.

8. Contacts. For administration of this MOU, the persons designated as each Party's contact is as follows:

City

Kenneth V. Payne, Utilities Director
City of Folsom
50 Natoma Street
Folsom, California 95630
(916) 355-7272

Agency

Either Party may change its contact person or information at any time by giving written notice of the change to the other Party.

9. Modification. The Parties may amend this MOU through any writing approved by each Party's legally authorized representative.

10. Not a Binding Agreement. This MOU is not a binding agreement between the Parties, but rather is an expression of the Parties' intent concerning their respective roles concerning the potential conveyance of Natomas Water through Agency FRWA Capacity.

11. Compliance with CEQA. Nothing in this MOU or any other agreement between the City and the Agency: (A) commits either Party to any particular decision regarding the development of any particular project; (B) confers any vested rights on either Party; or (C) restricts the City's or the Agency's discretion with respect to any activity or project developed in accordance with this MOU. In addition, the Parties intend that CEQA, and all other applicable environmental compliance laws, will be fully complied with prior to any decisions with respect to the Natomas Water or the City obtaining any rights in the Agency FRWA Capacity. (See *Concerned McCloud Citizens v. McCloud Community Services Dist.* (2007) 147 Cal.App.4th 181.)

12. Signatures and Counterparts. This MOU may be executed with signatures via facsimiles or signatures scanned and transmitted in Portable Document Format. This MOU may be executed in counterparts, each of which shall be deemed an original, and all of which taken together shall constitute one original MOU.

The foregoing is approved by the Parties as of the date first written above.

CITY OF FOLSOM

By: _____
Kerry L. Miller
City Manager

Attest:

By: _____
Christa Schmidt
City Clerk

Approved as to content:

By: _____
Kenneth V. Payne
Utilities Director

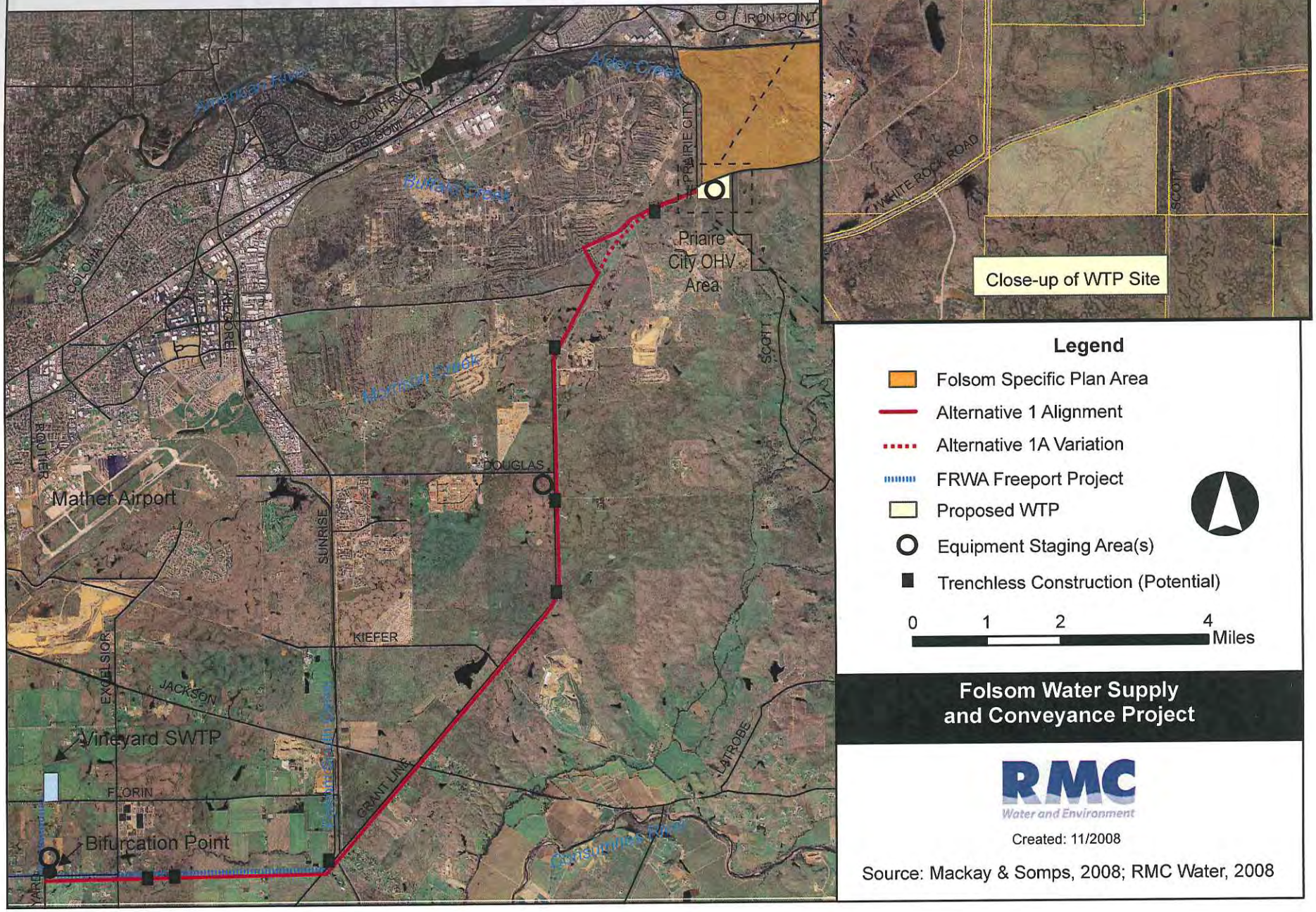
Approved as to form:

By: _____
Bruce Cline
City Attorney

SACRAMENTO COUNTY WATER AGENCY

Appendix I – Folsom Water Supply Conveyance Project Conveyance Alternatives

Figure 2-5
Alignment Alternative 1 & 1A



Off-site Water Facility Alternatives 2, 2A, and 2B

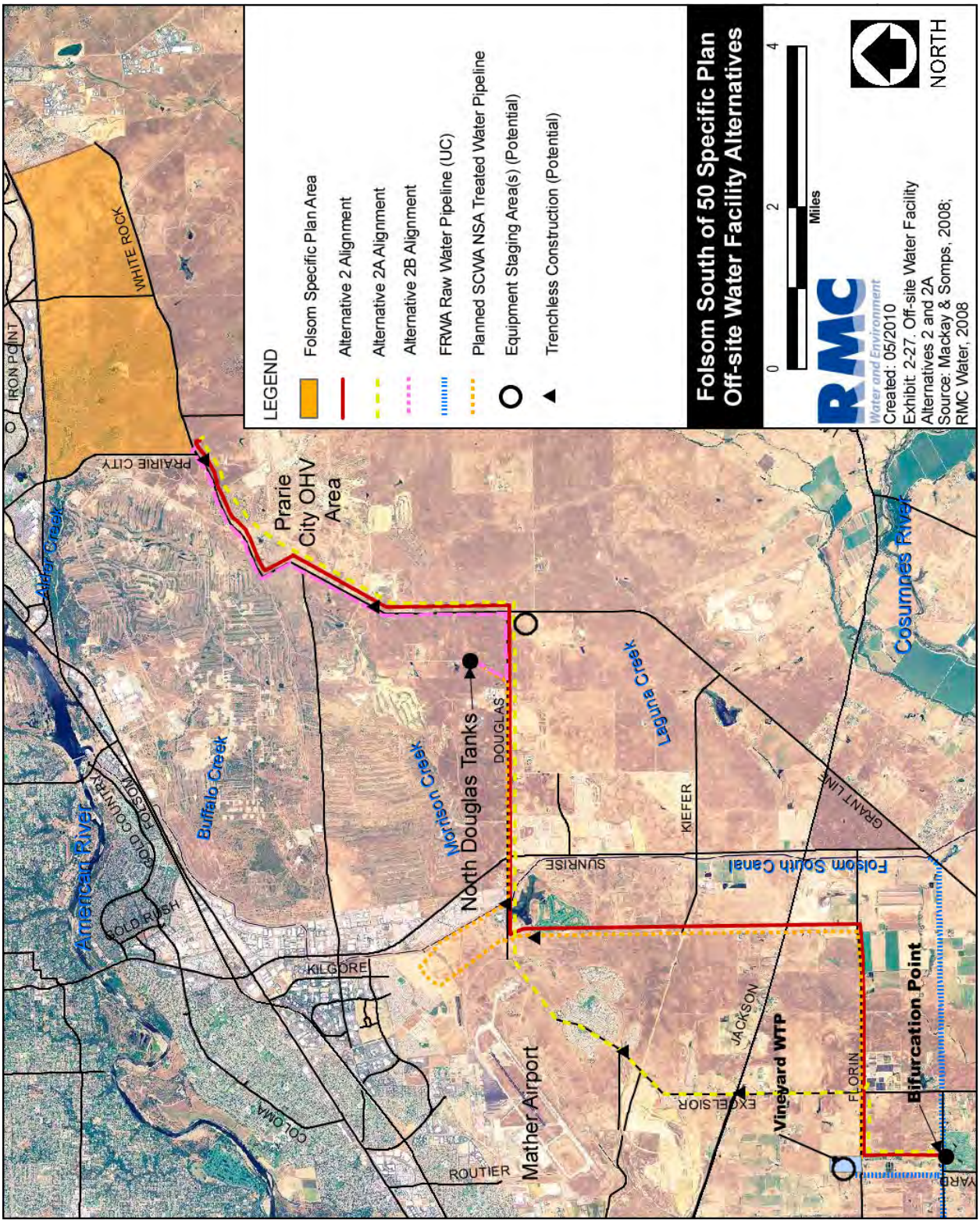
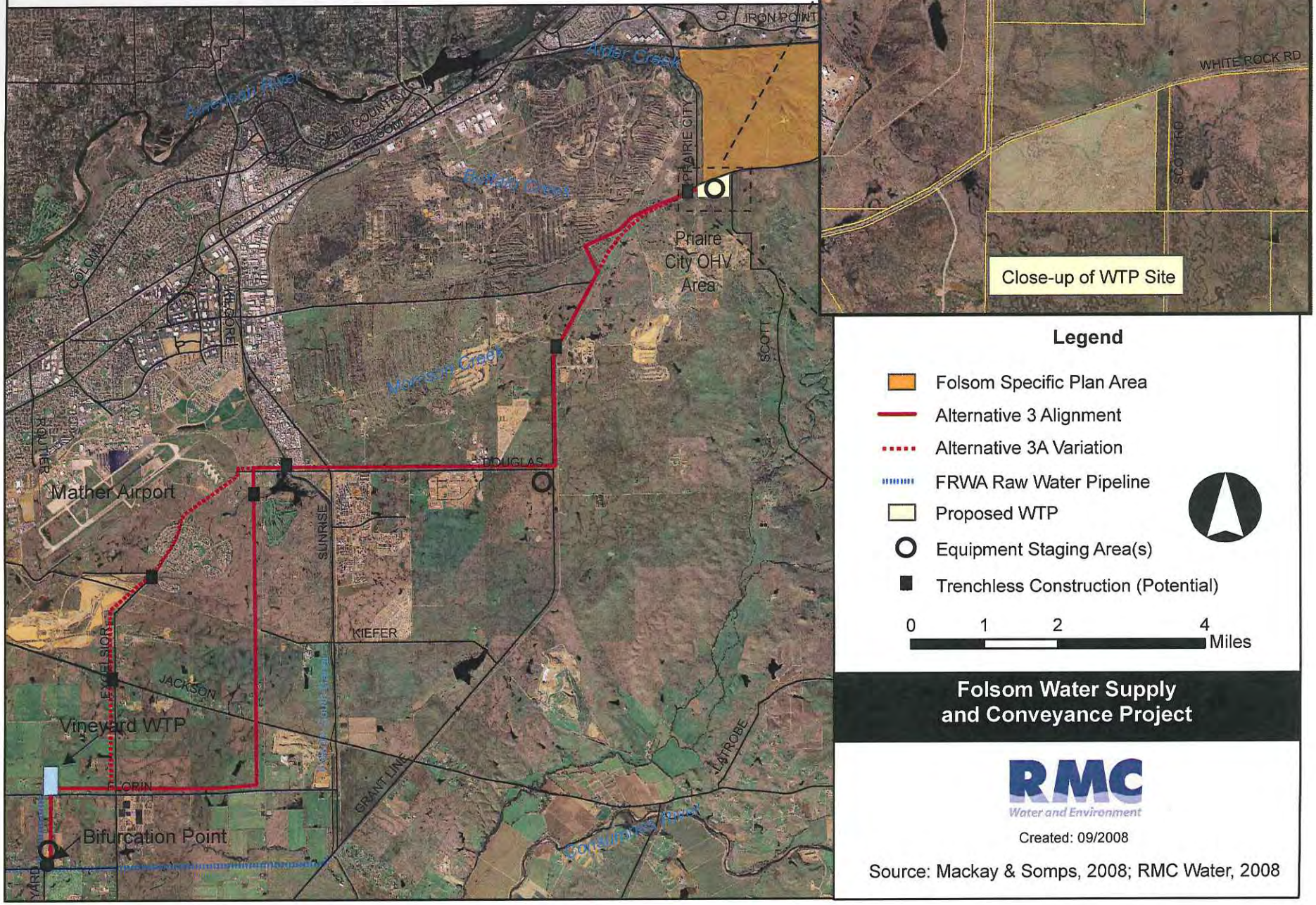


Figure 2-8
Alignment Alternatives 3 & 3A



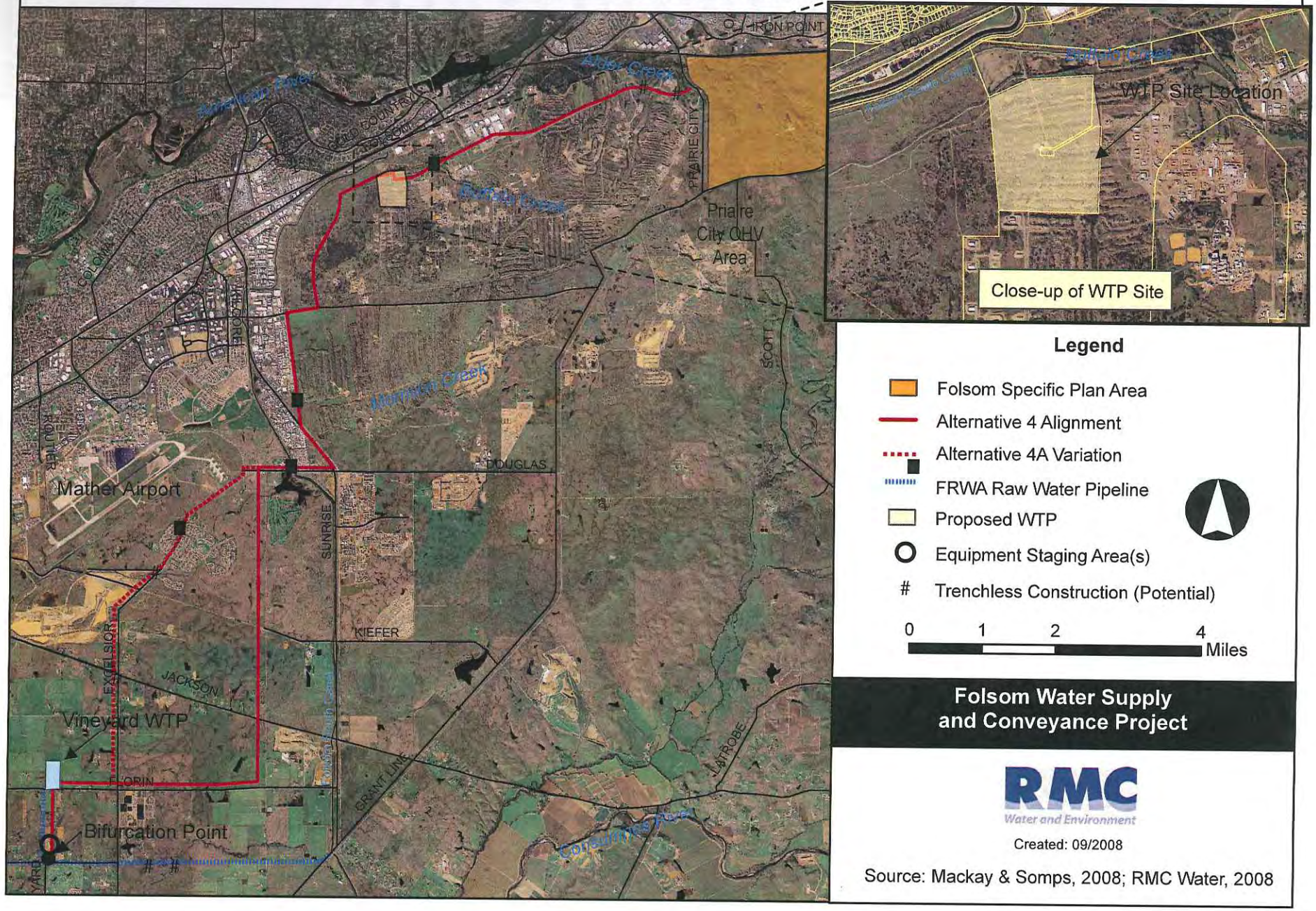
Folsom Water Supply and Conveyance Project

RMC Water and Environment

Created: 09/2008

Source: Mackay & Somps, 2008; RMC Water, 2008

Figure 2-9
Alignment Alternative 4 & 4A



Appendix J – Regulatory Requirements, Permits and Authorizations for Project Facilities

1.6.3 REGULATORY REQUIREMENTS, PERMITS, AUTHORIZATIONS, AND APPROVALS FOR "LAND" AND "WATER"

The following list identifies permits and other approval actions and authorizations needed from Federal, state, regional, and local agencies for which this EIR/EIS may be used during these agencies' decision-making processes. The following may be under the purview of regulatory agencies other than the lead agencies.

FEDERAL ACTIONS/PERMITS

- **U.S. Army Corps of Engineers:** Department of the Army permit under Section 404 of the CWA for discharges of dredge or fill material into Waters of the United States. Consultation for impacts on cultural resources pursuant to Section 106 of the National Historic Preservation Act. Consultation for impacts on Federally listed species pursuant to Section 7 of the ESA.

- **U.S. Bureau of Reclamation:** approval of Assignment of 8,000 AFY from NCMWC to City of Folsom, Water Service Contract Amendment for Change in Water Supply Delivery Schedule from Agriculture to M&I, and approval of an Encroachment Permit for Folsom South Canal Crossing.

- **U.S. Environmental Protection Agency:** reviewing the EIS, filing, and noticing; concurrence with Section 404 CWA permit.

- **U.S. Fish and Wildlife Service:** ESA consultation and issuance of incidental-take authorization for the take of Federally listed endangered and threatened species.

- **National Marine Fisheries Service:** ESA consultation and issuance of incidental-take authorization for the take of Federally listed endangered and threatened species.

STATE ACTIONS/PERMITS

- **California Department of Education:** approval of new school sites for which state funding is sought.

- **California Department of Fish and Game, Sacramento Valley—Central Sierra Region:** California Endangered Species Act (CESA) consultation and issuance of take authorization (if needed) (California Fish and Game Code Section 2081), streambed alteration agreement (California Fish and Game Code Section 1602), and protection of raptors (California Fish and Game Code Section 3503.5).

- **California Department of Transportation:** encroachment permits.

- **Central Valley Regional Water Quality Control Board (Region 5):** National Pollutant Discharge Elimination System (NPDES) construction stormwater permit (NOI to proceed under General Construction Permit) for disturbance of more than 1 acre; discharge permit for stormwater; general order for dewatering; and Section 401 CWA certification or waste discharge requirements; Clean Water Act, Section 401 Water Quality Certification; NPDES permit coverage for hydrostatic testing of pipeline (coverage expected under General Order for Low Threat Discharges to Surface Water)

- **State Historic Preservation Officer (SHPO):** approval of a Programmatic Agreement and/or MOU for Section 106 compliance with the National Historic Preservation Act.

- **California Department of Public Health:** approval of an amendment to the City's Public Water System Permit.

REGIONAL AND LOCAL ACTIONS/PERMITS

- **Sacramento Local Agency Formation Commission:** approval of annexation to the City of Folsom.

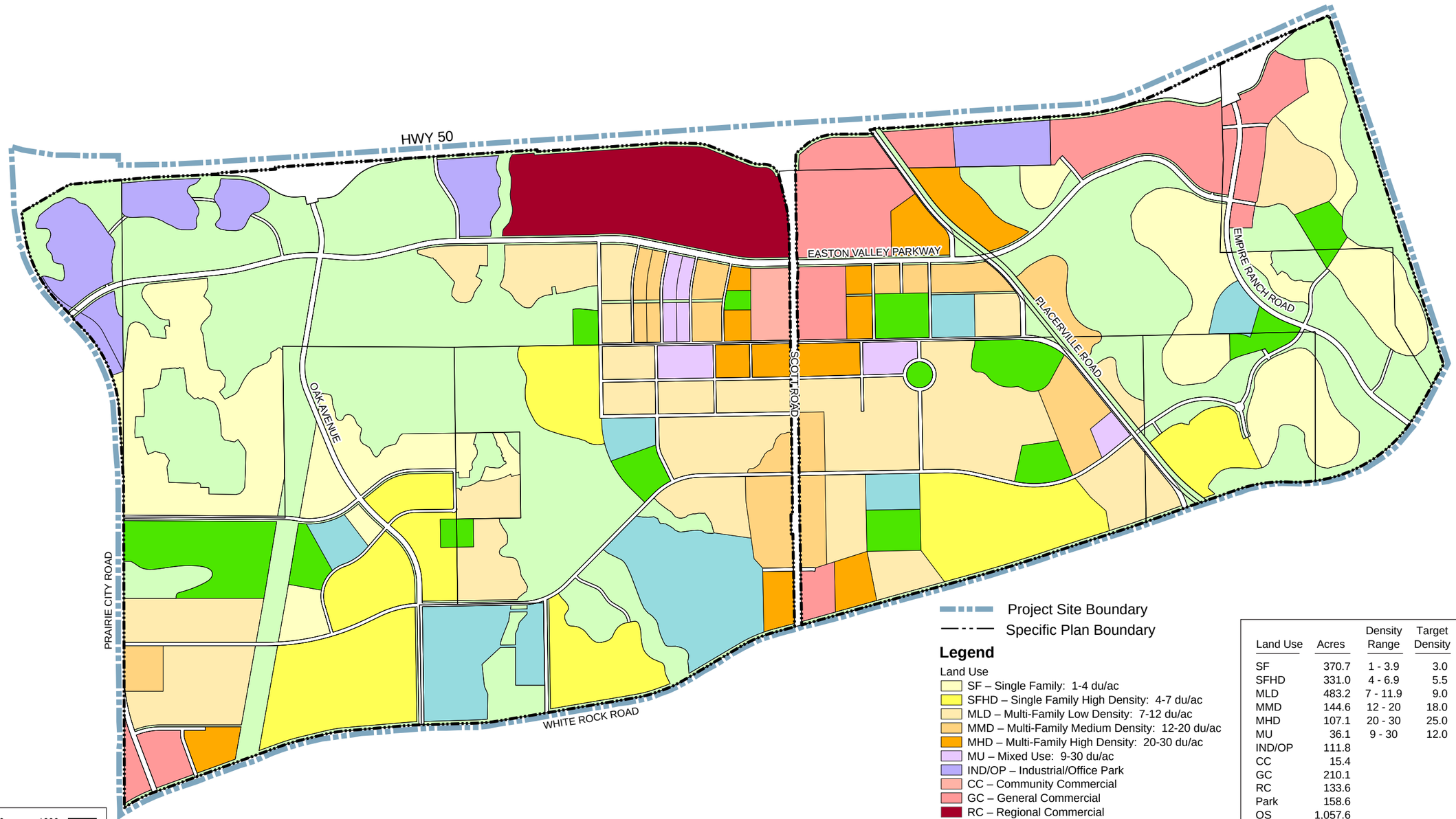
- **Sacramento Metropolitan Air Quality Management District:** authority to construct (for devices that emit air pollutants), health risk assessment, and Air Quality Management Plan consistency determination.

- **Sacramento County Water Agency:** approval for dedicated capacity in SCWA's Freeport Project Pipeline Facility,

- **Sacramento County:** approval of roadway encroachment permit for pipeline construction, tree removal permit (if needed), rezoning, use permit, and parcel map application for new WTP, approval of grading permit.

City of Rancho Cordova: roadway encroachment permit for pipeline construction, tree removal permit (if needed), rezoning, use permit, and parcel map application for new Folsom Boulevard WTP.

Appendix K – RHA Land Use Exhibit



Project Site Boundary

Specific Plan Boundary

Legend

Land Use

- SF – Single Family: 1-4 du/ac
- SFHD – Single Family High Density: 4-7 du/ac
- MLD – Multi-Family Low Density: 7-12 du/ac
- MMD – Multi-Family Medium Density: 12-20 du/ac
- MHD – Multi-Family High Density: 20-30 du/ac
- MU – Mixed Use: 9-30 du/ac
- IND/OP – Industrial/Office Park
- CC – Community Commercial
- GC – General Commercial
- RC – Regional Commercial
- Park – Parks (Community/Neighborhood Parks)
- OS – Open Space
- School – Public/Quasi-Public
- RW – Right of Way

Land Use	Acres	Density Range	Target Density	Tot. DU
SF	370.7	1 - 3.9	3.0	1,112
SFHD	331.0	4 - 6.9	5.5	1,820
MLD	483.2	7 - 11.9	9.0	4,349
MMD	144.6	12 - 20	18.0	2,603
MHD	107.1	20 - 30	25.0	2,678
MU	36.1	9 - 30	12.0	433
IND/OP	111.8			
CC	15.4			
GC	210.1			
RC	133.6			
Park	158.6			
OS	1,057.6			
School	188.3			
RW	154.5			
TOTAL:	3,502.6			12,995

APPENDIX M2

Wanger and Bonsignore Report

Natomas Central Mutual Water Company

Water Supply Evaluation of the Potential Transfer of 10,000 acre-feet of Project Water from USBR Contact

October 31, 2007

Wagner&Bonsignore
Consulting Civil Engineers, A Corporation
444 North Third Street, Suite 325
Sacramento, CA 95814-0228
916-441-6850
916-448-3866 *fax*

Natomas Central Mutual Water Company

Water Supply Evaluation of the Potential Transfer of 10,000 acre-feet of Project Water from USBR Contact

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EXECUTIVE SUMMARY

Natomas Central Mutual Water Company's United States Bureau of Reclamation contract allows for the use of up to 22,000 acre feet of Project Water during July (7,200 acre-feet) and August (14,800 acre-feet). This report evaluates the potential impacts on water available for continuing crop irrigation after transferring up to 10,000 acre-feet of the NCMWC's Project Water to the City of Folsom.

Water demand for water diverted from the Sacramento River for irrigation within NCMWC's service area has declined in recent years due to changes in cropping patterns and improvements to its irrigation system and practices. NCMWC has become more efficient by virtue of its ability to re-use irrigation return flow and water available from its system of drains, thereby reducing its demand for water diverted from the River. This analysis evaluates the amount of water that would be available for continued irrigation of the existing cropping pattern in 2007 and an expected maximum irrigation demand represented by the cropping pattern of 2004.

The analysis is based on data obtained from the USBR for reported monthly deliveries to NCMWC for 2007 and on data developed by NCMWC to account for water pumped from its system of drains in 2007. NCMWC improved the metering of its drain pumping plants and its main river diversions in 2007 thus providing reliable data to evaluate the impacts of the transfer on water supply.

The amount of water presently under contract with USBR and the amount remaining after the proposed transfer are shown below. During a critical year, defined in the USBR contract, NCMWC will receive only 75% of its contract amount. The critical year contract amount is also shown.

USBR Contract Water Available after Transfer

(all values in acre-feet)

Month	Existing USBR Contract			Proposed Transfer	Normal Year Contract Amount Available	Critical Year Contract Available
	Base Supply	Project Water	Total			
Apr	14,000	0	14,000	0	14,000	10,500
May	27,700	0	27,700	0	27,700	20,775
Jun	23,000	0	23,000	0	23,000	17,250
Jul	11,500	7,200	18,700	3,273	15,427	11,570
Aug	3,900	14,800	18,700	6,727	11,973	8,980
Sep	16,100	0	16,100	0	16,100	12,075
Oct	2,000	0	2,000	0	2,000	1,500
Total	**98,200**	**22,000**	**120,200**	**10,000**	**110,200**	**82,650**

The following table shows the amount of water available under contract and the actual amount of water delivered by USBR to NCMWC for irrigation during the critical months of July, August, and September in 2007. The amount of water delivered in the three critical months was about 34,100 acre-feet or about 19,300 acre-feet less than the contract amount for those months. If the transfer had occurred in 2007 NCMWC would still have been able to meet its irrigation demand. Assuming the same hydrologic conditions that existed in 2007 will exist in the future, and based on the ability of NCMWC to continue to efficiently re-use irrigation tailwater and other water from its drain system, the transfer of 10,000 acre-feet of Project Water should not interfere with future irrigation demand in normal years.

2007 USBR Scheduled Contract and Reported Deliveries

(all values in acre-feet)

Month	Existing USBR Contract			2007 Reported Deliveries			Accumulated Excess Contract Water
	Base Supply	Project Water	Total	Base Supply	Project Water	Total	
Jul	11,500	7,200	18,700	11,500	4,088	15,588	3,112
Aug	3,900	14,800	18,700	3,900	9,174	13,074	8,738
Sep	16,100	0	16,100	5,472	0	5,472	19,366
Total	**31,500**	**22,000**	**53,500**	**20,872**	**13,262**	**34,134**	**19,366**

The water available in critical years was also evaluated and is summarized in the tables below. During critical years, the irrigation demand for 2004 would exceed the available supply in July by 1,827 acre-feet, in August by 894 acre-feet, and in September by 340 acre-feet. These amounts are considered to be manageable by NCMWC staff due in part to the availability of groundwater water resources to augment surface supplies when needed. It is noted that the 2004 cropping pattern represents an expected maximum demand that may not occur in the future. The critical year analysis for the 2007 cropping pattern indicates that NCMWC would be able to meet its irrigation demand after the transfer of 10,000 acre-feet.

Analysis of Critical Year Condition with 2004 Cropping Pattern
After 10,000 acre-feet Project Water Transfer

Month	Contract Available	Drain Pumps	Net Supply	Irrigation Demand	Surplus/ (Deficiency)
Jul	11,570	8,175	19,745	21,573	(1,827)
Aug	8,980	8,025	17,004	17,899	(894)
Sep	12,075	7,903	12,075	12,415	(340)
Total	**32,625**	**24,103**	**48,824**	**51,887**	**(3,061)**

Analysis of Critical Year Condition with 2007 Cropping Pattern
After 10,000 acre-feet Project Water Transfer

Month	Contract Available	Drain Pumps	Net Supply	Irrigation Demand	Surplus/ (Deficiency)
Jul	11,570	8,175	19,745	15,588	4,157
Aug	8,980	8,025	17,004	13,074	3,930
Sep	12,075	7,903	12,075	9,188	2,887
Total	**32,625**	**24,103**	**48,824**	**37,850**	**10,974**

Based on the assumptions that hydrologic conditions and irrigation practices in the general area of Natomas continue, the analysis shows that the transfer of 10,000 acre-feet of project water should not impair NCMWC's ability to continue to provide sufficient water for irrigation.

Natomas Central Mutual Water Company

Water Supply Evaluation of the Potential Transfer of 10,000 acre-feet of Project Water from USBR Contact

1.0 INTRODUCTION

1.1 Project Objectives

The Natomas Central Mutual Water Company (NCMWC) presently obtains a supply of irrigation water under contract with the United States Bureau of Reclamation (USBR). This report presents the methodology and results of an analysis of transferring 10,000 acre-feet of NCMWC of USBR project water to the City of Folsom. The study focuses on the estimated irrigation demand of the NCMWC USBR contract service area. By determining a maximum potential irrigation demand and estimating the supply available after a transfer of 10,000 acre-feet of Project Water, this study evaluates whether the remaining contract amount and other potential supplies would be sufficient to meet the irrigation demand for lands in cultivation under 2004 and 2007 cropping patterns, based on current operational capabilities.

1.2 Water Company Overview

The NCMWC place of use boundary, shown on Plate 1 as a black dashed line, encompasses about 51,000 acres within Sacramento and Sutter Counties. NCMWC operates under a settlement contract with the USBR during the months of April through October. The USBR contract service area boundary, shown on Plate 1 as a red dashed line, encompasses about 40,000 acres. Historically, the lands within the service area have been predominantly agricultural lands. Significant land use changes have occurred within the last 15 years as a result of urbanization. Most of the urbanization has occurred in the service area within Sacramento County, however, portions of the service area within Sutter County may experience similar changes in the future.

2.0 PROJECT SETTING

2.1 Water Supply

2.1.1 Surface Water Sources

NCMWC serves its shareholders primarily with water diverted from the Sacramento River, pumped either directly from the River or from the Natomas Cross Canal at the northern edge of the service area. Shareholders also pump tailwater from a network of drainage canals within the service area.

2.1.2 Water Rights

2.1.2.1 Appropriative Rights

NCMWC holds seven appropriative water rights issued by the State Water Resources Control Board, Division of Water Rights (SWRCB), or predecessor agencies. Six of these rights are licensed and one is permitted. These water rights allow for the diversion of water at four points along the Sacramento River, two points on the Natomas Cross Canal, and four moveable points of diversion on canals and drains within the service area. A summary of the water rights held by NCMWC is shown below in Table 1. The licenses, permits and orders granted by the SWRCB (and predecessors) are included in Appendix A.

Table 1

Water Rights Held by NCMWC

Application	License/Permit	Sources	Season	Amount[1] (cfs)	Purposes[2]
534	L1050	Natomas Cross Canal and Sacramento River	Apr 1 to Oct 1	42.18	I, M, J, D
1056	L2814	Natomas Cross Canal and Sacramento River	Mar 15 to Oct 15	38	I, M, J, D
1203	L3109	Natomas Cross Canal and Sacramento River	May 1 to Oct 31	160	I, M, J, D
1413	L3110	Natomas Cross Canal and Sacramento River	May 1 to Oct 1	120	I, M, J, D
15572	L9794	Natomas Cross Canal and Sacramento River	Apr 1 to Jun 30	131	I, M, J, D
22309	L9989	RD 1000 East, Main, and West Drains	Mar 1 to Jun 30, Sep 1 to Oct 31	14	I
25727	P19400	Natomas Cross Canal, Sacramento River, RD 1000 East, Main, and West Drains	Oct 1 to Apr 1	168	I, M, J, D

Notes:

[1] The total amount of water diverted under Licenses 1050, 2814, 3109, 3110, and 9794 and Permit 19400 shall not exceed 10,000 acre-feet during the period of October 1 to April 1. The total amount of water diverted under Licenses 3109 and 3110 shall not exceed 270 cfs. The maximum amount diverted under License 9794 shall not exceed 11,846 acre-feet per year. The maximum amount diverted under License 9989 shall not exceed 2,627 acre-feet per year. The maximum amount diverted under Permit shall not exceed 10,000 acre-feet per year.

[2] For Purposes: I = Irrigation, M = Municipal, J = Industrial, D = Domestic

2.1.2.2 Contract with Bureau of Reclamation – Project Water Transferable

Under a long-term settlement contract with the USBR, NCMWC may divert natural "Base Supply" from the Sacramento River as well as water regulated by the Central Valley Project ("Project Water"). The Base Supply is an amount of water that has been estimated to be available from the River if the Central Valley Project did not exist. The contract provides for a Base Supply of up to 98,200 acre-feet allocated on a monthly schedule during the diversion season of April through October, without payment to the USBR. The contract also provides for up to 22,000 acre-

feet of Project Water in excess of the Base Supply, resulting in a total maximum USBR contract delivery of 120,200 acre-feet. The USBR contracted delivery schedule in a normal year is as follows:

Table 2

USBR Contract Delivery Schedule (Normal Year)
(all values in acre-feet)

Month	Base Supply	Project Water	Total
April	14,000	0	14,000
May	27,700	0	27,700
June	23,000	0	23,000
July	11,500	7,200	18,700
August	3,900	14,800	18,700
September	16,100	0	16,100
October	2,000	0	2,000
Total	**98,200**	**22,000**	**120,200**

The amount of water NCMWC is contracted to divert is greatly reduced in a year deemed to be a "critical year" as determined by the USBR. A detailed definition of a critical year is included in the USBR contract in Appendix B. In such a year the total Base Supply and Project Water diverted from April through October is reduced by 25 percent in each month. According to NCMWC staff critical years occur about on in ten years. The resulting critical year delivery schedule is as follows:

Table 3

USBR Contract Delivery Schedule (Critical Year)
(all values in acre-feet)

Month	Base Supply	Project Water	Total
April	10,500	0	10,500
May	20,775	0	20,775
June	17,250	0	17,250
July	8,625	5,400	14,025
August	2,925	11,100	14,025
September	12,075	0	12,075
October	1,500	0	1,500
Total	**73,650**	**16,500**	**90,150**

2.2 Facilities

2.2.1 River Pump Stations

NCMWC operates four pump stations along the Sacramento River and two pump stations on the Natomas Cross Canal. The Verona, Pritchard Lake, Elkhorn and Riverside Pumping Plants divert water from the Sacramento River, and the Bennett and Northern Pumping Plants divert river water from the Natomas Cross Canal (see Plate 1). The Verona Pumping Plant lifts water from the Sacramento River to the Natomas Cross Canal and seldom operates. It is used only when the level of the Sacramento River is too low for River water to flow by gravity into the Natomas Cross Canal. A summary of the five other pumping stations used to divert River water is provided below in Table 4. Copies of pump efficiency test reports are included in Appendix C.

Table 4

NCMWC River Diversion Facilities

Pump Station	Pump	HP	Flow Rate (gpm)	Pump Test Date
Bennett	1	125	19,320	7/25/2007
	2	125	16,896	7/25/2007
	3	125	6,276	6/21/2006
Elkhorn	1	125	20,640	9/10/1993
	2	75	4,733	6/10/1992
Northern	1	200	39,309	6/22/1995
	2	125	9,556	6/22/1995
	3	100	20,455	6/22/1995
	4	200	39,396	6/22/1995
	5	125	22,382	6/22/1995
Pritchard Lake	1	125	12,936	9/7/1993
	2	200	28,109	9/7/1993
	3	200	NA	NA
Riverside	1	100	12,285	9/10/1993
	2	60	7,392	9/10/1993

2.2.2 Canals and Drains

Water diverted at the pumping plants is conveyed throughout the NCMWC service area by a network of canals and drains. The canals and drains also capture irrigation tailwater, rendering it available for reuse. As shown on Plate 1, the main arteries in the system are the Northern Main, Bennett Main, Central Main, North Drainage, West Drainage and East Drainage Canals.

The Northern Main Canal carries water from the Northern Pumping Plant south to the Swimming Hole Diversion, north of Elverta Road. Throughout the length of this canal, drain water can be discharged to the Northern Main Canal from the T-Drain and V-Drain. A check structure near the intersection of the R-Drain canal and the Northern Main Canal allows water to be pumped into the R-Drain for use on adjacent fields.

The Bennett Main carries water from the Bennett Pumping Plant south through the Bennett Loop. Drain water can be added to the Bennett Main from the North Drainage Canal by the Bennett Drain Pump.

The Central Main Canal carries water pumped at the Pritchard Lake Pumping Plant east to the area surrounding the NCMWC office on Elkhorn Blvd.

The North, East and West Drainage Canals collect tailwater from agricultural fields. Various NCMWC pumps and other privately owned pumps divert water out of these drains for irrigation.

2.2.3 Drain/Lift Pump Stations

NCMWC operates over 30 drain/lift pump stations within its service area. These pumps control the movement of water throughout the network of canals, drains and laterals within the service area. Drain pumps pull tailwater from the drains and discharge it into main canals or laterals, for subsequent diversion by individual growers. Twelve of these drain pumps pump water that has not been pumped by another pump station, therefore, they would provide a reasonable estimation of supply available from the drains. As discussed later in this report, time-of-use data was collected in 2007 for the 12 pump stations. For 6 of these pump stations, pump tests reports are available and were used in conjunction with the time-of-use data to estimate the amount of water pumped from the drains in 2007 Table 5 lists a summary of attributes for the 12 drain pump stations. Copies of available pump efficiency test reports are included in Appendix D.

Table 5

Summary of Drain Pump Diversion Facilities

Pump Station	Pump	HP	Flow Rate (gpm)	Pump Test Date
Airport Bayou Way		40	NA	NA
Airport North		15	NA	NA
Bennett		120	16,439	8/10/2007
Bryte Bend Well		40	1,001	8/31/2007
Del Paso Rosa		15	3,736	8/31/2007
Elkhorn	1	125	NA	NA
	2	75	NA	NA
Plant #3		40	NA	NA
Pullman	1	125	14,811	8/3/2007
	2	75	NA	NA
	3	75	10,323	8/3/2007
	4	125	17,504	8/3/2007
Riego 30's	1	30	9,824	8/10/2007
	2	60	13,902	8/10/2007
	3	60	12,109	7/25/2007
	4	60	12,759	7/25/2007
San Juan 30 Horse		30	6,087	8/31/2007
T-Drain		30	NA	NA
V-Drain	1	NA	NA	NA
	2	NA	NA	NA

2.2.4 Reclamation District 1000 Facilities

Reclamation District 1000 (RD 1000) has historically operated seven pumping plants within the NCMWC service area for flood control in the Natomas basin (see Plate 1). Currently only six pumping plants are operational (Plant #2 is under repair). According to NCMWC staff, the RD 1000 pumps in the southern region of the service area are set to pump water from the drains to the Sacramento River if the staff gage reading at the pump site is about 7.8 to 8.0 during the summer, 7.0 in the fall, and 5.5 to 6.0 in the winter. RD 1000's Pump #4, located in the

northern region, will operate if the staff gage reading at the pump site is at about 16.5 to 17.5 in the summer, about 15.0 to 16.0 in the fall, and 10.0 in the winter.

2.3 Operations

2.3.1 Historical Land Use – Cropping Patterns, Urbanization

The NCMWC contract service area is estimated to be about 40,000 acres. Historical land use within the NCMWC service area was compiled based on water account records provided by NCMWC. These records summarize crop acreage for each field based on applications for service submitted by NCMWC shareholders in March of each year. NCMWC uses a numbering system to identify each field within north, south, and central subareas. Using this numbering system the irrigated crop can be identified for each field each year.

The predominant crop grown within the NCMWC service area historically has been rice, accounting for about 80 percent of the irrigated area and about 85 percent of the water use. From 1995 to 2005 the amount of land planted in rice averaged about 17,000 acres. About 17,550 acres were planted to rice in 2004, accounting for about 85 percent of the total 20,583 acres irrigated that year. The rice acreage decreased to 11,604 acres in 2007, which is about 76 percent of the total 15,325 acres irrigated that year.

2.3.2 Irrigation Practices and Return Flows

Diversions for irrigation typically begin after April 1. The initial flooding of rice occurs during the month of April. After initial flooding, water is diverted as required by crop irrigation demand. The majority of the water used for irrigation is diverted May through August with the largest monthly diversion typically occurring in July. Each grower is responsible for lifting the water from irrigation

canals and drains for use on their fields. Tailwater from the fields flows by gravity through gated channels to the system of drains.

2.3.3 Water Movement through NCMWC Facilities and Lands

Most of the lands served by NCMWC can be supplied by diversions from the Sacramento River or from the drains, the rest are predominantly served using only the drains. This system allows NCMWC some flexibility for moving water throughout the service area and maximizing use of drain water, thus reducing demand for River diversions. For the purposes of this study, fields were divided into three categories based on the source from which the majority of their water supply is obtained.

2.3.3.1 River Source Lands

Lands characterized as river source lands are fields that are predominantly served by water obtained directly from diversions from the Sacramento River. About 12,200 acres of irrigated lands are characterized as river source lands, and they are shown shaded in white on Plate 2.

2.3.3.2 Drain Source Lands

Drain source lands are fields that are predominantly served by water pumped from the drains. Lands characterized as drain source lands account for about 9,700 acres of the area served by NCMWC, and are shown on Plate 2 shaded in yellow.

2.3.3.3 Commingled Source Lands

About 3,600 acres of land are irrigated with substantial amounts of water from both the River and the drains. These fields are shown shaded blue on

Plate 2. In order to more conservatively estimate the amount of water available for transfer these fields are characterized as river source lands in irrigation demand estimates.

2.4 Available Data

2.4.1 Crop Evapotranspiration and Climatic Records

Evapotranspiration of applied water (ETAW) for each irrigated crop was estimated using the computer program Simulation of Evapotranspiration of Applied Water (SIMETAW), developed by the California Department of Water Resources (DWR) and the University of California, Davis. SIMETAW provides estimates of ETAW for specified crops within a particular region based on climatic conditions. Climatic data input necessary for SIMETAW consists of solar radiation, temperature, wind, precipitation, and reference ET (ET_o). For this study, climatic data reported for Davis, California was used to estimate average annual ETAW.[1] The monthly distribution of ETAW for each crop was estimated based on DWR's Consumptive Use Program (CUP) and personal communication with NCMWC staff (Appendix F).

2.4.2 Land Use Records

Cropping patterns in 2004 and 2007 were determined from water use account records provided by NCMWC. The water account records allow NCMWC to track individual crop acreages for each field. The 2004 and 2007 cropping patterns are displayed on Plates 3 and 4 respectively. Each field is labeled using NCMWC's field numbering system. The most noticeable difference between the 2004 and 2007 cropping patterns is the reduction in rice acreage in the area between the Sacramento-Sutter county line and Elkhorn Blvd. These areas have

[1] California Irrigation Management Information System (CIMIS) station in Davis, CA, period of record 1983 to 2000 (Appendix E).

been planted to winter wheat in recent years, a practice expected to continue for the next several years. Table 6 below lists crop acreages served by NCMWC in 2004 and 2007.

Table 6

2004 and 2007 Crop Acreages

Crop	2004 Acreage	2007 Acreage
Alfalfa	0	741
Clover	181	0
Corn	422	648
Golf Course	90	120
Grain	40	227
Grass/Hay	0	195
Kiwis	3	3
Managed Marsh	433	439
Melons, Squash	95	75
Misc. Deciduous	56	5
Mixed Pasture	41	21
Mixed Truck	0	14
Onions and Garlic	12	50
Peppers	5	10
Rice	17,729	11,604
Safflower	390	149
Sunflowers	0	139
Tomatoes	341	35
Vineyard	0	0
Wheat	924	850
Total	**20,762**	**15,325**

2.4.3 USBR Reported River Diversions

USBR reports River diversions from each of the pumping stations in a monthly water statement to NCMWC. The metered flow data for 2007 is considered more reliable than for previous years due to improvements made to the metering system in April 2007. Because the metered flows for 2007 are more accurate than for

previous years the reported USBR diversions for the 2007 season were used to estimate irrigation demand in 2007 as well as 2004 (discussed later in this report). The monthly reported USBR diversions for each pump station are listed below in Table 7.

Table 7

Reported 2007 USBR Deliveries
(all values in acre-feet)

Pump Station	Apr	May	Jun	Jul	Aug	Sep	Oct	Total
Bennett	616	2,786	1,348	2,187	1,974	2,95	NA	9,206
Elkhorn	630	1,636	1,790	1,953	1,800	1,314	NA	9,123
Northern	446	5,464	7,515	8,334	7,858	3,192	NA	32,809
Pritchard Lake	0	2,398	2,186	1,669	0	0	NA	6,253
Riverside	1,035	1,243	1,148	1,445	1,257	671	NA	6,799
Total	**2,727**	**13,527**	**13,987**	**15,588**	**13,074**	**5,472**	**NA**	**64,190**

2.4.4 Drain Diversions

In June 2007, field supervisors for NCMWC began monitoring daily pump hours for certain drain pumps. For pumps having a recent pump efficiency test, an estimated flow rate is known, and the pump discharge over time can be calculated based on the pump hours and the tested flow rate. Estimated drain pump diversions for July through August 2007 are listed in Table 8 below. Flow rates are not known for all of the NCMWC drain pump stations, therefore the total amount of water pumped from the drains in 2007 cannot be calculated at this time. However, reliance on data for only some of the pump stations underestimates the total supply obtained from the drains, and hence provides a conservative reckoning of 2007 supply from this source.

Table 8

2007 Drain Pump Diversions

(all values in acre-feet)

Pump Station	Jul	Aug	Sep
Airport Bayou Way	NA	NA	NA
Airport North	NA	NA	NA
Bennett	1,779	2,211	129
Bryte Bend Well	23	17	0
Del Paso Rosa	510	510	379
Elkhorn	NA	NA	NA
Plant #3	NA	NA	NA
Pullman	2,865	4,079	1,253
Riego 30's	5,190	4,665	1,713
San Juan 30 Horse	646	202	108
T-Drain	NA	NA	NA
V-Drain	NA	NA	NA
Total	**11,013**	**11,684**	**3,582**

2.4.5 Water Quality

In 2007 electrical conductivity (EC) measurements were made at various locations within the NCMWC drainage network, and in the Sacramento River and Natomas Cross Canal. Table 9 lists the results of these measurements. The maximum salinity for irrigation water for which no detrimental effects will typically be noticed is 500 ppm.[2] It is apparent from the measurements that the quality of the water in the drains is suitable for irrigation purposes.

[2] Clark, Viessmann and Hammer, "Water Supply and Pollution Control", 3rd Edition.

Table 9

EC Evaluation of Water Samples

(all values in parts per million)

Sample Location	8/4/07	9/4/07	10/4/07
Pullman (North Drain)	179	179	278
Bennett Drain (North Drain)	164	157	214
The 30s Riego (East Drain)	236	207	293
County Line (East Drain)	286	207	286
Elkhorn Lift (East Drain)	NA	250	321
Airport Bayou (West Drain)	NA	NA	143
San Juan 30 (West Drain)	NA	NA	100
Northern Main Pumping Plant (Natomas Cross Canal)	NA	143	150
Pritchard Lake Pumping Plant (Sacramento River)	NA	129	86

2.4.6 Reliability of Available Data

The USBR's reported River diversion data are considered more reliable for 2007 than for previous years, as a result of improvements made to the metering systems. Drain diversion data collected by NCMWC for 2007 is also considered more reliable than for previous years. The 2007 drain diversions were estimated based on 2007 tested flow rates and daily recorded pump hours. ETAW was calculated using the SIMETAW program. Also the monthly breakdown of the annual ETAW demand was estimated using default irrigation seasons as set by the CUP program and adjusted according to personal communication with NCMWC staff. The cropping patterns for 2004 and 2007 are based on the reports of the growers themselves when they apply for water for their fields.

3.0 WATER AVAILABLE FOR TRANSFER

3.1 2004 and 2007 Water Operations

3.1.1 Land Use and Cropping

The cropping patterns in 2004 and 2007 were analyzed for the purposes of this study. Water use in 2004 is considered to be the maximum that will occur in the future use based on current land uses. A total of 20,583 acres were irrigated in 2004 of which 17,550 acres were planted to rice (see Plate 3).

Water use for 2007 was evaluated because it is considered to be the most representative of near-term irrigation demands. A total of 15,325 acres of agricultural lands were irrigated in 2007, of which 11,604 acres were planted to rice (see Plate 4).

3.1.2 Deliveries

A total of 93,705 acre-feet of water was delivered to NCMWC by USBR in 2004. The total amount delivered in the critical months of July, August and September was 44,976 acre-feet. It is noted that the 2004 delivery data is prior to the installation of more accurate metering systems in 2007, therefore the accuracy of the 2004 data is questionable and was not used further in this analysis.

The total amount of water delivered in 2007 was 64,375 acre-feet through the month of September as shown in Table 7. The total for the three critical months was 34,134 acre-feet.

3.1.3 Applied Water for Irrigation

The amount of water applied to irrigation in 2004 and 2007 was estimated for each crop based on ETAW values. Based on the assumption that a direct correlation exists between ETAW and River deliveries, an "irrigation demand index" was computed for 2007 as the ratio of USBR deliveries to the calculated ETAW. On a monthly basis, the irrigation demand index was found to typically be about 1.5, as shown below in Table 10A.

Table 10A

2007 Estimated ETAW Demand and Reported USBR Deliveries

Month	USBR Deliveries (acre-feet)	ETAW Demand (acre-feet)	Irrigation Demand Index
April	2,727	486	5.61
May	13,527	9,101	1.49
June	13,987	9,415	1.49
July	15,588	9,653	1.61
August	13,074	8,748	1.49
September	5,472	6,148	0.89
October	NA	NA	NA

Because of the more reliable water supply data in 2007, the 2007 irrigation demand index was used to estimate the irrigation demand in 2004 from the calculation of 2004 ETAW (Table 10B).

Table 10B

2004 Estimated Irrigation Demand

Month	ETAW Demand (acre-feet)	Irrigation Demand Index[1]	Irrigation Demand (acre-feet)
April	178	5.61	1,001
May	12,902	1.49	19,178
June	13,141	1.49	19,522
July	13,359	1.61	21,573
August	11,976	1.49	17,899
September	8,307	1.49	12,415
October	212	1.49	316

Note:

[1] Irrigation Demand Index for September and October is assumed to be 1.49.

3.1.4 Return Flows and Pumping from Drains

Return flows were calculated as the difference between the amount of water delivered and the estimated ETAW. This amount of water is assumed to discharge to the drains as tailwater. For the purposes of this study the effects of percolation and evaporation from water surfaces were assumed to be negligible. The amount of water pumped from the drains in 2007 was calculated for 6 drain pump stations having pump test data available (see Table 8). Operational data is only available for July, August, and September because NCMWC did not start monitoring pump hours until late June. NCMWC will continue to monitor drain pump hours in the future.

3.2 Consideration of 10,000 acre-foot Water Transfer

In a normal year the total combined Base Supply and Project Water available to NCMWC is 120,200 acre-feet. The remaining contract amount available after a transfer of 10,000 acre-feet of project water for both year-types are shown below in Table 11. For this analysis, the proposed monthly transfer amounts shown in Table 11 was assumed based on the ratio of the monthly Project Water to the total annual Project Water, noting

that the amount of Project Water that can be transferred in each of the months of July and August is flexible. The normal year USBR contract amount available after the transfer is labeled "New Contract." The resulting critical year amount available is reduced monthly by 25 percent.

Table 11

USBR Contract Water Available after Transfer
(all values in acre-feet)

Month	Existing USBR Contract			Proposed Transfer	Normal Year Contract Amount Available	Critical Year Contract Available
	Base Supply	Project Water	Total			
Apr	14,000	0	14,000	0	14,000	10,500
May	27,700	0	27,700	0	27,700	20,775
Jun	23,000	0	23,000	0	23,000	17,250
Jul	11,500	7,200	18,700	3,273	15,427	11,570
Aug	3,900	14,800	18,700	6,727	11,973	8,980
Sep	16,100	0	16,100	0	16,100	12,075
Oct	2,000	0	2,000	0	2,000	1,500
Total	**98,200**	**22,000**	**120,200**	**10,000**	**110,200**	**82,650**

Tables 12 and 13 summarize analyses of the effect of a 10,000 acre-foot transfer on normal year NCMWC water operations for 2004 and 2007 cropping patterns, respectively. Tables 14 and 15 provide similar analyses for a critical year condition. The remaining monthly contract amounts, after the transfer in Table 11 has been made, are shown in each table. In recognition of previous agreements, 5,000 acre-feet of Base Supply is potentially already committed and is shown in Tables 12 through 15 in the column labeled "Transfers – Out" in the month of April. Additional supplies available from the drains are shown in the columns labeled "Drain Pumps" and "RD 1000" (further discussion below).

The "Transfers" column also includes consideration of potential operational scenarios involving rescheduling of Base Supply deliveries during the irrigation season. Under the USBR contract, water scheduled for delivery to NCMWC in the non-critical months of April, May, June and October can be reallocated for delivery among those four months.

Water scheduled for delivery to NCMWC in the critical months of July through September can only be reallocated among the three critical months. Delivery of Project Water is limited to the months of July and August.

The estimated amount of water that can potentially be pumped by the drain/lift pumps is based on operational data collected in 2007. For months in which no operational data is available for the drains, the amount pumped is estimated based on the ratio of the monthly amount of water diverted from the River and the estimated amount of water pumped from the drains for months having operational data available.

The amount of water pumped out of the drains and into the River by RD 1000 is a potential source of water supply to NCMWC. Careful management of diversions and movement of water throughout the network of drains and canals could reduce the amount of water pumped to the Sacramento River by RD 1000. In Tables 12 through 15, the amounts pumped by RD 1000 were assumed to be available as an additional source of supply to NCMWC.

The estimated "Net Supply" shown in Tables 12 through 15 consists of the existing USBR contracted deliveries, plus supplies available from the drains and RD 1000, less any reserved transfer amounts and the 10,000 acre-foot transfer to the City of Folsom. As shown, the net available supply in a normal year is estimated to be about 133,000 acre-feet if the full USBR contract amount is diverted. In a critical year, the estimated net available supply is about 100,000 acre-feet.

As discussed in earlier sections, the estimated irrigation demand shown in Tables 12 through 15 is based on the ETAW of each crop applied to the acreage of each crop and multiplied by the 2007 irrigation demand index. April is a typically low demand month with a high allotment of Base Supply. Although there is a very low ETAW demand in April, there is a relatively high irrigation demand because rice growers initially flood their fields in April. As shown in Tables 12 through 15, the majority of the irrigation demand occurs during the period of May through August.

3.2.1 Estimate of Surplus/Deficiency for Normal Year Condition

As shown in Tables 12 and 13, and described above, the transfer of 10,000 acre-feet under normal year conditions was estimated to yield a potential surplus each month for both 2004 and 2007 cropping patterns. It is assumed in Tables 12 and 13 that the full monthly allotment of scheduled USBR deliveries would be pumped from the River in each month. The water pumped from the drain/lift pumps is based on the assumption that the supply available from the drains is proportional to monthly River deliveries. The amount of water pumped by RD 1000 in 2007 is included in the available supply in both tables. The last column in Tables 12 and 13 is the computed monthly surplus or deficiency. As shown in both tables, there is a surplus of supply for each month. It is noted that the surpluses shown conservatively do not include the volume of water that typically is present within the drain system prior to the start of deliveries.

Table 12

Analysis of Normal Year Condition with 2004 Cropping Pattern After 10,000 acre-feet Project Water Transfer
(all values in acre-feet)

Month	Contract Available	Transfers/Reallocation		Drain Pumps	RD 1000	Net Supply	Irrigation Demand	Surplus/ (Deficiency)
		In	Out					
Apr	14,000	0	5,000	NA	0	9,000	1,001	7,999
May	27,700	0	0	NA	770	28,470	19,178	9,292
Jun	23,000	0	0	NA	1,189	24,189	19,522	4,667
Jul	15,427	0	0	10,900	1,037	27,364	21,573	5,791
Aug	11,973	0	0	10,700	3,522	26,194	17,899	8,296
Sep	16,100	0	0	10,538	7,503	16,100	12,415	3,685
Oct	2,000	0	0	NA	NA	2,000	316	1,684
Total	**110,200**	**0**	**5,000**	**32,137**	**14,021**	**133,317**	**91,904**	**41,413**

Table 13

Analysis of Normal Year Condition with 2007 Cropping Pattern After 10,000 acre-feet Project Water Transfer

(all values in acre-feet)

Month	Contract Available	Transfers/Reallocation		Drain Pumps	RD 1000	Net Supply	Irrigation Demand	Surplus/ (Deficiency)
		In	Out					
Apr	14,000	0	5,000	NA	0	9,000	2,727	6,273
May	27,700	0	0	NA	770	28,470	13,527	14,943
Jun	23,000	0	0	NA	1,189	24,189	13,987	10,202
Jul	15,427	0	0	10,900	1,037	27,364	15,588	11,776
Aug	11,973	0	0	10,700	3,522	26,194	13,074	13,120
Sep	16,100	0	0	10,538	7,503	16,100	9,188	6,912
Oct	2,000	0	0	NA	NA	2,000	797	1,203
Total	**110,200**	**0**	**5,000**	**32,137**	**14,021**	**133,317**	**68,888**	**64,429**

3.2.2 Estimate of Surplus/Deficiency for Critical Year Condition

Similar evaluations of surplus/deficiency for critical year conditions are provided in Tables 14 and 15 for 2004 and 2007 cropping conditions, respectively. Under critical year conditions, the total scheduled USBR deliveries would be reduced by 25% relatively to normal year deliveries. Per Table 14, the result of a 10,000 acre-foot transfer with the 2004 cropping pattern could result in a water supply surplus in the critical months if water is reallocated from August into July and September. Per Table 15, for 2007 cropping patterns there would be a surplus in every month, with an overall seasonal surplus of about 31,000 acre-feet.

Table 14

Analysis of Critical Year Condition with 2004 Cropping Pattern After 10,000 acre-feet Project Water Transfer

(all values in acre-feet)

Month	Contract Available	Transfers/Reallocation		Drain Pumps	RD 1000	Net Supply	Irrigation Demand	Surplus/ (Deficiency)
		In	Out					
Apr	10,500	0	5,000	NA	0	5,500	1,001	4,499
May	20,775	0	1,083	NA	770	20,462	19,178	1,284
Jun	17,250	1,083	0	NA	1,189	19,522	19,522	0
Jul	11,570	464	0	8,502	1,037	21,573	21,573	0
Aug	8,980	0	804	7,307	3,522	19,005	17,899	1,106
Sep	12,075	340	0	8,126	7,503	12,415	12,415	0
Oct	1,500	0	0	NA	NA	1,500	316	1,184
Total	**82,650**	**1,887**	**6,887**	**23,935**	**14,021**	**99,976**	**91,904**	**8,073**

Table 15

Analysis of Critical Year Condition with 2007 Cropping Pattern After 10,000 acre-feet Project Water Transfer

(all values in acre-feet)

Month	Contract Available	Transfers/Reallocation		Drain Pumps	RD 1000	Net Supply	Irrigation Demand	Surplus/ (Deficiency)
		In	Out					
Apr	10,500	0	5,000	NA	0	5,500	2,727	2,773
May	20,775	0	0	NA	770	21,545	13,527	8,018
Jun	17,250	0	0	NA	1,189	18,439	13,987	4,452
Jul	11,570	0	0	8,175	1,037	20,782	15,588	5,194
Aug	8,980	0	0	8,025	3,522	20,526	13,074	7,452
Sep	12,075	0	0	7,903	7,503	12,075	9,188	2,887
Oct	1,500	0	0	NA	NA	1,500	797	703
Total	**82,650**	**0**	**5,000**	**24,103**	**14,021**	**100,367**	**68,888**	**31,479**

3.3 Analysis of Surplus/Deficiency Excluding Potential RD 1000 Supply

It is uncertain at this time whether the water pumped by RD 1000 can be considered a viable source of water for irrigation. Potential changes in operational and institutional conditions associated with use of RD 1000 water for irrigation may preclude use of the RD 1000 supply. Accordingly, until further information is obtained regarding this

supply, it is prudent to evaluate surplus/deficiency assuming that the RD 1000 supply is not available.

3.3.1 Normal Year Condition

Tables 16 and 17 respectively show the normal year surplus calculation assuming the amount pumped by RD 1000 is not available. With reference to Tables 12 and 13, the estimated surplus drops from about 41,000 acre-feet to about 35,000 acre-feet for a 2004 cropping pattern, and drops from about 64,000 acre-feet to about 58,000 acre-feet for a 2007 copping pattern.

Table 16

Analysis of Normal Year Condition with 2004 Cropping Pattern

After 10,000 acre-feet Project Water Transfer

Month	Contract Available	Transfers/Reallocation		Drain Pumps	Net Supply	Irrigation Demand	Surplus/ (Deficiency)
		In	Out				
Apr	14,000	0	5,000	NA	9,000	1,001	7,999
May	27,700	0	0	NA	27,700	19,178	8,522
Jun	23,000	0	0	NA	23,000	19,522	3,478
Jul	15,427	0	0	10,900	26,327	21,573	4,754
Aug	11,973	0	0	10,700	22,672	17,899	4,774
Sep	16,100	0	0	10,538	16,100	12,415	3,685
Oct	2,000	0	0	NA	2,000	316	1,684
Total	**110,200**	**0**	**5,000**	**32,137**	**126,799**	**91,904**	**34,896**

Table 17

Analysis of Normal Year Condition with 2007 Cropping Pattern

After 10,000 acre-feet Project Water Transfer

Month	Contract Available	Transfers/Reallocation		Drain Pumps	Net Supply	Irrigation Demand	Surplus/ (Deficiency)
		In	Out				
Apr	14,000	0	5,000	NA	9,000	2,727	6,273
May	27,700	0	0	NA	27,700	13,527	14,173
Jun	23,000	0	0	NA	23,000	13,987	9,013
Jul	15,427	0	0	10,900	26,327	15,588	10,739
Aug	11,973	0	0	10,700	22,672	13,074	9,598
Sep	16,100	0	0	10,538	16,100	9,188	6,912
Oct	2,000	0	0	NA	2,000	797	1,203
Total	**110,200**	**0**	**5,000**	**32,137**	**126,799**	**68,888**	**57,911**

3.3.2 Critical Year Water Availability

Tables 18 and 19 respectively show the effects on surplus/deficiency for 2004 and 2007 cropping patterns if RD 1000 pumping is not included as a source of supply during a critical year condition. With reference to Table 14, under a 2004 cropping condition deficits in the critical months would be greater and there would be a seasonal surplus of about 1,946 acre-feet rather than a surplus of 8,073 acre-feet. For this condition, a supplemental water supply would be required to meet irrigation demands. Additional groundwater pumping is a potential source of supplemental water. Also, the Natomas Basin Conservancy has agreed to forego surface deliveries in the event of a critical year shortage.

With reference to Table 15, under 2007 cropping conditions there would still be a surplus in each month, but the total seasonal surplus would drop from about 31,000 acre-feet to about 25,000 acre-feet.

Table 18

Analysis of Critical Year Condition with 2004 Cropping Pattern After 10,000 acre-feet Project Water Transfer

Month	Contract Available	Transfers/Reallocation		Drain Pumps	Net Supply	Irrigation Demand	Surplus/ (Deficiency)
		In	Out				
Apr	10,500	0	7,272	NA	3,228	1,001	2,227
May	20,775	0	0	NA	20,775	19,178	1,597
Jun	17,250	2,272	0	NA	19,522	19,522	0
Jul	11,570	0	0	8,175	19,745	21,573	(1,827)
Aug	8,980	0	0	8,025	17,004	17,899	(894)
Sep	12,075	0	0	7,903	12,075	12,415	(340)
Oct	1,500	0	0	NA	1,500	316	1,184
Total	**82,650**	**2,272**	**7,272**	**24,103**	**93,849**	**91,904**	**1,946**

Table 19

Analysis of Critical Year Condition with 2007 Cropping Pattern After 10,000 acre-feet Project Water Transfer

Month	Contract Available	Transfers/Reallocation		Drain Pumps	Net Supply	Irrigation Demand	Surplus/ (Deficiency)
		In	Out				
Apr	10,500	0	5,000	NA	5,500	2,727	2,773
May	20,775	0	0	NA	20,775	13,527	7,248
Jun	17,250	0	0	NA	17,250	13,987	3,263
Jul	11,570	0	0	8,175	19,745	15,588	4,157
Aug	8,980	0	0	8,025	17,004	13,074	3,930
Sep	12,075	0	0	7,903	12,075	9,188	2,887
Oct	1,500	0	0	NA	1,500	797	703
Total	**82,650**	**0**	**5,000**	**24,103**	**93,849**	**68,888**	**24,961**

4.0 CONCLUSION

According to the analysis of supply available to NCMWC during normal years, NCMWC would be able to meet the irrigation demands for the cropping patterns in 2004 and 2007 after the transfer of 10,000 acre-feet. The critical year analysis for 2004 indicates that there could potentially be a supply deficiency during the three critical months especially

if we assume that water pumped to the River by RD 1000 is unavailable for irrigation. According to NCMWC staff, groundwater water resources are available to augment surface supplies if needed. It is noted that the 2004 cropping pattern represents an expected maximum demand that may not occur in the future. Further, critical years have occurred in the past one year in ten. The critical year analysis for 2007 indicates that NCMWC should be able to meet its irrigation demand after the transfer of 10,000 acre-feet.

Based on the assumptions that hydrologic conditions and irrigation practices in the general area of Natomas continue, the analysis shows that the transfer of 10,000 acre-feet of project water should not impair NCMWC's ability to continue to provide water for irrigation.

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Orang, Morteza N.; Snyder, Richard L.; Matyac, J. Scott. CUP-E Consumptive Use Program. State of California – Department of Water Resources and the Regents of the University of California, 2001

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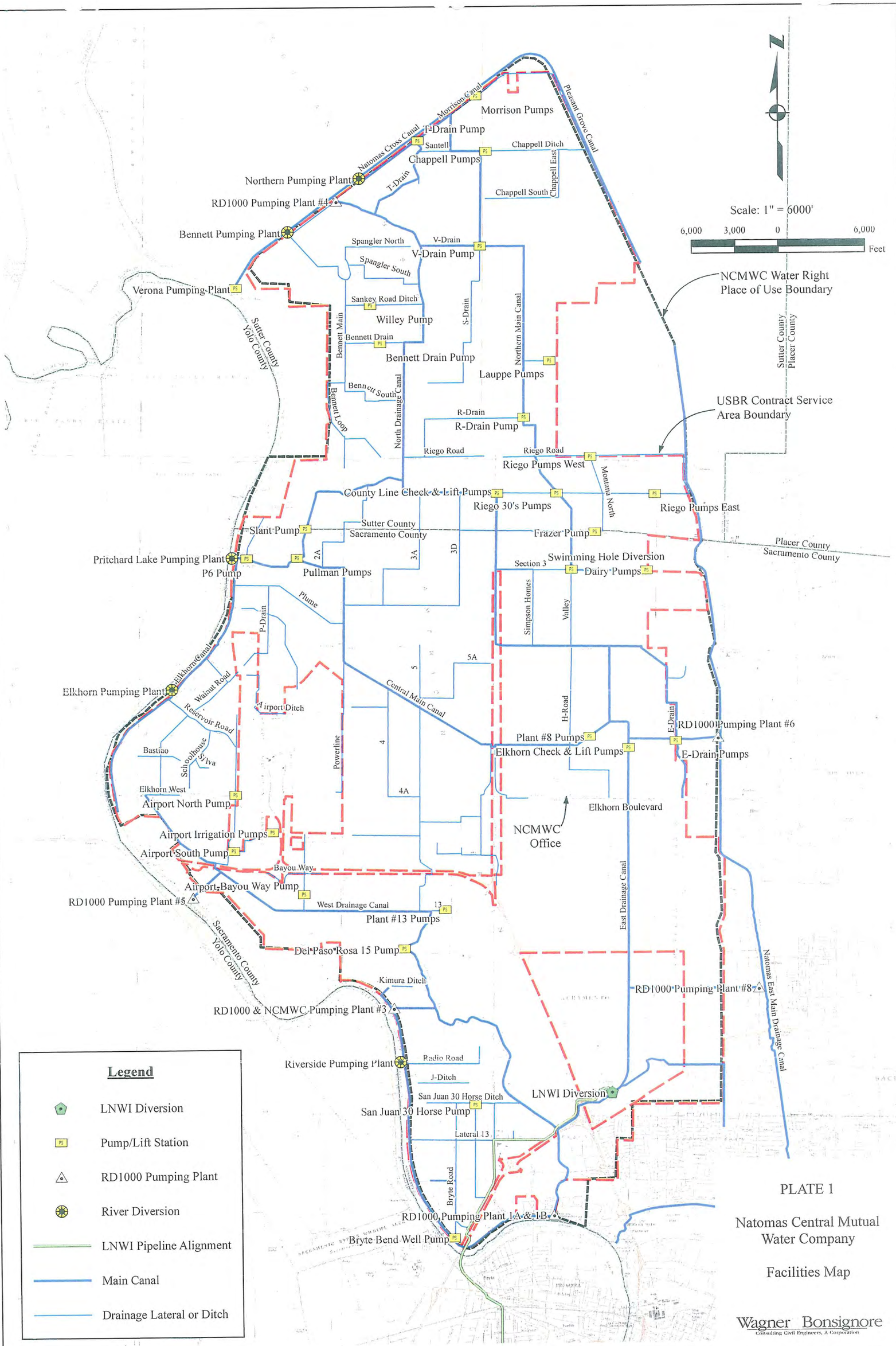
Snyder, Richard L.; Orang, Morteza N.; Geng, Shu; Matyac, J. Scott; Sarreshteh, Sara. SIMETAW Simulation of Evapotranspiration of Applied Water. State of California – Department of Water Resources and the Regents of the University of California, 2004



Base map per USGS 7.5 minute quadrangle for Davis, Grays Bend, Knights Landing, Pleasant Grove, Rio Linda, Sacramento East, Sacramento West, Taylor Mounument, and Verona.

Q:\Drawings\Natomas Central Mutual Water Company\GIS\Field Map (Drainage Network) 11x17.mxd

October 2007

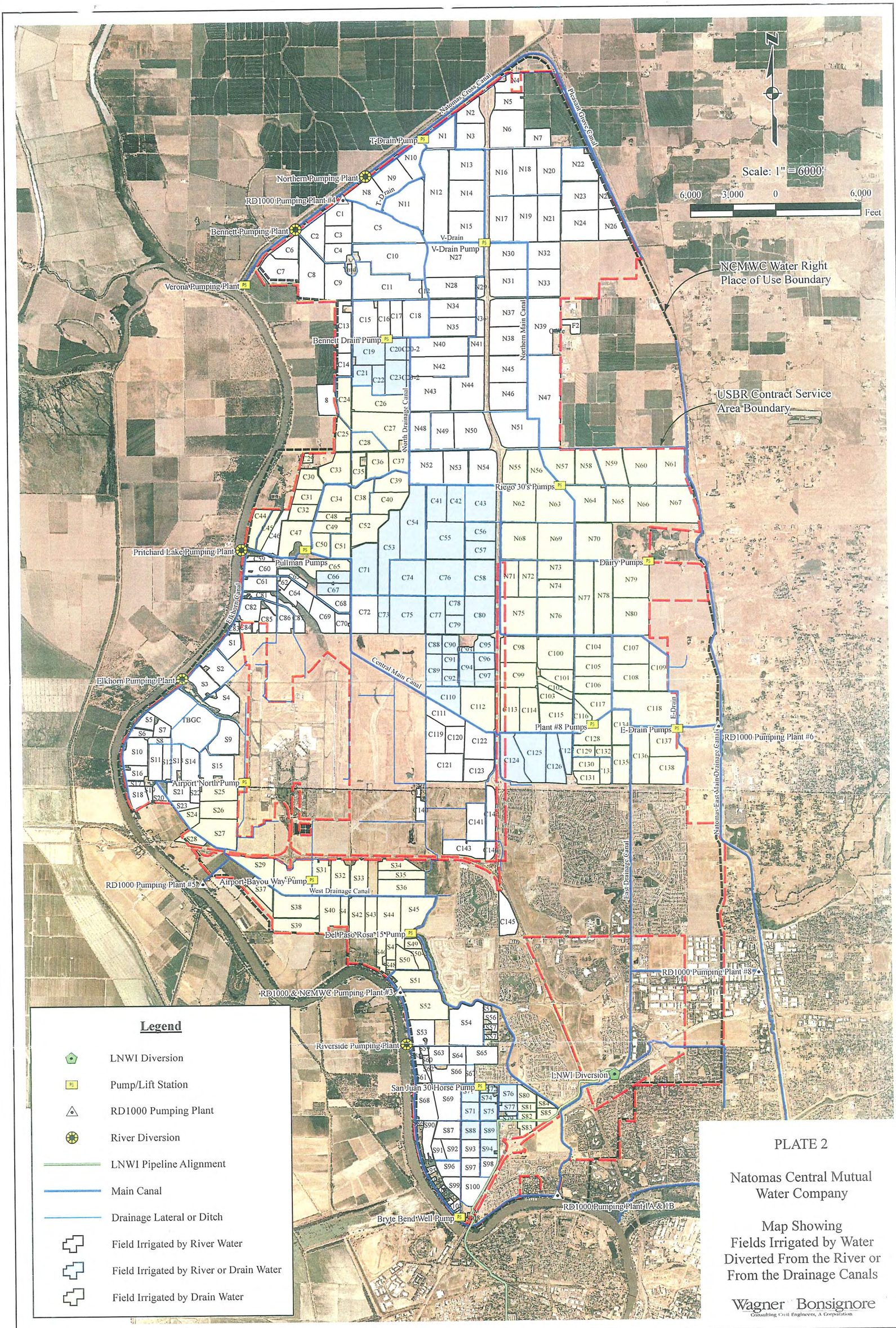


PLATE 2

Natomas Central Mutual Water Company

Map Showing Fields Irrigated by Water Diverted From the River or From the Drainage Canals

Wagner Bonsignore
Consulting Civil Engineers, A Corporation

Base map per 2006 aerial photo from USDA's National Ag. Imagery Program.

Q:\Drawings\Natomas Central Mutual Water Company\GIS\Field Map (Water Source) 11x17.mxd

October 2007

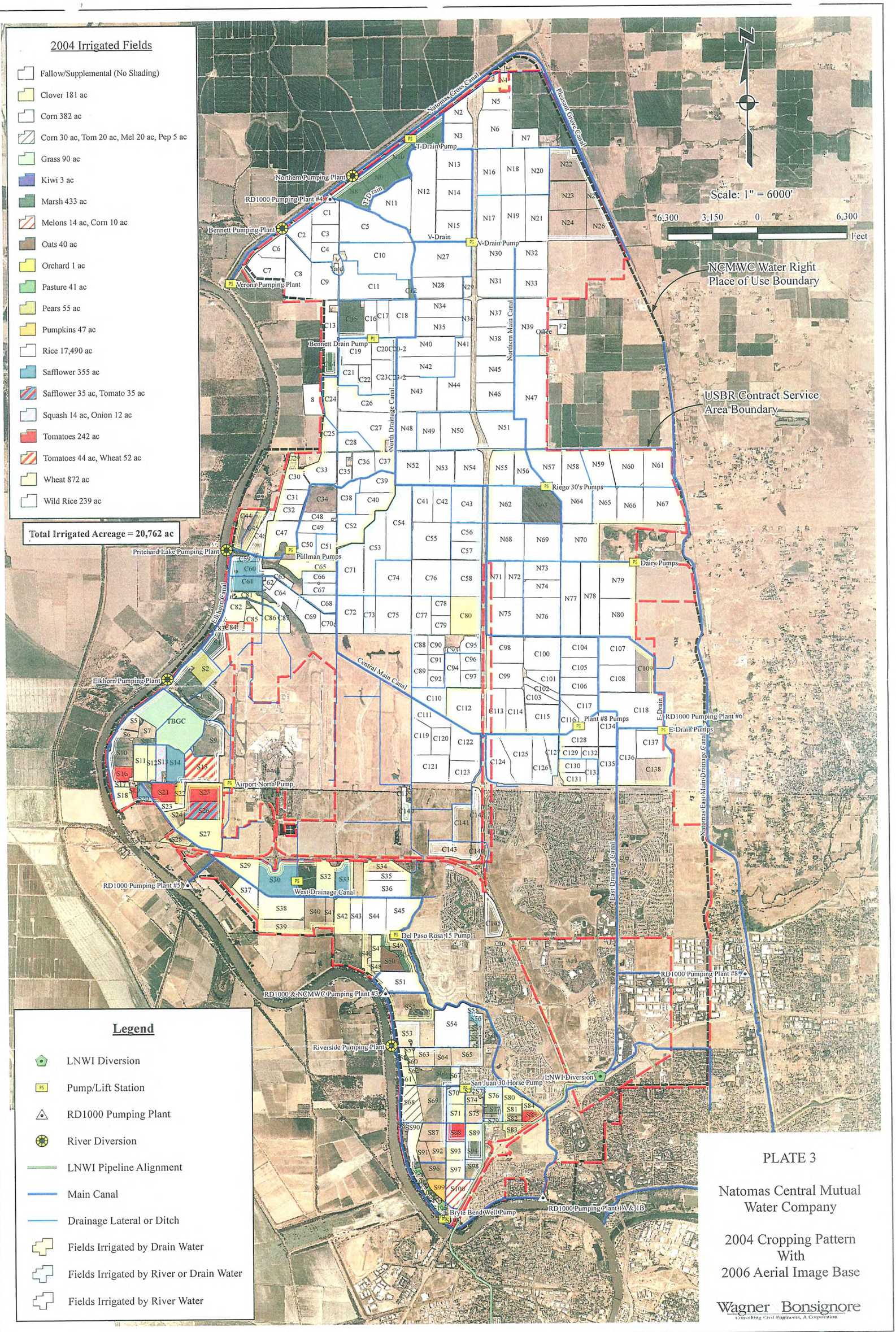


PLATE 3

Natomas Central Mutual Water Company

2004 Cropping Pattern With 2006 Aerial Image Base

Wagner Bonsignore
Consulting Civil Engineers, A Corporation

Base map per 2006 aerial photo from USDA's National Ag. Imagery Program.

Q:\Drawings\Natomas Central Mutual Water Company\GIS\Field Map (2004 Cropping) 11x17.mxd

October 2007

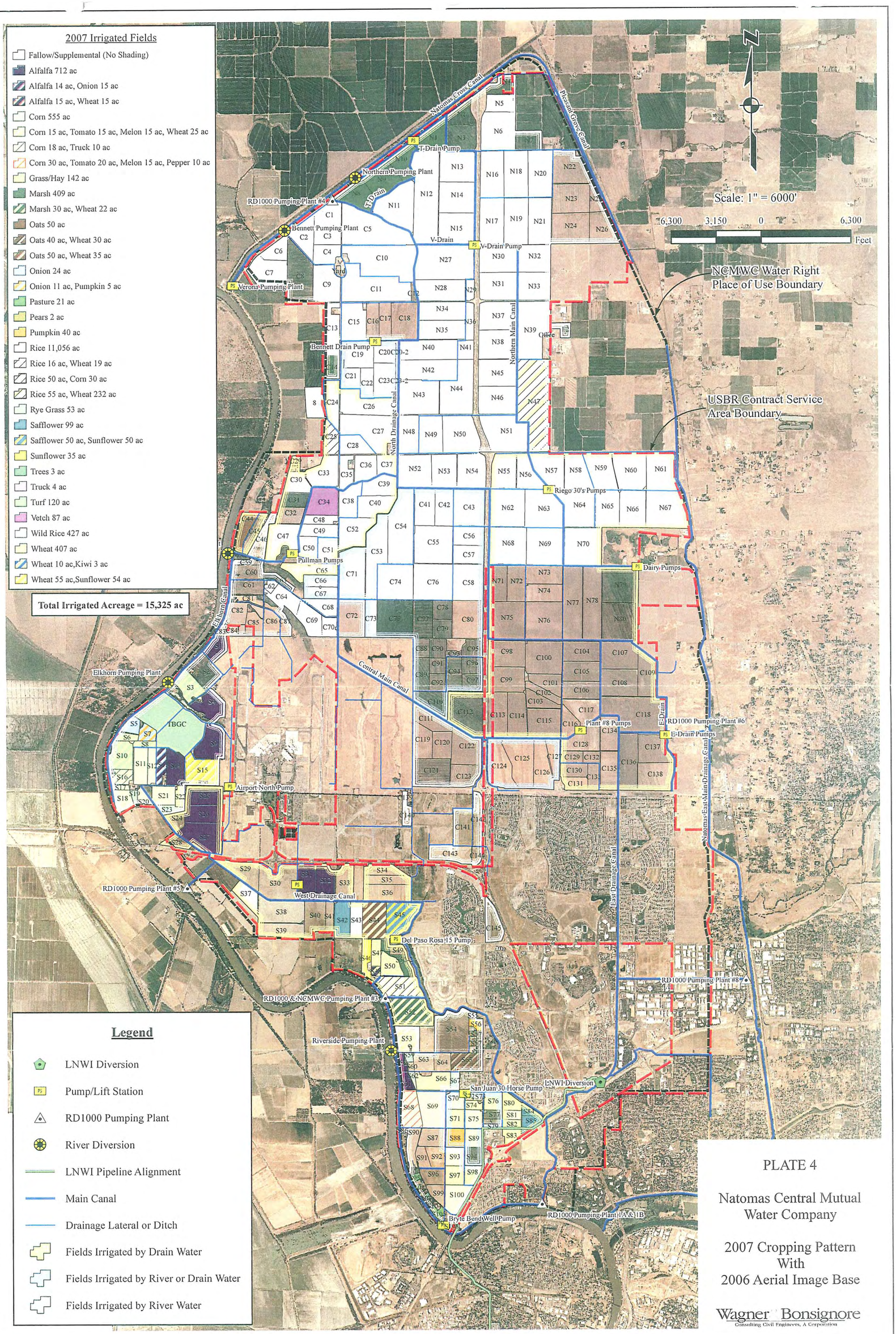


PLATE 4

Natomas Central Mutual Water Company

2007 Cropping Pattern With 2006 Aerial Image Base

Wagner Bonsignore
Consulting Civil Engineers, A Corporation

Base map per 2006 aerial photo from USDA's National Ag. Imagery Program.

Q:\Drawings\Natomas Central Mutual Water Company\GIS\Field Map (2007 Cropping) 11x17.mxd

October 2007

APPENDIX M3

Memorandum of Understanding between the City of Folsom and SCWA for Use of Freeport Regional Project Facilities

RESOLUTION NO. 8595

A RESOLUTION AUTHORIZING THE CITY MANAGER TO EXECUTE A MEMORANDUM OF UNDERSTANDING BETWEEN THE CITY OF FOLSOM AND SACRAMENTO COUNTY WATER AGENCY CONCERNING FOLSOM SPHERE OF INFLUENCE AREA WATER SUPPLY CONVEYANCE AND REGIONAL WATER MANAGEMENT

WHEREAS, the City of Folsom is seeking to annex and allow development of approximately 3,600 acres of land located south of the current City limits and Highway 50 in an area known as the Folsom Sphere of Influence; and

WHEREAS, the City of Folsom must meet requirements of Measure W, approved by the Folsom voters in 2004, that requires that the City find and secure a permanent water supply for the area; and

WHEREAS, the City of Folsom has identified an independent water supply and is evaluating water supply conveyance alternatives to meet the requirements of Measure W; and

WHEREAS, the City recognizes the obligations of the Water Forum Agreement to protect the American River; and

WHEREAS, the City has established a Memorandum of Understanding with the SOI Landowners, known as the Folsom South Area Group, to investigate the feasibility and outline activities required to convey NCMWC agreement water supply to the Folsom SOI; and

WHEREAS, the City has negotiated an MOU with Sacramento County Water Agency to convey the NCMWC water supply through the Freeport Project; and

WHEREAS, the MOU will establish terms and parameters to govern any negotiations between the parties for City's purchase of a portion of the Agency's capacity in the Freeport Project facilities in order to convey NCMWC Water to supply the area encompassed by the SOI, and coordination of regional water supply activities; and

WHEREAS, the agreement will be in a form acceptable to the City Attorney:

NOW, THEREFORE, BE IT RESOLVED that the City Council of the City of Folsom hereby authorizes the City Manager to execute a Memorandum of Understanding between the City of Folsom and Sacramento County Water Agency Concerning Folsom Sphere of Influence Area Water Supply Conveyance and Regional Water Management.

PASSED AND ADOPTED on this 15th day of December 2009, by the following roll call vote:

AYES:	Council Member(s):	Howell, Morin, Miklos, Sheldon, Starsky
NOES:	Council Member(s):	None
ABSENT:	Council Member(s):	None
ABSTAIN:	Council Member(s):	None

Jeffrey M. Starsky, MAYOR

ATTEST:

Christa Freemantle, CITY CLERK

MEMORANDUM OF UNDERSTANDING BETWEEN THE CITY OF FOLSOM AND SACRAMENTO COUNTY WATER AGENCY CONCERNING FOLSOM SPHERE OF INFLUENCE AREA WATER SUPPLY AND REGIONAL WATER MANAGEMENT

This Memorandum of Understanding ("MOU") is entered into by and between the City of Folsom, a charter city (the "City") and Sacramento County Water Agency, a special district created pursuant to the Sacramento County Water Agency Act (codified at West's Water Code Appendix, §§ 66-1 to 66-55) (the "Agency").

Recitals

A. On November 14, 2000, the Sacramento Local Agency Formation Commission ("LAFCO") adopted Resolution No. LAFC 1196 approving the inclusion in the City's sphere of influence of all the real property lying south of Highway 50, and bounded by Prairie City Road to the west, White Rock Road to the south and the Sacramento/El Dorado County boundary to the east, comprising approximately 3,500 acres south of the City's existing limits ("SOI").

B. At the November 2, 2004 election, the City's voters approved Measure W, which added an amendment to the City's charter setting forth various actions to be taken by the City prior to approval of annexation of certain property south of Highway 50 by LAFCO. Measure W states in part: "The City Council shall take the following actions prior to approval by the Local Agency Formation Commission. … A. Water Supply. Identify and secure the source of water supplies to serve the Area. This new water supply shall not cause a reduction in the water supplies designated to serve existing water users north of Highway 50 and the new water supply shall not be paid for by Folsom residents north of Highway 50."

C. On December 17, 2007, South Folsom Properties, LLC ("SFP"), and Natomas Central Mutual Water Company ("Natomas Central") entered into an agreement entitled "Terms and Conditions of Purchase and Sale of Water Entitlements," under which Natomas Central agreed to assign to SFP up to 15,000 acre-feet per year ("afy") of water ("Natomas Water") to which Natomas Central has rights under a May 10, 2005 Contract Between the United States and Natomas Central Mutual Water Company, Diverter of Water from Sacramento River Sources, Settling Water Rights Disputes and Providing for Project Water.

D. On August 26, 2008, the City and SFP signed a memorandum of understanding that contemplates that SFP will assign the Natomas Water to the City for use as a new water supply in the SOI upon the completion of all legal requirements.

E. The City desires to convey its Natomas water from the Sacramento River to its SOI, and has approached the Agency to discuss the feasibility of purchasing a portion of the Agency's capacity in the Freeport Regional Water Project ("FRWP"). Under this project scenario, the diversion point for the Natomas Water for use in the SOI would be at the intake facility that the Freeport Regional Water Authority ("FRWA") is building on the Sacramento River in Sacramento County just north of the community of Freeport. Exhibit A to this MOU depicts the location of FRWA's intake and conveyance facilities (the "FRWA Facilities"), as

well as the SOI. The Agency is a member of FRWA, along with East Bay Municipal Utility District ("EBMUD"), and owns 85 million gallons per day ("mgd") of capacity in the FRWA Facilities.

F. The City is preparing an environmental impact report ("EIR") for the SOI and desires to include conveyance of Natomas Water through the Agency's portion of the FRWA Facilities as part of the project under the California Environmental Quality Act (Pub. Res. Code §§ 21000-21177 ("CEQA")).

G. The City and the Agency have been jointly participating in regional water planning activities through forums such as the Sacramento Central Groundwater Authority. The Parties each desire to ensure that they have water supplies, facilities and contractual arrangements in place to be able to provide high-quality, reliable long-term water supplies within their respective service areas.

H. In 2008, the City and the Agency began developing a non-potable water policy in conjunction with other regional water purveyors. The non-potable water policy may be relevant to future developments in Sacramento County. The City and the Agency will continue to develop this policy as part of the negotiating process set forth in this MOU.

I. In 2006, the City and the Agency facilitated the development of the Central Basin Groundwater Management Plan. The City and the Agency are charter members of the Sacramento Central Groundwater Authority. The City and the Agency will continue to cooperatively assess groundwater conditions and uses in the Central Sacramento Groundwater Basin ("Central Basin") as part of the negotiating process set forth in this MOU.

J. The City and the Agency have developed technical information and analyses as part of various ongoing projects that are relevant to the cooperative efforts contemplated in this MOU. The Parties recognize that sharing technical information is an integral part of furthering the objectives of this MOU.

1. Incorporation of Recitals. The foregoing recitals are incorporated by reference into this MOU.

2. Purpose. The purpose of this MOU is to establish principles and parameters to govern any negotiations between the parties for City's purchase of a portion of the Agency's capacity in the FRWA Facilities in order to convey Natomas Water to supply the area encompassed by the SOI. This MOU is not intended to be a binding legal agreement or to require that any negotiations take place between the parties. The parties are likewise free to terminate negotiations at any time.

3. Principles of Project Development. The City's purchase of capacity in the FRWA Facilities and any related projects will conform to the following principles:

3.1 The project will not adversely impact the coequal objectives of the Water Forum Agreement.

3.2 The project will be consistent with applicable general plan policies of the

City and the County of Sacramento.

3.3 The project will be consistent with any general plan amendments that concern or affect the SOI.

3.4 Any joint projects implemented by the Parties will be carried out in a manner that protects the interests of affected ratepayers, including their investment in existing or planned facilities.

3.5 Except as otherwise provided for in this MOU, the beneficiaries of a project will pay for it in proportion to the benefits received.

3.6 The average daily capacity in the FRWA Facilities that will be available for purchase by the City will be 6.5 mgd with consideration of an appropriate peaking factor.

3.7 The City will be required to provide Agency at City's cost with an alternate supply of water equivalent to the any capacity in the FRWA Facilities purchased by City.

3.8 If a project is required to offset the City's use of a portion of SCWA's capacity in the FRWA facilities, the City is responsible for all costs.

3.9 The project will not compromised the Agency's abilities to provide water to meet the demands of the Agency's customers, now and build-out of the Agency's Service Area.

4. Negotiations and SOI EIR.

4.1 Maximum Available Capacity. The Parties may undertake negotiations pursuant to this MOU to develop the terms and conditions under which the City may purchase capacity in the FRWA Facilities to convey Natomas Water through the FRWA Facilities. If such negotiations are successful, it is contemplated that the Parties will memorialize any such agreement in the form of a binding contractual commitment. ("City-Agency Agreement"). As an inherent component of any such negotiations, and to maximize the Parties' and the public's consideration of a possible City-Agency Agreement, the Parties acknowledge that the average daily capacity in the FRWA Facilities that would be available for purchase by the City is 6.5 mgd with consideration of an appropriate peaking factor. The CEQA Guidelines encourage evaluation of projects' effects early enough to "incorporate environmental considerations into project conceptualization, design and planning" (Cal. Code Regs., tit. 14, § 15004(b)(2)), so, to address a potential City-Agency Agreement's possible effects, the City will incorporate this daily capacity as a project component in the City's EIR for the SOI and the related water supply assessment under Water Code sections 10910-10912. This MOU uses the term "CEQA Guidelines" to refer to sections 15000-15387 of title 14 of the California Code of Regulations.

4.2 Uncertainty and *Vineyard* Analysis. The Parties acknowledge that the availability of the Agency's capacity in the FRWA Facilities to convey Natomas Water is subject to many factors. The Parties accordingly agree that the City's SOI EIR will address

water-supply uncertainty in that EIR in accordance with *Vineyard Area Citizens for Responsible Growth, Inc. v. City of Rancho Cordova* (2007) 40 Cal.4th 412. The Parties intend that the ultimate City-Agency Agreement will specify the portion of the Agency's capacity in the FRWA Facilities that the City may use to convey Natomas Water in terms of both mgd (daily maximum use) and afy (annual maximum use).

4.3. Raw and Treated Water Alternatives. The Parties are discussing the possibility that conveyance of Natomas Water through the FRWA Facilities to the SOI could include the Agency treating that Natomas Water to drinking-water standards before delivering it to the City. The Parties accordingly agree that the City's SOI EIR will include project alternatives that involve the Agency treating the Natomas Water to drinking-water standards, and associated facilities, pursuant to section 15126.6 of the CEQA Guidelines. The Parties intend that the ultimate City-Agency Agreement will specify whether the Agency will provide drinking-water treatment for the Natomas Water and, if so, how such treatment is to be provided.

4.4. Parties' Criteria. Each Party understands that the other Party has identified certain criteria that may affect its ability to ultimately execute a City-Agency Agreement, including without limitation: (a) a maximum of 6.5 mgd of the Agency's capacity in the FRWA Facilities can be committed to diverting and conveying Natomas Water; and (b) the costs that the City can pay for using FRWA Facilities.

4.4.1. City Criteria. The City's criteria may include, without limitation:

(a) Ensuring adequate and reliable water supplies for, and minimizing costs to, the potential City residents who would live in the SOI.

(b) Successfully integrating the operation of the City's SOI water system with the water systems associated with the City's use of the Natomas Water and using a portion of the Agency's capacity in the FRWA Facilities.

(c) Successfully addressing impacts of the contamination of groundwater aquifers within the City's water service area.

4.4.2. Agency Criteria. The Agency's criteria may include, without limitation:

(a) The delivery of water to improve system reliability for Agency customers.

(b) The protection of the Central Basin by maintaining the basin balance through facilitating conjunctive use.

(c) Addressing the impacts of groundwater contamination in the Central Basin through the recovery of treated groundwater.

(d) Minimizing the Agency's capital and operational costs for the FRWA intake and conveyance facilities.

(e) Opportunities to provide regional water supply benefit to additional agencies consistent with approved plans and programs.

(f) Energy savings through possible power curtailments at the FRWA facilities and other related opportunities.

(g) The use of non-potable water in the SOI to offset potable water demands in the City and/or SCWA service areas.

(h) The development of a project (infrastructure and water supply) to make up for the City's use of a portion of SCWA's capacity and to provide additional future water supplies, as well as making SCWA whole, with no additional financial burden on SCWA's existing or future customers.

(i) Evaluate sources of water, amounts of water available, and timing of delivery to optimize the efficiency of both purveyors projects and supplies.

(j) The development of a conjunctive use project (In-lieu and Active Recharge Projects).

(k) The potential development of a regional environmentally beneficial project.

(l) Statewide Conservation Mandates.

5. Related Projects.

5.1. Coordinated Analyses. The Parties will prepare coordinated analyses of the following factors that may be required for the Agency to allow the use of a portion of its capacity in the FRWA Facilities to convey Natomas Water.

5.2. Non-Potable Water. The Parties are developing plans to implement non-potable water supplies for uses that do not require potable water within the Parties' relevant service areas. The Parties intend that the following conditions concerning non-potable water will be included in their ultimate City-Agency Agreement:

(a) The City will require that a non-potable water service system be installed in the SOI.

(b) The City will apply non-potable water to its own properties like medians and parks in the SOI in accordance with the non-potable water use policies it develops for its service area in coordination with the Agency's development of similar policies for its service area.

(c) The City will not be required to apply, or to require the application of, non-potable water for any indoor use even if the Agency's present or future non-potable water policy requires such indoor use of non-potable water.

(d) The City will be responsible for acquiring non-potable water supplies for use in the SOI.

5.3. Conjunctive Use. The City and the Agency will jointly study potential conjunctive use projects such as: (a) direct injection or percolation of surface water into the Central Basin's aquifers; (b) in-lieu recharge involving delivery of surface water to groundwater users to reduce pumping from the Central Basin's aquifers; or (c) other integrated uses of groundwater and surface water that are agreeable to the Parties. The City will pay for this study, as well any resulting pilot projects that are necessary to implement this MOU.

5.4. Environmental Project. The City and the Agency will jointly investigate the potential development of environmentally beneficial projects for the region.

6. Term and Consistency with FRWA Agreements. The term of the City-Agency Agreement will be the same as the term of the FRWA Agreement for Delivery of Water, dated _____, between the Agency and EBMUD ("Delivery Agreement"). If a party to the Delivery Agreement terminates that Agreement according to its terms, then the City-Agency Agreement will terminate at the same time.

6.1. Agreement Extension. If FRWA's Board of Directors elects to extend the Delivery Agreement's term, then the City-Agency Agreement will be automatically extended for the same term as the Delivery Agreement. If FRWA's Board of Directors elects not to extend the Delivery Agreement's term and EBMUD and the Agency instead decide to negotiate a successor to the Delivery Agreement, then the City-Agency Agreement will be extended for the term of that successor agreement and will be amended to be consistent with that successor agreement.

6.2. Dissolution of Authority. If FRWA ever dissolves, then the City will retain its right to use the FRWA Facilities to divert and convey Natomas Water under the City-Agency Agreement. The Agency will ensure that any new governance arrangements for FRWA will incorporate the City's rights to use the FRWA Facilities. Upon FRWA's dissolution, the City and the Agency will renegotiate the City-Agency Agreement to adjust the City's obligation to pay operations and maintenance costs associated with the City's use of the FRWA Facilities to reflect any changes to the operation of the FRWA Facilities generally.

7. Costs of City Use of FRWA Facilities. Any City-Agency Agreement will reflect the following cost-allocation terms.

7.1. Feasibility Studies. The City will pay all costs for technical evaluations to determine whether conveying the Natomas Water through the use of a portion of SCWA's capacity in the FRWA Facilities is technically feasible, including without limitation all costs of modifying the Agency's pipelines to accommodate any

new conveyance facilities desired by the City.

7.2. Proportionate Sunk Costs. The City will pay a share of the total costs that the Agency has incurred to implement the FRWA Facilities ("Sunk Costs") that is proportionate to the share of the FRWA Facilities that the City-Agency Agreement authorizes the City to use. The Sunk Costs include the Agency's planning, design and construction costs for the FRWA Facilities and Agency pipeline.

7.3 Replacement of Capacity. In addition to the City paying for its proportionate share for using a portion of SCWA's capacity in the FRWP, SCWA will require the replacement of this capacity to serve the future water supply needs of SCWA's service area currently proposed to be served by its portion of the Freeport Project facilities. Therefore, the City will provide sufficient water supplies and/or funds for investment in other infrastructure as to make the County whole such that there is no reduction in SCWA's water supply and/or financial burden on SCWA's existing or future customers within SCWA's service area as a result of the City's use of a portion of SCWA's capacity in the FRWP.

7.4. Implementation Costs. The City will pay all costs associated with integrating any new facilities that the City will construct into the facilities by which the Agency conveys water from the FRWA Facilities. The costs for which the City will be responsible under this Section 7.3 will include, without limitation: (a) design costs; (b) construction costs; (c) costs associated with any technical modifications associated with the operation of the existing FRWA system; and (d) transaction costs (including, but not limited to, consultant fees associated with development of technical and environmental compliance analyses). The City will be responsible for obtaining all permits associated with the implementation of any City-Agency Agreement and preparing all environmental documents required for such implementation, including without limitation the SOI EIR. The Parties acknowledge that the City's SOI EIR also will serve as an environmental impact statement under the National Environmental Policy Act.

7.5. City Delivery Costs. The City will be responsible for constructing all facilities necessary for, and all costs associated with, the conveyance of water from the point at which the Agency delivers Natomas Water conveyed through the FRWA Facilities into the City's control (the "Bifurcation") to the SOI or any other location where the City will use the Natomas Water. The costs for which the City will be responsible under this Section 7.5 will include, without limitation, feasibility-study, design, permitting, environmental-documentation and construction costs. The City and the Agency believe that it will be necessary to secure rights of way for the City to deliver water from the Bifurcation to the SOI or any other location where the City will use the Natomas Water. The City will be solely responsible for the cost of acquiring any such rights of way.

7.6. Operations and Maintenance Costs. In proportion to the City's partial use of capacity of the FRWA Facilities and, if separate, the Agency's facilities associated with the FRWA Facilities ("Agency's Associated Facilities"), the City will pay a share of the total fixed and variable operation and maintenance costs (as defined in the Delivery Agreement) for the facilities associated with the FRWA

Facilities and, if separate, the Agency's Associated Facilities. The Parties acknowledge that the energy costs associated with operating those facilities, including without limitation "peaking" energy costs, may be a special category of operations and maintenance costs that may require special treatment in the City-Agency Agreement. The Agency will invoice the City monthly for all costs that the Agency incurs for its operation and maintenance of the portion of the FRWA Facilities through which the City conveys Natomas Water, including both fixed and variable operations and maintenance costs as defined in the Delivery Agreement.

8. Delivery Scheduling. Under any City-Agency Agreement and by February 15 of each year, the City will deliver to the Agency a schedule of monthly deliveries of Natomas Water that the City requests for the fiscal year beginning the following July 1.

9. Contacts. For administration of this MOU, the persons designated as each Party's contact is as follows:

City	Agency
Kenneth V. Payne, Utilities Director City of Folsom 50 Natoma Street Folsom, California 95630 (916) 355-7272	Keith DeVore, Dir. of Water Resources Sacramento County Water Agency 827 7th Street, Room 301 Sacramento, CA 95814 (916) 874-6851

Either Party may change its contact person or information at any time by giving written notice of the change to the other Party.

10. Modification. The Parties may amend this MOU through any writing approved by each Party's legally authorized representative.

11. Not a Binding Agreement. This MOU is not a binding agreement between the Parties, but rather is an expression of the Parties' intent concerning their respective roles concerning the potential conveyance of Natomas Water through the FRWA Facilities.

12. Compliance with CEQA. Nothing in this MOU or any other agreement between the City and the Agency: (a) commits either Party to any particular decision regarding the development of any particular project; (b) confers any vested rights on either Party; or (c) restricts the City's or the Agency's discretion with respect to any activity or project developed in accordance with this MOU. In addition, the Parties intend that CEQA, and all other applicable environmental compliance laws, will be fully complied with prior to any decisions with respect to the Natomas Water or the City obtaining any rights in the FRWA Facilities. (See *Save Tara v. City of Los Angeles* (2008) 45 Cal. 4th 116.)

13. Signatures and Counterparts. This MOU may be executed with signatures via facsimiles or signatures scanned and transmitted in Portable Document Format. This MOU may be executed in counterparts, each of which shall be deemed an original, and all of which taken together shall constitute one original MOU.

The foregoing is approved by the Parties as of the date first written above.

CITY OF FOLSOM

By: _____
Kerry L. Miller
City Manager

Attest:

By: _____
Christa Schmidt
City Clerk

Approved as to content:

By: _____
Kenneth V. Payne
Utilities Director

Approved as to form:

By: _____
Bruce Cline
City Attorney

SACRAMENTO COUNTY WATER AGENCY

By: _____
Keith DeVore
Director of Water Resources

Approved as to form:

By: _____
John Whisenhunt
County Counsel

APPENDIX M4

Air Quality Calculations

Criteria Air Pollutant Summary - Folsom Water Supply - 10/2/2009

Construction

	RoadwayConstruction (2011) (lbs/day)					*Construction Totals (2011)*					*Construction Totals (2012)*				
Conveyance	*ROG*	*NOx*	*PM10*	*PM2.5*	*CO2*	*ROG*	*NOx*	*PM10*	*PM2.5*	*CO2*	*ROG*	*NOx*	*PM10*	*PM2.5*	*CO2*
Preferred Alt	*22.2*	*83.7*	*26.2*	*9.8*	*8347.4*	*25.06*	*107.18*	*77.38*	*21.32*	*10706.44*	*234.3*	*110.81*	*27.95*	*11.29*	*15042.4*
Alterantive 1	20.6	79.9	25.8	9.5	7978.7	23.46	103.38	76.98	21.02	10337.74	232.73	107.01	27.55	10.99	14673.7
Alterantive 1A	20.4	79.4	25.8	9.5	7929.5	23.26	102.88	76.98	21.02	10288.54	232.53	106.51	27.55	10.99	14624.5
Alterantive 2	14.4	64.6	24.3	8.1	6479.2	14.4	64.6	24.3	8.1	6479.2	14.4	64.6	24.3	8.1	6479.2
Alterantive 2A	20.3	79	25.7	9.4	7892.6	20.3	79	25.7	9.4	7892.6	20.3	79	25.7	9.4	7892.6
Alternative 2B	11	56.1	23.5	7.3	5643.4	11	56.1	23.5	7.3	5643.4	11	56.1	23.5	7.3	5643.4
Alterantive 3	23	85.8	26.4	10	8556.3	25.86	109.28	77.58	21.52	10915.34	235.13	112.91	28.15	11.49	15251.3
Alterantive 3A	21.5	82.2	26	9.7	8199.9	24.36	105.68	77.18	21.22	10558.94	233.63	109.31	27.75	11.19	14894.9
Alterantive 4	23.3	86.5	26.5	10.1	8630.1	26.16	109.98	77.68	21.62	10989.14	235.43	113.61	25.05	11.59	15325.1
Alterantive 4A	22.7	84.9	26.3	10	8470.3	25.56	108.38	77.48	21.52	10829.34	234.83	112.01	28.05	11.49	15165.3

	Urbemis Construction (Summer - lbs / day)					*Urbemis* Construction (Winter- pounds / day)					
WTP (General)	*ROG*	*NOx*	*PM10*	PM2.5	*CO2*	WTP (General)	*NOx*	*ROG*	*PM10*	PM2.5	*CO2*
2011	2.86	23.48	51.18	11.52	2359.04	2011	23.48	2.86	51.18	11.52	2359.04
2012	212.13	27.11	1.75	1.49	6695	2012	27.11	212.13	1.75	1.49	6695

20.676

Operations *Urbemis*

WTP (General)	*ROG*	*NOx*	*PM10*	PM2.5	*CO2*
2012 (lbs/day)	4.51	4.25	6.13	1.19	4835.92
2012 (tons/year)	0.82	0.88	1.12	0.22	836.75

GHG Summary

	Indirect	direct mobile	
Preferred Alt	22725.40353	759.0996	MTCO2e/yr
Alterantive 1	22725.40353	759.0996	MTCO2e/yr
Alterantive 1A	22725.40353	759.0996	MTCO2e/yr
Alterantive 2	22503.70237	0	MTCO2e/yr
Alterantive 2A	22503.70237	0	MTCO2e/yr
Alternative 2B	21614.7411	0	MTCO2e/yr
Alterantive 3	22725.40353	759.0996	MTCO2e/yr
Alterantive 3A	22725.40353	759.0996	MTCO2e/yr
Alterantive 4	22725.40353	759.0996	MTCO2e/yr
Alterantive 4A	22725.40353	759.0996	MTCO2e/yr

Folsom Water Supply and Conveyance Project - GHG - Alt, Alt 1, Alt 1A, 3, 3A, 4, and 4A

1700	HP		
1267.69	KWh		
Total Annual MWh =	10831.14		
Total Annual KWh =	10831143		
Total lbs/CO2/year=	6014101	Total lbs/CH4/year =	314.1032
Total metric tons/CO2/	**2727.953**	Total metric tons/CH4/year=	0.142475
		Total metric tons CO2e/year=	2.991974
Total MTC02e/yr	**2747.698**		
		Total lbs/N2O/year =	119.1426
		Total metric tons/N2O/year=	0.054042
Assumptions		Total metric tons CO2e/year=	16.75309

Assumption: Pumps run via electrical grid
1 HP/hr = 0.7457 KWh
1700 HP pump
Operations assumed 24/7
0.55526 lbs/CO2 emitted per KWh (1) - (Table G-5, SMUD - 2006)
2,204.62 lbs = 1 metric ton
0.000029 lbs/CH4/KWh (2) - for 2004
0.000011 lbs/N20/KWh (2) - for 2004
CH4 emissions x 21 = CO2E; N2O emissions x 310 = CO2E
Source(s):
(1) Local Government Operations Protocol, September 2008 - Table G.5 - Utility specific Verified Electricity CO2 Emission Factors

(2) Local Government Operations Protocol, September 2008 - Table G.5 - Utility specific Verified Electricity CO2 Emission Factors
Table G.6 California Grid Average Electricity Emission Factors (1990-2004)

Folsom Water Supply and Conveyance Project - Alt 2 and 2A GHG

1650 HP
1230.405 KWh

Total Annual KWh =	10512580		
Total lbs/CO2/year=	5837215	Total lbs/CH4/year =	304.8648
Total metric tons/CO2/year=	**2647.719**	Total metric tons/CH4/year=	0.138285
		Total metric tons CO2e/year=	2.903975
Total MTC02e/yr	**2666.884**		
		Total lbs/N2O/year =	115.6384
		Total metric tons/N2O/year=	0.052453
		Total metric tons CO2e/year=	16.26035

Assumptions
Assumption: Pumps run via electrical grid
1 HP/hr = 0.7457 KWh
1700 HP pump
Operations assumed 24/7
0.55526 lbs/CO2 emitted per KWh (1) - (Table G-5, SMUD - 2006)
2,204.62 lbs = 1 metric ton
0.000029 lbs/CH4/KWh (2) - for 2004
0.000011 lbs/N20/KWh (2) - for 2004
CH4 emissions x 21 = CO2E; N2O emissions x 310 = CO2E
Source(s):
(1) Local Government Operations Protocol, September 2008 - Table G.5 - Utility specific Verified Electricity C

(2) Local Government Operations Protocol, September 2008 - Table G.5 - Utility specific Verified Electricity C
Table G.6 California Grid Average Electricity Emission Factors (1990-2004)

O2 Emission Factors

O2 Emission Factors

Folsom Water Supply and Conveyance Project - Alt 2B GHG

1110	HP		
820.27	KWh		
Total Annual MWh =	7008.387		
Total Annual kWh =	7008387		
Total lbs/CO2/year=	3891477	Total lbs/CH4/year =	203.2432
Total metric tons/CO2/	**1765.146**	Total metric tons/CH4/year=	0.09219
		Total metric tons CO2e/year=	1.935983
Total MTC02e/yr	**1777.923**		
		Total lbs/N2O/year =	77.09226
		Total metric tons/N2O/year=	0.034969
		Total metric tons CO2e/year=	10.84024

Assumptions

Assumption: Pumps run via electrical grid
1 HP/hr = 0.7457 KWh
1700 HP pump
Operations assumed 24/7
0.55526 lbs/CO2 emitted per KWh (1) - (Table G-5, SMUD - 2006)
2,204.62 lbs = 1 metric ton
0.000029 lbs/CH4/KWh (2) - for 2004
0.000011 lbs/N20/KWh (2) - for 2004
CH4 emissions x 21 = CO2E; N2O emissions x 310 = CO2E
Source(s):
(1) Local Government Operations Protocol, September 2008 - Table G.5 - Utility specific Verified Electr

(2) Local Government Operations Protocol, September 2008 - Table G.5 - Utility specific Verified Electr
Table G.6 California Grid Average Electricity Emission Factors (1990-2004)

icity CO2 Emission Factors

icity CO2 Emission Factors

Folsom Water Supply and Conveyance Project - WTP and Local Distribution (Alts 1, 3, and 4) GHG

6.5 MGD average
1,418 kWh/MG
9217 KWh

Total Annual KWh =	78750048		
Total lbs/CO2/year=	43726752	Total lbs/CH4/year =	2283.751
Total metric tons/CO2/	**19834.14**	Total metric tons/CH4/year=	1.035893
		Total metric tons CO2e/year=	21.75376
Total MTC02e/yr	**19977.71**		
		Total lbs/N2O/year =	866.2505
		Total metric tons/N2O/year=	0.392925
		Total metric tons CO2e/year=	121.8068

Assumptions

Assumption: WTP and Pumps run via electrical grid
1 HP/hr = 0.7457 KWh
1,418 kWh/ MG (Exhibit 3-10, ICF International, 2008; % of energy used for distibution pumping - 93%.
Operations assumed 24/7
0.55526 lbs/CO2 emitted per KWh (2) - (Table G-5, SMUD - 2006)
2,204.62 lbs = 1 metric ton
0.000029 lbs/CH4/KWh (3) - for 2004
0.000011 lbs/N20/KWh (3) - for 2004
CH4 emissions x 21 = CO2E; N2O emissions x 310 = CO2E
Source(s):
(1) ICF International, Water and Energy; Leverging Voluntary Programs to
Save Both Water and Energy, see Exhibit 3-10 (5 MG)

(1) Local Government Operations Protocol, September 2008
- Table G.5 - Utility specific Verified Electricity CO2 Emission Factors

(3) Local Government Operations Protocol, September 2008 -
Table G.5 - Utility specific Verified Electricity CO2 Emission Factors
Table G.6 California Grid Average Electricity Emission Factors (1990-2004)

Folsom Water Supply and Conveyance Project - Vineyard WTP and Local Distribution (Alts 2, 2A, and 2B) GHG

6.5 MGD average
1,408 kWh/MG
9152 KWh

Total Annual KWh =	78194688		
Total lbs/CO2/year=	43418382	Total lbs/CH4/year =	2267.646
Total metric tons/CO2/	**19694.27**	Total metric tons/CH4/year=	1.028588
		Total metric tons CO2e/year=	21.60035
Total MTC02e/yr	**19836.82**		
		Total lbs/N2O/year =	860.1416
		Total metric tons/N2O/year=	0.390154
		Total metric tons CO2e/year=	120.9478

Assumptions

Assumption: WTP and Pumps run via electrical grid and Vineayard SWTP operates at slightly higher efficiency
1 HP/hr = 0.7457 KWh
1,408 kWh/ MG (Exhibit 3-10, ICF International, 2008; % of energy used for distibution pumping - 91%.
Operations assumed 24/7
0.55526 lbs/CO2 emitted per KWh (2) - (Table G-5, SMUD - 2006)
2,204.62 lbs = 1 metric ton
0.000029 lbs/CH4/KWh (3) - for 2004
0.000011 lbs/N20/KWh (3) - for 2004
CH4 emissions x 21 = CO2E; N2O emissions x 310 = CO2E
Source(s):
(1) ICF International, Water and Energy; Leverging Voluntary Programs to
Save Both Water and Energy, see Exhibit 3-10 (50 MG)

(1) Local Government Operations Protocol, September 2008
- Table G.5 - Utility specific Verified Electricity CO2 Emission Factors

(3) Local Government Operations Protocol, September 2008 -
Table G.5 - Utility specific Verified Electricity CO2 Emission Factors
Table G.6 California Grid Average Electricity Emission Factors (1990-2004)

Road Construction Emissions Model, Version 6.3

Emission Estimates for -> Folsom SOI Water Supply- Preferre Project Phases (English Units)	ROG (lbs/day)	CO (lbs/day)	NOx (lbs/day)	Total PM10 (lbs/day)	Exhaust PM10 (lbs/day)	Fugitive Dust PM10 (lbs/day)	Total PM2.5 (lbs/day)	Exhaust PM2.5 (lbs/day)	Fugitive Dust PM2.5 (lbs/day)	CO2 (lbs/day)
Grubbing/Land Clearing	20.9	61.0	76.1	25.6	5.6	20.0	9.3	5.1	4.2	7,261.6
Grading/Excavation	22.2	69.7	83.7	26.2	6.2	20.0	9.8	5.7	4.2	8,347.4
Drainage/Utilities/Sub-Grade	18.1	55.4	68.3	25.1	5.1	20.0	8.9	4.7	4.2	7,032.9
Paving	16.7	48.9	53.2	4.8	4.8	-	4.4	4.4	-	5,300.0
Maximum (pounds/day)	22.2	69.7	83.7	26.2	6.2	20.0	9.8	5.7	4.2	8,347.4
Total (tons/construction project)	5.2	15.8	19.5	6.0	1.5	4.5	12.5	0.9	0.9	1,880.4

Notes:
Project Start Year -> 2011
Project Length (months) -> 24
Total Project Area (acres) -> 113
Maximum Area Disturbed/Day (acres) -> 2
Total Soil Imported/Exported (yd^3/day)-> 100

PM10 and PM2.5 estimates assume 50% control of fugitive dust from watering and associated dust control measures if a minimum number of water trucks are specified.

Total PM10 emissions shown in column F are the sum of exhaust and fugitive dust emissions shown in columns H and I. Total PM2.5 emissions shown in Column J are the sum of exhaust and fugitive dust emissions shown in columns K and L.

Emission Estimates for -> Folsom SOI Water Supply- Preferre Project Phases (Metric Units)	ROG (kgs/day)	CO (kgs/day)	NOx (kgs/day)	Total PM10 (kgs/day)	Exhaust PM10 (kgs/day)	Fugitive Dust PM10 (kgs/day)	Total PM2.5 (kgs/day)	Exhaust PM2.5 (kgs/day)	Fugitive Dust PM2.5 (kgs/day)	CO2 (kgs/day)
Grubbing/Land Clearing	9.5	27.7	34.6	11.6	2.5	9.1	4.2	2.3	1.9	3,300.7
Grading/Excavation	10.1	31.7	38.0	11.9	2.8	9.1	4.5	2.6	1.9	3,794.3
Drainage/Utilities/Sub-Grade	8.2	25.2	31.0	11.4	2.3	9.1	4.0	2.1	1.9	3,196.8
Paving	7.6	22.2	24.2	2.2	2.2	-	2.0	2.0	-	2,409.1
Maximum (kilograms/day)	10.1	31.7	38.0	11.9	2.8	9.1	4.5	2.6	1.9	3,794.3
Total (megagrams/construction project)	4.7	14.3	17.7	5.4	1.3	4.1	11.3	0.8	0.8	1,705.6

Notes:
Project Start Year -> 2011
Project Length (months) -> 24
Total Project Area (hectares) -> 46
Maximum Area Disturbed/Day (hectares) -> 1
Total Soil Imported/Exported ($meters^3$/day)-> 76

PM10 and PM2.5 estimates assume 50% control of fugitive dust from watering and associated dust control measures if a minimum number of water trucks are specified.

Total PM10 emissions shown in column F are the sum of exhaust and fugitive dust emissions shown in columns H and I. Total PM2.5 emissions shown in Column J are the sume of exhaust and fugitive dust emissions shown in columns K and L.

Road Construction Emissions Model, Version 6.3

Emission Estimates for -> Folsom SOI Water Supply- Alt. 1				Total	Exhaust	Fugitive Dust	Total	Exhaust	Fugitive Dust	
Project Phases (English Units)	**ROG (lbs/day)**	**CO (lbs/day)**	**NOx (lbs/day)**	**PM10 (lbs/day)**	**PM10 (lbs/day)**	**PM10 (lbs/day)**	**PM2.5 (lbs/day)**	**PM2.5 (lbs/day)**	**PM2.5 (lbs/day)**	**CO2 (lbs/day)**
Grubbing/Land Clearing	19.4	57.1	72.4	25.2	5.2	20.0	9.0	4.8	4.2	6,892.9
Grading/Excavation	20.6	65.8	79.9	25.8	5.8	20.0	9.5	5.3	4.2	7,978.7
Drainage/Utilities/Sub-Grade	16.8	51.8	64.7	24.8	4.8	20.0	8.6	4.4	4.2	6,664.2
Paving	15.4	45.2	49.5	4.5	4.5	-	4.1	4.1	-	4,931.3
Maximum (pounds/day)	20.6	65.8	79.9	25.8	5.8	20.0	9.5	5.3	4.2	7,978.7
Total (tons/construction project)	4.8	14.8	18.6	5.9	1.4	4.5	12.5	0.9	0.9	1,783.1

Notes:

Project Start Year ->	2011
Project Length (months) ->	24
Total Project Area (acres) ->	113
Maximum Area Disturbed/Day (acres) ->	2
Total Soil Imported/Exported (yd^3/day)->	100

PM10 and PM2.5 estimates assume 50% control of fugitive dust from watering and associated dust control measures if a minimum number of water trucks are specified.

Total PM10 emissions shown in column F are the sum of exhaust and fugitive dust emissions shown in columns H and I. Total PM2.5 emissions shown in Column J are the sum of exhaust and fugitive dust emissions shown in columns K and L.

Emission Estimates for -> Folsom SOI Water Supply- Alt. 1				Total	Exhaust	Fugitive Dust	Total	Exhaust	Fugitive Dust	
Project Phases (Metric Units)	**ROG (kgs/day)**	**CO (kgs/day)**	**NOx (kgs/day)**	**PM10 (kgs/day)**	**PM10 (kgs/day)**	**PM10 (kgs/day)**	**PM2.5 (kgs/day)**	**PM2.5 (kgs/day)**	**PM2.5 (kgs/day)**	**CO2 (kgs/day)**
Grubbing/Land Clearing	8.8	26.0	32.9	11.5	2.4	9.1	4.1	2.2	1.9	3,133.1
Grading/Excavation	9.4	29.9	36.3	11.7	2.6	9.1	4.3	2.4	1.9	3,626.7
Drainage/Utilities/Sub-Grade	7.6	23.5	29.4	11.3	2.2	9.1	3.9	2.0	1.9	3,029.2
Paving	7.0	20.6	22.5	2.0	2.0	-	1.9	1.9	-	2,241.5
Maximum (kilograms/day)	9.4	29.9	36.3	11.7	2.6	9.1	4.3	2.4	1.9	3,626.7
Total (megagrams/construction project)	4.4	13.4	16.8	5.3	1.2	4.1	11.3	0.8	0.8	1,617.3

Notes:

Project Start Year ->	2011
Project Length (months) ->	24
Total Project Area (hectares) ->	46
Maximum Area Disturbed/Day (hectares) ->	1
Total Soil Imported/Exported ($meters^3$/day)->	76

PM10 and PM2.5 estimates assume 50% control of fugitive dust from watering and associated dust control measures if a minimum number of water trucks are specified.

Total PM10 emissions shown in column F are the sum of exhaust and fugitive dust emissions shown in columns H and I. Total PM2.5 emissions shown in Column J are the sume of exhaust and fugitive dust emissions shown in columns K and L.

Road Construction Emissions Model, Version 6.3

Emission Estimates for -> Folsom SOI Water Supply- Alt. 1A Project Phases (English Units)	ROG (lbs/day)	CO (lbs/day)	NOx (lbs/day)	Total PM10 (lbs/day)	Exhaust PM10 (lbs/day)	Fugitive Dust PM10 (lbs/day)	Total PM2.5 (lbs/day)	Exhaust PM2.5 (lbs/day)	Fugitive Dust PM2.5 (lbs/day)	CO2 (lbs/day)
Grubbing/Land Clearing	19.2	56.6	71.9	25.2	5.2	20.0	8.9	4.8	4.2	6,843.7
Grading/Excavation	20.4	65.3	79.4	25.8	5.8	20.0	9.5	5.3	4.2	7,929.5
Drainage/Utilities/Sub-Grade	16.6	51.3	64.2	24.8	4.8	20.0	8.5	4.4	4.2	6,615.0
Paving	15.3	44.7	49.0	4.4	4.4	-	4.1	4.1	-	4,882.1
Maximum (pounds/day)	20.4	65.3	79.4	25.8	5.8	20.0	9.5	5.3	4.2	7,929.5
Total (tons/construction project)	4.8	14.6	18.4	5.9	1.4	4.5	12.5	0.9	0.9	1,770.1

Notes:

Project Start Year ->	2011
Project Length (months) ->	24
Total Project Area (acres) ->	111
Maximum Area Disturbed/Day (acres) ->	2
Total Soil Imported/Exported (yd^3/day)->	100

PM10 and PM2.5 estimates assume 50% control of fugitive dust from watering and associated dust control measures if a minimum number of water trucks are specified.

Total PM10 emissions shown in column F are the sum of exhaust and fugitive dust emissions shown in columns H and I. Total PM2.5 emissions shown in Column J are the sum of exhaust and fugitive dust emissions shown in columns K and L.

Emission Estimates for -> Folsom SOI Water Supply- Alt. 1A Project Phases (Metric Units)	ROG (kgs/day)	CO (kgs/day)	NOx (kgs/day)	Total PM10 (kgs/day)	Exhaust PM10 (kgs/day)	Fugitive Dust PM10 (kgs/day)	Total PM2.5 (kgs/day)	Exhaust PM2.5 (kgs/day)	Fugitive Dust PM2.5 (kgs/day)	CO2 (kgs/day)
Grubbing/Land Clearing	8.7	25.7	32.7	11.4	2.4	9.1	4.1	2.2	1.9	3,110.8
Grading/Excavation	9.3	29.7	36.1	11.7	2.6	9.1	4.3	2.4	1.9	3,604.3
Drainage/Utilities/Sub-Grade	7.5	23.3	29.2	11.3	2.2	9.1	3.9	2.0	1.9	3,006.8
Paving	6.9	20.3	22.3	2.0	2.0	-	1.9	1.9	-	2,219.1
Maximum (kilograms/day)	9.3	29.7	36.1	11.7	2.6	9.1	4.3	2.4	1.9	3,604.3
Total (megagrams/construction project)	4.4	13.3	16.7	5.3	1.2	4.1	11.3	0.8	0.8	1,605.5

Notes:

Project Start Year ->	2011
Project Length (months) ->	24
Total Project Area (hectares) ->	45
Maximum Area Disturbed/Day (hectares) ->	1
Total Soil Imported/Exported ($meters^3$/day)->	76

PM10 and PM2.5 estimates assume 50% control of fugitive dust from watering and associated dust control measures if a minimum number of water trucks are specified.

Total PM10 emissions shown in column F are the sum of exhaust and fugitive dust emissions shown in columns H and I. Total PM2.5 emissions shown in Column J are the sume of exhaust and fugitive dust emissions shown in columns K and L.

Road Construction Emissions Model, Version 6.3

Emission Estimates for -> Folsom SOI Water Supply- Alt. 2 Project Phases (English Units)	ROG (lbs/day)	CO (lbs/day)	NOx (lbs/day)	Total PM10 (lbs/day)	Exhaust PM10 (lbs/day)	Fugitive Dust PM10 (lbs/day)	Total PM2.5 (lbs/day)	Exhaust PM2.5 (lbs/day)	Fugitive Dust PM2.5 (lbs/day)	CO2 (lbs/day)
Grubbing/Land Clearing	13.2	41.2	57.1	23.7	3.7	20.0	7.6	3.4	4.2	5,393.4
Grading/Excavation	14.4	50.0	64.6	24.3	4.3	20.0	8.1	4.0	4.2	6,479.2
Drainage/Utilities/Sub-Grade	11.5	36.9	49.9	23.5	3.5	20.0	7.3	3.2	4.2	5,164.7
Paving	10.2	30.3	34.8	3.1	3.1	-	2.9	2.9	-	3,431.8
Maximum (pounds/day)	14.4	50.0	64.6	24.3	4.3	20.0	8.1	4.0	4.2	6,479.2
Total (tons/construction project)	3.3	10.7	14.6	5.5	1.0	4.5	12.5	0.9	0.9	1,387.2

Notes:
Project Start Year -> 2011
Project Length (months) -> 24
Total Project Area (acres) -> 68
Maximum Area Disturbed/Day (acres) -> 2
Total Soil Imported/Exported (yd^3/day)-> 100

PM10 and PM2.5 estimates assume 50% control of fugitive dust from watering and associated dust control measures if a minimum number of water trucks are specified.

Total PM10 emissions shown in column F are the sum of exhaust and fugitive dust emissions shown in columns H and I. Total PM2.5 emissions shown in Column J are the sum of exhaust and fugitive dust emissions shown in columns K and L.

Emission Estimates for -> Folsom SOI Water Supply- Alt. 2 Project Phases (Metric Units)	ROG (kgs/day)	CO (kgs/day)	NOx (kgs/day)	Total PM10 (kgs/day)	Exhaust PM10 (kgs/day)	Fugitive Dust PM10 (kgs/day)	Total PM2.5 (kgs/day)	Exhaust PM2.5 (kgs/day)	Fugitive Dust PM2.5 (kgs/day)	CO2 (kgs/day)
Grubbing/Land Clearing	6.0	18.7	25.9	10.8	1.7	9.1	3.4	1.6	1.9	2,451.5
Grading/Excavation	6.6	22.7	29.4	11.0	2.0	9.1	3.7	1.8	1.9	2,945.1
Drainage/Utilities/Sub-Grade	5.2	16.8	22.7	10.7	1.6	9.1	3.3	1.4	1.9	2,347.6
Paving	4.6	13.8	15.8	1.4	1.4	-	1.3	1.3	-	1,559.9
Maximum (kilograms/day)	6.6	22.7	29.4	11.0	2.0	9.1	3.7	1.8	1.9	2,945.1
Total (megagrams/construction project)	3.0	9.7	13.2	5.0	0.9	4.1	11.3	0.8	0.8	1,258.3

Notes:
Project Start Year -> 2011
Project Length (months) -> 24
Total Project Area (hectares) -> 28
Maximum Area Disturbed/Day (hectares) -> 1
Total Soil Imported/Exported ($meters^3$/day)-> 76

PM10 and PM2.5 estimates assume 50% control of fugitive dust from watering and associated dust control measures if a minimum number of water trucks are specified.

Total PM10 emissions shown in column F are the sum of exhaust and fugitive dust emissions shown in columns H and I. Total PM2.5 emissions shown in Column J are the sume of exhaust and fugitive dust emissions shown in columns K and L.

Road Construction Emissions Model, Version 6.3

Emission Estimates for -> Folsom SOI Water Supply- Alt. 2A Project Phases (English Units)	ROG (lbs/day)	CO (lbs/day)	NOx (lbs/day)	Total PM10 (lbs/day)	Exhaust PM10 (lbs/day)	Fugitive Dust PM10 (lbs/day)	Total PM2.5 (lbs/day)	Exhaust PM2.5 (lbs/day)	Fugitive Dust PM2.5 (lbs/day)	CO2 (lbs/day)
Grubbing/Land Clearing	19.0	56.2	71.5	25.1	5.1	20.0	8.9	4.7	4.2	6,806.8
Grading/Excavation	20.3	64.9	79.0	25.7	5.7	20.0	9.4	5.3	4.2	7,892.6
Drainage/Utilities/Sub-Grade	16.5	50.9	63.8	24.7	4.7	20.0	8.5	4.3	4.2	6,578.2
Paving	15.1	44.4	48.7	4.4	4.4	-	4.0	4.0	-	4,845.2
Maximum (pounds/day)	20.3	64.9	79.0	25.7	5.7	20.0	9.4	5.3	4.2	7,892.6
Total (tons/construction project)	4.8	14.5	18.3	5.8	1.4	4.5	12.5	0.9	0.9	1,760.4

Notes:

Project Start Year ->	2011
Project Length (months) ->	24
Total Project Area (acres) ->	110
Maximum Area Disturbed/Day (acres) ->	2
Total Soil Imported/Exported (yd^3/day)->	100

PM10 and PM2.5 estimates assume 50% control of fugitive dust from watering and associated dust control measures if a minimum number of water trucks are specified.

Total PM10 emissions shown in column F are the sum of exhaust and fugitive dust emissions shown in columns H and I. Total PM2.5 emissions shown in Column J are the sum of exhaust and fugitive dust emissions shown in columns K and L.

Emission Estimates for -> Folsom SOI Water Supply- Alt. 2A Project Phases (Metric Units)	ROG (kgs/day)	CO (kgs/day)	NOx (kgs/day)	Total PM10 (kgs/day)	Exhaust PM10 (kgs/day)	Fugitive Dust PM10 (kgs/day)	Total PM2.5 (kgs/day)	Exhaust PM2.5 (kgs/day)	Fugitive Dust PM2.5 (kgs/day)	CO2 (kgs/day)
Grubbing/Land Clearing	8.6	25.5	32.5	11.4	2.3	9.1	4.0	2.1	1.9	3,094.0
Grading/Excavation	9.2	29.5	35.9	11.7	2.6	9.1	4.3	2.4	1.9	3,587.6
Drainage/Utilities/Sub-Grade	7.5	23.1	29.0	11.2	2.2	9.1	3.9	2.0	1.9	2,990.1
Paving	6.9	20.2	22.1	2.0	2.0	-	1.8	1.8	-	2,202.4
Maximum (kilograms/day)	9.2	29.5	35.9	11.7	2.6	9.1	4.3	2.4	1.9	3,587.6
Total (megagrams/construction project)	4.3	13.2	16.6	5.3	1.2	4.1	11.3	0.8	0.8	1,596.7

Notes:

Project Start Year ->	2011
Project Length (months) ->	24
Total Project Area (hectares) ->	45
Maximum Area Disturbed/Day (hectares) ->	1
Total Soil Imported/Exported ($meters^3$/day)->	76

PM10 and PM2.5 estimates assume 50% control of fugitive dust from watering and associated dust control measures if a minimum number of water trucks are specified.

Total PM10 emissions shown in column F are the sum of exhaust and fugitive dust emissions shown in columns H and I. Total PM2.5 emissions shown in Column J are the sume of exhaust and fugitive dust emissions shown in columns K and L.

Road Construction Emissions Model, Version 6.3

Emission Estimates for -> Folsom SOI Water Supply- Alt. 2 B Project Phases (English Units)	ROG (lbs/day)	CO (lbs/day)	NOx (lbs/day)	Total PM10 (lbs/day)	Exhaust PM10 (lbs/day)	Fugitive Dust PM10 (lbs/day)	Total PM2.5 (lbs/day)	Exhaust PM2.5 (lbs/day)	Fugitive Dust PM2.5 (lbs/day)	CO2 (lbs/day)
Grubbing/Land Clearing	9.7	32.4	48.6	22.9	2.9	20.0	6.8	2.6	4.2	4,557.6
Grading/Excavation	11.0	41.2	56.1	23.5	3.5	20.0	7.3	3.2	4.2	5,643.4
Drainage/Utilities/Sub-Grade	8.5	28.6	41.7	22.7	2.7	20.0	6.7	2.5	4.2	4,328.9
Paving	7.2	22.1	26.5	2.4	2.4	-	2.2	2.2	-	2,596.0
Maximum (pounds/day)	11.0	41.2	56.1	23.5	3.5	20.0	7.3	3.2	4.2	5,643.4
Total (tons/construction project)	2.5	8.4	12.4	5.3	0.8	4.5	12.5	0.9	0.9	1,166.6

Notes:

Project Start Year ->	2011
Project Length (months) ->	24
Total Project Area (acres) ->	44
Maximum Area Disturbed/Day (acres) ->	2
Total Soil Imported/Exported (yd^3/day)->	100

PM10 and PM2.5 estimates assume 50% control of fugitive dust from watering and associated dust control measures if a minimum number of water trucks are specified.

Total PM10 emissions shown in column F are the sum of exhaust and fugitive dust emissions shown in columns H and I. Total PM2.5 emissions shown in Column J are the sum of exhaust and fugitive dust emissions shown in columns K and L.

Emission Estimates for -> Folsom SOI Water Supply- Alt. 2 Project Phases (Metric Units)	ROG (kgs/day)	CO (kgs/day)	NOx (kgs/day)	Total PM10 (kgs/day)	Exhaust PM10 (kgs/day)	Fugitive Dust PM10 (kgs/day)	Total PM2.5 (kgs/day)	Exhaust PM2.5 (kgs/day)	Fugitive Dust PM2.5 (kgs/day)	CO2 (kgs/day)
Grubbing/Land Clearing	4.4	14.7	22.1	10.4	1.3	9.1	3.1	1.2	1.9	2,071.6
Grading/Excavation	5.0	18.7	25.5	10.7	1.6	9.1	3.3	1.4	1.9	2,565.2
Drainage/Utilities/Sub-Grade	3.9	13.0	18.9	10.3	1.2	9.1	3.0	1.1	1.9	1,967.7
Paving	3.3	10.0	12.1	1.1	1.1	-	1.0	1.0	-	1,180.0
Maximum (kilograms/day)	5.0	18.7	25.5	10.7	1.6	9.1	3.3	1.4	1.9	2,565.2
Total (megagrams/construction project)	2.3	7.7	11.2	4.8	0.7	4.1	11.3	0.8	0.8	1,058.1

Notes:

Project Start Year ->	2011
Project Length (months) ->	24
Total Project Area (hectares) ->	18
Maximum Area Disturbed/Day (hectares) ->	1
Total Soil Imported/Exported ($meters^3$/day)->	76

PM10 and PM2.5 estimates assume 50% control of fugitive dust from watering and associated dust control measures if a minimum number of water trucks are specified.

Total PM10 emissions shown in column F are the sum of exhaust and fugitive dust emissions shown in columns H and I. Total PM2.5 emissions shown in Column J are the sume of exhaust and fugitive dust emissions shown in columns K and L.

Road Construction Emissions Model, Version 6.3

Emission Estimates for -> Folsom SOI Water Supply- Alt. 3				Total	Exhaust	Fugitive Dust	Total	Exhaust	Fugitive Dust	
Project Phases (English Units)	**ROG (lbs/day)**	**CO (lbs/day)**	**NOx (lbs/day)**	**PM10 (lbs/day)**	**PM10 (lbs/day)**	**PM10 (lbs/day)**	**PM2.5 (lbs/day)**	**PM2.5 (lbs/day)**	**PM2.5 (lbs/day)**	**CO2 (lbs/day)**
Grubbing/Land Clearing	21.8	63.2	78.3	25.8	5.8	20.0	9.5	5.3	4.2	7,470.5
Grading/Excavation	23.0	72.0	85.8	26.4	6.4	20.0	10.0	5.9	4.2	8,556.3
Drainage/Utilities/Sub-Grade	18.8	57.5	70.4	25.3	5.3	20.0	9.1	4.9	4.2	7,241.9
Paving	17.5	50.9	55.2	5.0	5.0	-	4.6	4.6	-	5,508.9
Maximum (pounds/day)	23.0	72.0	85.8	26.4	6.4	20.0	10.0	5.9	4.2	8,556.3
Total (tons/construction project)	5.4	16.3	20.1	6.0	1.5	4.5	12.5	0.9	0.9	1,935.6

Notes:

Project Start Year ->	2011
Project Length (months) ->	24
Total Project Area (acres) ->	130
Maximum Area Disturbed/Day (acres) ->	2
Total Soil Imported/Exported (yd^3/day)->	100

PM10 and PM2.5 estimates assume 50% control of fugitive dust from watering and associated dust control measures if a minimum number of water trucks are specified.

Total PM10 emissions shown in column F are the sum of exhaust and fugitive dust emissions shown in columns H and I. Total PM2.5 emissions shown in Column J are the sum of exhaust and fugitive dust emissions shown in columns K and L.

Emission Estimates for -> Folsom SOI Water Supply- Alt. 3				Total	Exhaust	Fugitive Dust	Total	Exhaust	Fugitive Dust	
Project Phases (Metric Units)	**ROG (kgs/day)**	**CO (kgs/day)**	**NOx (kgs/day)**	**PM10 (kgs/day)**	**PM10 (kgs/day)**	**PM10 (kgs/day)**	**PM2.5 (kgs/day)**	**PM2.5 (kgs/day)**	**PM2.5 (kgs/day)**	**CO2 (kgs/day)**
Grubbing/Land Clearing	9.9	28.7	35.6	11.7	2.6	9.1	4.3	2.4	1.9	3,395.7
Grading/Excavation	10.5	32.7	39.0	12.0	2.9	9.1	4.6	2.7	1.9	3,889.2
Drainage/Utilities/Sub-Grade	8.5	26.1	32.0	11.5	2.4	9.1	4.1	2.2	1.9	3,291.8
Paving	7.9	23.2	25.1	2.3	2.3	-	2.1	2.1	-	2,504.1
Maximum (kilograms/day)	10.5	32.7	39.0	12.0	2.9	9.1	4.6	2.7	1.9	3,889.2
Total (megagrams/construction project)	4.9	14.8	18.2	5.5	1.4	4.1	11.3	0.8	0.8	1,755.6

Notes:

Project Start Year ->	2011
Project Length (months) ->	24
Total Project Area (hectares) ->	53
Maximum Area Disturbed/Day (hectares) ->	1
Total Soil Imported/Exported ($meters^3$/day)->	76

PM10 and PM2.5 estimates assume 50% control of fugitive dust from watering and associated dust control measures if a minimum number of water trucks are specified.

Total PM10 emissions shown in column F are the sum of exhaust and fugitive dust emissions shown in columns H and I. Total PM2.5 emissions shown in Column J are the sume of exhaust and fugitive dust emissions shown in columns K and L.

Road Construction Emissions Model, Version 6.3

Emission Estimates for -> Folsom SOI Water Supply- Alt. 3A Project Phases (English Units)	ROG (lbs/day)	CO (lbs/day)	NOx (lbs/day)	Total PM10 (lbs/day)	Exhaust PM10 (lbs/day)	Fugitive Dust PM10 (lbs/day)	Total PM2.5 (lbs/day)	Exhaust PM2.5 (lbs/day)	Fugitive Dust PM2.5 (lbs/day)	CO2 (lbs/day)
Grubbing/Land Clearing	20.3	59.4	74.6	25.4	5.4	20.0	9.2	5.0	4.2	7,114.1
Grading/Excavation	21.5	68.2	82.2	26.0	6.0	20.0	9.7	5.5	4.2	8,199.9
Drainage/Utilities/Sub-Grade	17.5	53.9	66.9	25.0	5.0	20.0	8.8	4.6	4.2	6,885.4
Paving	16.2	47.4	51.7	4.7	4.7	-	4.3	4.3	-	5,152.5
Maximum (pounds/day)	21.5	68.2	82.2	26.0	6.0	20.0	9.7	5.5	4.2	8,199.9
Total (tons/construction project)	5.1	15.4	19.2	5.9	1.4	4.5	12.5	0.9	0.9	1,841.5

Notes:	
Project Start Year ->	2011
Project Length (months) ->	24
Total Project Area (acres) ->	119
Maximum Area Disturbed/Day (acres) ->	2
Total Soil Imported/Exported (yd^3/day)->	100

PM10 and PM2.5 estimates assume 50% control of fugitive dust from watering and associated dust control measures if a minimum number of water trucks are specified.

Total PM10 emissions shown in column F are the sum of exhaust and fugitive dust emissions shown in columns H and I. Total PM2.5 emissions shown in Column J are the sum of exhaust and fugitive dust emissions shown in columns K and L.

Emission Estimates for -> Folsom SOI Water Supply- Alt. 3A Project Phases (Metric Units)	ROG (kgs/day)	CO (kgs/day)	NOx (kgs/day)	Total PM10 (kgs/day)	Exhaust PM10 (kgs/day)	Fugitive Dust PM10 (kgs/day)	Total PM2.5 (kgs/day)	Exhaust PM2.5 (kgs/day)	Fugitive Dust PM2.5 (kgs/day)	CO2 (kgs/day)
Grubbing/Land Clearing	9.2	27.0	33.9	11.6	2.5	9.1	4.2	2.3	1.9	3,233.7
Grading/Excavation	9.8	31.0	37.3	11.8	2.7	9.1	4.4	2.5	1.9	3,727.2
Drainage/Utilities/Sub-Grade	8.0	24.5	30.4	11.4	2.3	9.1	4.0	2.1	1.9	3,129.7
Paving	7.4	21.5	23.5	2.1	2.1	-	2.0	2.0	-	2,342.0
Maximum (kilograms/day)	9.8	31.0	37.3	11.8	2.7	9.1	4.4	2.5	1.9	3,727.2
Total (megagrams/construction project)	4.6	13.9	17.4	5.4	1.3	4.1	11.3	0.8	0.8	1,670.3

Notes:	
Project Start Year ->	2011
Project Length (months) ->	24
Total Project Area (hectares) ->	48
Maximum Area Disturbed/Day (hectares) ->	1
Total Soil Imported/Exported ($meters^3$/day)->	76

PM10 and PM2.5 estimates assume 50% control of fugitive dust from watering and associated dust control measures if a minimum number of water trucks are specified.

Total PM10 emissions shown in column F are the sum of exhaust and fugitive dust emissions shown in columns H and I. Total PM2.5 emissions shown in Column J are the sume of exhaust and fugitive dust emissions shown in columns K and L.

Road Construction Emissions Model, Version 6.3

Emission Estimates for -> Folsom SOI Water Supply- Alt. 4				Total	Exhaust	Fugitive Dust	Total	Exhaust	Fugitive Dust	
Project Phases (English Units)	**ROG (lbs/day)**	**CO (lbs/day)**	**NOx (lbs/day)**	**PM10 (lbs/day)**	**PM10 (lbs/day)**	**PM10 (lbs/day)**	**PM2.5 (lbs/day)**	**PM2.5 (lbs/day)**	**PM2.5 (lbs/day)**	**CO2 (lbs/day)**
Grubbing/Land Clearing	22.1	64.0	79.0	25.9	5.9	20.0	9.6	5.4	4.2	7,544.3
Grading/Excavation	23.3	72.7	86.5	26.5	6.5	20.0	10.1	5.9	4.2	8,630.1
Drainage/Utilities/Sub-Grade	19.0	58.2	71.1	25.4	5.4	20.0	9.1	5.0	4.2	7,315.6
Paving	17.7	51.7	55.9	5.1	5.1	-	4.6	4.6	-	5,582.7
Maximum (pounds/day)	23.3	72.7	86.5	26.5	6.5	20.0	10.1	5.9	4.2	8,630.1
Total (tons/construction project)	5.5	16.5	20.3	6.0	1.5	4.5	12.5	0.9	0.9	1,955.1

Notes:
Project Start Year -> 2011
Project Length (months) -> 24
Total Project Area (acres) -> 132
Maximum Area Disturbed/Day (acres) -> 2
Total Soil Imported/Exported (yd^3/day)-> 100

PM10 and PM2.5 estimates assume 50% control of fugitive dust from watering and associated dust control measures if a minimum number of water trucks are specified.

Total PM10 emissions shown in column F are the sum of exhaust and fugitive dust emissions shown in columns H and I. Total PM2.5 emissions shown in Column J are the sum of exhaust and fugitive dust emissions shown in columns K and L.

Emission Estimates for -> Folsom SOI Water Supply- Alt. 4				Total	Exhaust	Fugitive Dust	Total	Exhaust	Fugitive Dust	
Project Phases (Metric Units)	**ROG (kgs/day)**	**CO (kgs/day)**	**NOx (kgs/day)**	**PM10 (kgs/day)**	**PM10 (kgs/day)**	**PM10 (kgs/day)**	**PM2.5 (kgs/day)**	**PM2.5 (kgs/day)**	**PM2.5 (kgs/day)**	**CO2 (kgs/day)**
Grubbing/Land Clearing	10.0	29.1	35.9	11.8	2.7	9.1	4.3	2.5	1.9	3,429.2
Grading/Excavation	10.6	33.1	39.3	12.0	2.9	9.1	4.6	2.7	1.9	3,922.8
Drainage/Utilities/Sub-Grade	8.7	26.5	32.3	11.5	2.5	9.1	4.1	2.3	1.9	3,325.3
Paving	8.1	23.5	25.4	2.3	2.3	-	2.1	2.1	-	2,537.6
Maximum (kilograms/day)	10.6	33.1	39.3	12.0	2.9	9.1	4.6	2.7	1.9	3,922.8
Total (megagrams/construction project)	5.0	15.0	18.4	5.5	1.4	4.1	11.3	0.8	0.8	1,773.3

Notes:
Project Start Year -> 2011
Project Length (months) -> 24
Total Project Area (hectares) -> 53
Maximum Area Disturbed/Day (hectares) -> 1
Total Soil Imported/Exported ($meters^3$/day)-> 76

PM10 and PM2.5 estimates assume 50% control of fugitive dust from watering and associated dust control measures if a minimum number of water trucks are specified.

Total PM10 emissions shown in column F are the sum of exhaust and fugitive dust emissions shown in columns H and I. Total PM2.5 emissions shown in Column J are the sume of exhaust and fugitive dust emissions shown in columns K and L.

Road Construction Emissions Model, Version 6.3

Emission Estimates for -> Folsom SOI Water Supply- Alt. 4A Project Phases (English Units)	ROG (lbs/day)	CO (lbs/day)	NOx (lbs/day)	Total PM10 (lbs/day)	Exhaust PM10 (lbs/day)	Fugitive Dust PM10 (lbs/day)	Total PM2.5 (lbs/day)	Exhaust PM2.5 (lbs/day)	Fugitive Dust PM2.5 (lbs/day)	CO2 (lbs/day)
Grubbing/Land Clearing	21.4	62.3	77.4	25.7	5.7	20.0	9.4	5.3	4.2	7,384.5
Grading/Excavation	22.7	71.0	84.9	26.3	6.3	20.0	10.0	5.8	4.2	8,470.3
Drainage/Utilities/Sub-Grade	18.5	56.6	69.5	25.3	5.3	20.0	9.0	4.8	4.2	7,155.8
Paving	17.2	50.1	54.4	4.9	4.9	-	4.5	4.5	-	5,422.9
Maximum (pounds/day)	22.7	71.0	84.9	26.3	6.3	20.0	10.0	5.8	4.2	8,470.3
Total (tons/construction project)	5.3	16.1	19.9	6.0	1.5	4.5	12.5	0.9	0.9	1,912.9

Notes:
Project Start Year -> 2011
Project Length (months) -> 24
Total Project Area (acres) -> 127
Maximum Area Disturbed/Day (acres) -> 2
Total Soil Imported/Exported (yd^3/day)-> 100

PM10 and PM2.5 estimates assume 50% control of fugitive dust from watering and associated dust control measures if a minimum number of water trucks are specified.

Total PM10 emissions shown in column F are the sum of exhaust and fugitive dust emissions shown in columns H and I. Total PM2.5 emissions shown in Column J are the sum of exhaust and fugitive dust emissions shown in columns K and L.

Emission Estimates for -> Folsom SOI Water Supply- Alt. 4A Project Phases (Metric Units)	ROG (kgs/day)	CO (kgs/day)	NOx (kgs/day)	Total PM10 (kgs/day)	Exhaust PM10 (kgs/day)	Fugitive Dust PM10 (kgs/day)	Total PM2.5 (kgs/day)	Exhaust PM2.5 (kgs/day)	Fugitive Dust PM2.5 (kgs/day)	CO2 (kgs/day)
Grubbing/Land Clearing	9.7	28.3	35.2	11.7	2.6	9.1	4.3	2.4	1.9	3,356.6
Grading/Excavation	10.3	32.3	38.6	12.0	2.9	9.1	4.5	2.6	1.9	3,850.1
Drainage/Utilities/Sub-Grade	8.4	25.7	31.6	11.5	2.4	9.1	4.1	2.2	1.9	3,252.7
Paving	7.8	22.8	24.7	2.2	2.2	-	2.1	2.1	-	2,464.9
Maximum (kilograms/day)	10.3	32.3	38.6	12.0	2.9	9.1	4.5	2.6	1.9	3,850.1
Total (megagrams/construction project)	4.8	14.6	18.0	5.4	1.4	4.1	11.3	0.8	0.8	1,735.0

Notes:
Project Start Year -> 2011
Project Length (months) -> 24
Total Project Area (hectares) -> 51
Maximum Area Disturbed/Day (hectares) -> 1
Total Soil Imported/Exported ($meters^3$/day)-> 76

PM10 and PM2.5 estimates assume 50% control of fugitive dust from watering and associated dust control measures if a minimum number of water trucks are specified.

Total PM10 emissions shown in column F are the sum of exhaust and fugitive dust emissions shown in columns H and I. Total PM2.5 emissions shown in Column J are the sume of exhaust and fugitive dust emissions shown in columns K and L.

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Urbemis 2007 Version 9.2.4

Summary Report for Annual Emissions (Tons/Year)

File Name: P:\A. Projects\0165-002_Folsom_WS_Alternatives_Report\Air Quality\URBEMIS outputs (Folsom Water Supply and Conveyance Project\Folsom Water Supply and Conveyance Project- WTP_17Nov08.urb924

Project Name: Folsom Water Supply and Conveyance Project

Project Location: Sacramento County AQMD

On-Road Vehicle Emissions Based on: Version : Emfac2007 V2.3 Nov 1 2006

Off-Road Vehicle Emissions Based on: OFFROAD2007

CONSTRUCTION EMISSION ESTIMATES

	ROG	NOx	CO	SO2	PM10 Dust	PM10 Exhaust	PM10	PM2.5 Dust	PM2.5 Exhaust	PM2.5	CO2
2011 TOTALS (tons/year unmitigated)	0.14	1.04	0.61	0.00	1.18	0.06	1.24	0.25	0.06	0.30	106.70
2011 TOTALS (tons/year mitigated)	0.14	1.04	0.61	0.00	1.18	0.06	1.24	0.25	0.06	0.30	106.70
Percent Reduction	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2012 TOTALS (tons/year unmitigated)	2.50	0.98	1.38	0.00	0.01	0.06	0.06	0.00	0.05	0.05	244.06
2012 TOTALS (tons/year mitigated)	2.50	0.98	1.38	0.00	0.01	0.06	0.06	0.00	0.05	0.05	244.06
Percent Reduction	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

AREA SOURCE EMISSION ESTIMATES

	ROG	NOx	CO	SO2	PM10	PM2.5	CO2
TOTALS (tons/year, unmitigated)	0.25	0.15	0.26	0.00	0.00	0.00	174.86

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OPERATIONAL (VEHICLE) EMISSION ESTIMATES

	ROG	NOx	CO	SO2	PM10	PM2.5	CO2
TOTALS (tons/year, unmitigated)	0.57	0.73	7.15	0.01	1.12	0.22	661.89
TOTALS (tons/year, mitigated)	0.57	0.73	7.15	0.01	1.12	0.22	661.89
Percent Reduction	0.00	0.00	0.00	0.00	0.00	0.00	0.00

SUM OF AREA SOURCE AND OPERATIONAL EMISSION ESTIMATES

	ROG	NOx	CO	SO2	PM10	PM2.5	CO2
TOTALS (tons/year, unmitigated)	0.82	0.88	7.41	0.01	1.12	0.22	836.75

Both Area and Operational Mitigation must be turned on to get a combined mitigated total.

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Urbemis 2007 Version 9.2.4

Summary Report for Summer Emissions (Pounds/Day)

File Name: P:\A. Projects\0165-002_Folsom_WS_Alternatives_Report\Air Quality\URBEMIS outputs (Folsom Water Supply and Conveyance Project\Folsom Water Supply and Conveyance Project- WTP_17Nov08.urb924

Project Name: Folsom Water Supply and Conveyance Project

Project Location: Sacramento County AQMD

On-Road Vehicle Emissions Based on: Version : Emfac2007 V2.3 Nov 1 2006

Off-Road Vehicle Emissions Based on: OFFROAD2007

CONSTRUCTION EMISSION ESTIMATES

	ROG	NOx	CO	SO2	PM10 Dust	PM10 Exhaust	PM10	PM2.5 Dust	PM2.5 Exhaust	PM2.5	CO2
2011 TOTALS (lbs/day unmitigated)	2.86	23.48	12.95	0.00	50.00	1.35	51.18	10.44	1.24	11.52	2,359.04
2011 TOTALS (lbs/day mitigated)	2.86	23.48	12.95	0.00	50.00	1.35	51.18	10.44	1.24	11.52	2,359.04
2012 TOTALS (lbs/day unmitigated)	212.13	27.11	37.74	0.05	0.20	1.55	1.75	0.07	1.42	1.49	6,695.00
2012 TOTALS (lbs/day mitigated)	212.13	27.11	37.74	0.05	0.20	1.55	1.75	0.07	1.42	1.49	6,695.00

AREA SOURCE EMISSION ESTIMATES

	ROG	NOx	CO	SO2	PM10	PM2.5	CO2
TOTALS (lbs/day, unmitigated)	1.45	0.82	2.22	0.00	0.01	0.01	959.59

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OPERATIONAL (VEHICLE) EMISSION ESTIMATES

	ROG	NOx	CO	SO2	PM10	PM2.5	CO2
TOTALS (lbs/day, unmitigated)	3.06	3.43	41.42	0.04	6.12	1.18	3,876.33
TOTALS (lbs/day, mitigated)	3.06	3.43	41.42	0.04	6.12	1.18	3,876.33
Percent Reduction	0.00	0.00	0.00	0.00	0.00	0.00	0.00

SUM OF AREA SOURCE AND OPERATIONAL EMISSION ESTIMATES

	ROG	NOx	CO	SO2	PM10	PM2.5	CO2
TOTALS (lbs/day, unmitigated)	4.51	4.25	43.64	0.04	6.13	1.19	4,835.92

Both Area and Operational Mitigation must be turned on to get a combined mitigated total.

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Urbemis 2007 Version 9.2.4

Summary Report for Winter Emissions (Pounds/Day)

File Name: P:\A. Projects\0165-002_Folsom_WS_Alternatives_Report\Air Quality\URBEMIS outputs (Folsom Water Supply and Conveyance Project\Folsom Water Supply and Conveyance Project- WTP_17Nov08.urb924

Project Name: Folsom Water Supply and Conveyance Project

Project Location: Sacramento County AQMD

On-Road Vehicle Emissions Based on: Version : Emfac2007 V2.3 Nov 1 2006

Off-Road Vehicle Emissions Based on: OFFROAD2007

CONSTRUCTION EMISSION ESTIMATES

	ROG	NOx	CO	SO2	PM10 Dust	PM10 Exhaust	PM10	PM2.5 Dust	PM2.5 Exhaust	PM2.5	CO2
2011 TOTALS (lbs/day unmitigated)	2.86	23.48	12.95	0.00	50.00	1.35	51.18	10.44	1.24	11.52	2,359.04
2011 TOTALS (lbs/day mitigated)	2.86	23.48	12.95	0.00	50.00	1.35	51.18	10.44	1.24	11.52	2,359.04
2012 TOTALS (lbs/day unmitigated)	212.13	27.11	37.74	0.05	0.20	1.55	1.75	0.07	1.42	1.49	6,695.00
2012 TOTALS (lbs/day mitigated)	212.13	27.11	37.74	0.05	0.20	1.55	1.75	0.07	1.42	1.49	6,695.00

AREA SOURCE EMISSION ESTIMATES

	ROG	NOx	CO	SO2	PM10	PM2.5	CO2
TOTALS (lbs/day, unmitigated)	1.33	0.80	0.67	0.00	0.00	0.00	956.78

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OPERATIONAL (VEHICLE) EMISSION ESTIMATES

	ROG	NOx	CO	SO2	PM10	PM2.5	CO2
TOTALS (lbs/day, unmitigated)	3.21	5.11	34.65	0.03	6.12	1.18	3,127.77
TOTALS (lbs/day, mitigated)	3.21	5.11	34.65	0.03	6.12	1.18	3,127.77
Percent Reduction	0.00	0.00	0.00	0.00	0.00	0.00	0.00

SUM OF AREA SOURCE AND OPERATIONAL EMISSION ESTIMATES

	ROG	NOx	CO	SO2	PM10	PM2.5	CO2
TOTALS (lbs/day, unmitigated)	4.54	5.91	35.32	0.03	6.12	1.18	4,084.55

Both Area and Operational Mitigation must be turned on to get a combined mitigated total.

3.1.3 The Energy Intensity of Water Supply and Opportunities to Improve Efficiency

EPRI estimated electricity consumption at about 30 billion kWh for public water systems in the year 2000 (EPRI, 2000, p. 2-4). The pumping of water is the primary consumer of energy, including pumping to deliver untreated water to a treatment plant, deliver treated water to customers, and to clean water filters. In California, water pumping is the single most significant use of electricity in the state, using seven percent of the total usage. Electricity costs can compose anywhere between 20 and 80 percent of a water utility's total operating budget (Business Wire, 2001).

An often-cited source of energy intensity estimates for water supply systems is the EPRI-funded study *Water and Wastewater Industries: Characteristics and Energy Management Opportunities* (Burton, 1996). This study reviewed data on energy consumption in various processes to produce estimates of electricity usage in "generic" water supply plants ranging from 1 mgd to 100 mgd (Burton, 1996, p. 3-28).

Using the basic schematic shown in Exhibit 3-6, and including the processes presented in Exhibit 3-8, a surface water supply system would have an estimated total electricity consumption of 1,400 to 1,500 kWh per million gallons of water supplied (Burton, 1996, p. 3-30). This total includes the pumping of the raw water to the treatment plant, the treatment of the water, and the pumping of the water for distribution. The energy intensity was estimated to vary slightly by the flow rate of the plant (see Exhibit 3-10).

Burton (1996) estimated electricity consumption for groundwater systems at about 1,824 kWh per million gallons of water. Pumping accounts for 99 percent of the estimated requirement, with the chlorination process requiring less than 1 percent of the electricity needed (Burton, 1996, p. 3-30).

Exhibit 3-10: Electricity Consumption for Surface Water Treatment Plants

Water Supply Plant Size	Electricity Consumption (kWh/million gallons)	Portion of Energy Used for Pumping
1 mgd	1,483	89%
5 mgd	1,418	93%
10 mgd	1,406	94%
20 mgd	1,409	94%
50 mgd	1,408	91%
100 mgd	1,407	94%

Source: Burton (1996), p. 3-30.

Of note is that energy requirements can vary significantly with local circumstances. Pumping from deep groundwater wells requires more energy than pumping from shallow wells. Variations in topography may necessitate pumping to higher elevations in some areas. Alternatively, surface water may be delivered in part by means of gravity, thereby having lower energy requirements for collecting the raw water prior to treatment. Several examples of the energy intensity of water supply are as follows.

- The Madera Valley Water Company reported using about 1.27 million kWh to deliver about 519 million gallons of water in 1993, for an energy intensity of about 2,400 kWh per million gallons (CEC, 2003a). This system serves 1,600 residential customers with groundwater drawn from within their distribution system.
- The Iowa Association of Municipal Utilities (IAMU) conducted a detailed survey and analysis to assess energy consumption at water supply plants (IAMU, 2002).

Table G.5 Utility-Specific Verified Electricity CO_2 Emission Factors (2000-2006)

Utility	CO_2 (lbs/MWh)						
	2000	2001	2002	2003	2004	2005	2006
Anaheim Public Utilities						1,399.80	1,416.74
Austin Energy						1,127.37	1,077.97
City and County of San Francisco						76.28	
City of Palo Alto Public Utilities						320.94	39.02
East Bay Municipal Utility District						239.16	
Glendale Water & Power						1,065.00	
Los Angeles Department of Water & Power	1,407.44	1,403.39	1,348.48	1,360.07	1,360.60	1,303.58	1,238.52
Northern California Power Agency						55.38	
Pacific Gas & Electric Company					566.20	489.16	455.81
PacifiCorp					1,811.00	1,812.22	1,747.3
Pasadena Water & Power						1,409.65	
Platte River Power Authority						1,970.93	1,955.66
Riverside Public Utilities						1,333.45	1,346.15
Roseville Electric							565.52
Sacramento Municipal Utility District					769.00	616.07	555.26
Salt River Project							1,546.28
San Diego Gas & Electric					613.75	546.46	780.79
Southern California Edison					678.88	665.72	641.26
Turlock Irrigation District							682.48

Source: California Climate Action Registry Power/Utility Protocol Public Reports (as of June 2008). http://www.climateregistry.org/CARROT/public/reports.aspx

Table G.6 California Grid Average Electricity Emission Factors (1990-2004)

Year	CO_2 (lbs/MWh)	CH_4 (lbs/MWh)	N_2O (lbs/MWh)
1990	1,031.14	0.040	0.014
1991	994.03	0.037	0.013
1992	984.42	0.040	0.012
1993	1,007.26	0.037	0.013
1994	1,071.19	0.040	0.013
1995	929.77	0.031	0.012
1996	827.65	0.029	0.011
1997	874.96	0.029	0.011
1998	941.54	0.029	0.011
1999	917.60	0.031	0.011
2000	829.50	0.029	0.009
2001	1,009.75	0.033	0.011
2002	865.28	0.031	0.010
2003	888.41	0.031	0.011
2004	958.49	0.029	0.011

Source: Calculated from total in-state and imported electricity emissions divided by total consumption in MWh. Emissions from California Air Resources Board, Greenhouse Gas Inventory, 1990 – 2004 (November 17, 2007 version), available on line at http://www.arb.ca.gov/cc/inventory/data/data.htm. Consumption data from California Energy Commission, http://www.energy.ca.gov

Step 3: Determine total annual emissions and convert to metric tons.

Multiply your electricity use in kilowatt-hours from Step 1 by the emission factors for CO_2, CH_4, and N_2O from Step 2. To convert pounds into metric tons, divide the total by 2204.62 lbs/metric ton. (See Equation III.6b.) Repeat this step for each region in which you purchased electricity.

Equation III.6b	Total Emissions from Indirect Electricity Use					
Total CO_2 Emissions (metric tons)	=	Electricity Use (kWh)	x	Electricity Emission Factor (lbs CO_2/kWh)	÷	2,204.62 lbs/metric ton
Total CH_4 Emissions (metric tons)	=	Electricity Use (kWh)	x	Electricity Emission Factor (lbs CH_4/kWh)	÷	2,204.62 lbs/metric ton
Total N_2O Emissions (metric tons)	=	Electricity Use (kWh)	x	Electricity Emission Factor (lbs N_2O/kWh)	÷	2,204.62 lbs/metric ton

Step 4: Convert non-CO_2 emissions to CO_2e and sum the total.

To incorporate non-CO_2 gases into your GHG emissions inventory, the mass estimates of these gases will need to be converted to CO_2 equivalent. To do this, multiply the non-CO_2 GHG emissions in units of mass by its global warming potential (GWP). Table C.1 in Appendix C lists the 100-year GWPs to be used to express emissions on a CO_2 equivalent basis. Equation III.6c shows the calculation to determine CO_2e from the total mass of a given non-CO_2 GHG using the GWPs published by the IPCC in its Second Assessment Report (SAR, 1996). If you use CARROT to calculate your emissions, it will automatically perform this calculation for you. Sum your CO_2 + CO_2e emissions (see Equation III.6d).

Equation III.6c	Convert Non-CO_2 GHGs to Carbon Dioxide Equivalent and Sum Total					
Metric Tons of CO_2e	=	Metric Tons of GHG	x	GWP (SAR, 1996)		
Metric Tons of CO_2					=	1,237.61 metric tons CO_2
CH_4 Tons of CO_2e	=	0.03347 metric tons CH_4	x	21 (GWP)	=	0.70287 metric tons CO_2e
N_2O Tons of CO_2e	=	0.01644 metric tons N_2O	x	310 (GWP)	=	5.0964 metric tons CO_2e
				Total	=	1,243.41 metric tons CO_2e

Equation III.6d	Total GHG Emissions from Electricity Use			
Total CO_2e Emissions (metric tons)	=	Total CO_2 Emissions (metric tons)	+	Total CO_2e Emissions (metric tons)

III.6.2 Alternate Methods to Estimate Electricity Use

Some organizations have difficulty reporting their indirect emissions from purchased electricity because their electricity use is not separately metered. As previously mentioned, these organizations must still calculate and report their estimated indirect emissions. To calculate their electricity use, such organizations have four options:

1. Estimate energy use based on a participant's share (percent of square footage) of the building in which they are using energy and the building's total annual electricity consumption.
2. Estimate energy use based on an energy audit.
3. For office space in California only, estimate energy use based on square footage and the average annual electricity intensity in your service territory.
4. Estimate energy use based on square footage and average electricity intensity of comparable facilities.

Reporters who cannot obtain actual electricity meter readings should clearly indicate, both to their verifier and in their public CARROT report, which methodology was used to estimate their indirect emissions from purchased electricity.

Methodology Disclosure

All members using an alternate estimation methodology must disclose publicly in CARROT that they are unable to obtain their electric bills and are estimating their emissions.

The California Registry asks that members use the following standard disclosure language in their public CARROT report:

"[Some or all] of the indirect emissions from purchased electricity disclosed in this report are estimated based on a California Registry-approved methodology for estimating electricity use, not calculated based on metered data."

APPENDIX M5

Biology Letter Report and Supporting Reference Materials

ROBERTSON - BRYAN, INC.
Solutions for Progress

1130 Iron Point Road #170 • Folsom CA 95630
Phone (916) 235-7555 • Fax (916) 235-7550

MEMORANDUM

Date: November 19, 2008

To: Clint Meyer, RMC Water and Environment

From: Ann Hendrickson, Robertson-Bryan, Inc.

Project: City of Folsom – Folsom Water Supply and Conveyance Project

Re: Potential Biological Resource Issues

Per your request, Robertson-Bryan, Inc. (RBI) is providing guidance on the potential biological resource issues for the City of Folsom – Folsom Water Supply and Conveyance Project.

The City of Folsom proposes to install new treated and raw water pipelines as part of the Folsom Water Supply and Conveyance Project. The project area is located within Sacramento County at approximately 100 feet in elevation. Surveys were conducted to determine what biological resources exist within the project area that could potentially be affected by the proposed project. This memorandum only pertains to the proposed water conveyance alternatives which include: Alternative 1 and 1A, Alternative 2 and 2A, Alternative 3 and 3A, and Alternative 4 and 4A.

Two biologists from RBI conducted a reconnaissance-level survey of the project area on October 6–7, 2008. This included identification of vegetation communities, wildlife habitats, and animal species occurring in the project area. The reconnaissance survey did not include areas that were inaccessible due to private property fencing, construction activities, or the area from the intersection of Sunrise Boulevard and Douglas Boulevard to the intersection of Prairie City Road and Easton Valley Parkway, per your request. Both sides of roads in the project area were surveyed by foot and by automobile, as appropriate.

Based on the results of existing information and the reconnaissance survey the following resources were identified as potentially occurring in the project area.

Vegetation Communities/Wildlife Habitats

Several vegetation communities/wildlife habitats as classified in *California Statewide Wildlife Habitat Relationships System* (CWHR)—California annual grassland, Valley foothill woodland, vernal pool grassland, and fresh emergent wetland—characterize the project area (Mayer and Laudenslayer 1988). A brief description of these habitats is provided below.

- California annual grasslands are open grasslands composed primarily of non-native annual plant species which include wild oats (*Avena fatua*), soft chess (*Bromus hordeaceus*), Italian ryegrass (*Lolium multiflorum*), and ripgut brome (*Bromus diandrus*).
- Valley foothill woodlands are composed primarily of Fremont cottonwood (Populus fremontii), willow (*Salix* sp.), coyote brush (*Baccharis pilularis*), and poison oak (*Toxicodendron diversilobum*)

- Vernal pools grasslands are composed of seasonally flooded depressions underlain by a clay, rock, or mineral layer beneath the soil that water cannot easily pass through. These areas support plant species such as white meadowfoam (*Limnanthes alba*), Fremont's tidy-tips (*Layia fremontii*), and woolly marbles (*Psilocarphus brevissimus*)
- Fresh emergent wetlands are distinguished by the presence of tall, erect, grass-like plants that are rooted in soils that are permanently or seasonally flooded or inundated. These ecosystems can occur in basins or depressions at all elevations, aspects, and exposures, but they are most common on level to gently rolling topography (Mayer and Laudenslayer 1988).

Special-status Biological Resources

Based on information obtained from a literature review and from regulatory agencies, 17 special-status plant species and 25 special-status wildlife species were identified as having the potential to occur in Sacramento County (Table 1 and Table 2). Through an analysis of the specific elevation, habitats, and soils present onsite, this list was refined to include 11 special-status plant species and 19 special-status wildlife species potentially occurring in the project area. Refer to Table 1 and 2 for information on the status, life history, distribution, and potential for occurrence in the project area for each of these species.

Potential Resource Issues

Based on the results of the existing information review and the reconnaissance survey, several potential biological resources issues exist along the proposed alternative alignments. These biological resource issues may require further analysis as part of the California Environmental Quality Act/National Environmental Policy Act (CEQA/NEPA) process. Refer to Table 3 for an overview of each potential resources issue in relation to each alternative alignment.

Attachments: Table 1. Special-status Plant Species Potentially Occurring in the City of Folsom – Folsom Water Supply and Conveyance Project Vicinity.
Table 2. Special-status Wildlife Species Potentially Occurring in the City of Folsom – Folsom Water Supply and Conveyance Project Vicinity.
Table 3. Potential Resource Issues in the City of Folsom – Folsom Water Supply and Conveyance Project Area.

TABLE 1. SPECIAL-STATUS PLANT SPECIES POTENTIALLY OCCURRING IN ZONE 4 OF THE OFFSITE WATER FACILITIES STUDY AREA							
Scientific Name	**Common Name**	**Federal Status**	**State Status**	**CNPS List**	**Blooming Period/Fertile**	**Habitat**	**Occurrence Notes**
Arctostaphylos myrtifolia	Ione manzanita	FT	—	1B.2	November–February	Chaparral and cismontane woodland on acidic, Ione soils, clay or sandy substrates. From 200 to 1,900 feet in elevation.	Unlikely to Occur. Unlikely to occur due to lack of suitable habitat in Zone 4 of the project study area.
Castilleja campestris ssp. succulenta	succulent owl's–clover	FT FX	SE	1B.2	April–May	Vernal pools, often acidic. From 200 to 2,460 feet in elevation.	Likely to Occur. Potentially occurring in the project area. The project area is not within designated critical habitat.
Chlorogalum grandiflorum	Red Hill's soaproot	—	—	1B.2	May–June	Cismontane woodland, chaparral, and lower montane coniferous forests on serpentine or gabbro soils. From 850 to 3,500 feet in elevation.	Unlikely to Occur. Unlikely to occur due to lack of suitable habitat in project area. The project area is also outside of the species' known elevation range.
Clarkia biloba ssp. brandegeeae	Brandegee's clarkia	—	—	1B.2	May–July	Chaparral and cismontane woodland in openings and rocky slopes; often road cuts, from 0 to 3,000 feet in elevation.	Unlikely to Occur. No suitable habitat was observed in Zone 4.
Downingia pusilla	dwarf downingia	—	—	2.2	March–May	Mesic areas in valley and foothill grassland and vernal pools. From 3 to 1,450 feet in elevation.	Likely to Occur. Potentially occurring in Zone 4. Suitable habitat observed within Zone 4.
Eriogonum apricum var. apricum	Ione buckwheat	FE	SE	1B.1	July–October	Chaparral in openings and Ione soil. From 200 to 475 feet in elevation.	Unlikely to Occur. Unlikely to occur due to lack of suitable habitat and soils in project area.
Eriogonum apricum var. prostratum	Irish Hill buckwheat	FE	SE	1B.1	June–July	Chaparral in openings and Ione soil. From 200 to 400 feet in elevation.	Unlikely to Occur. Unlikely to occur due to lack of suitable habitat and soils in project area.
Eryngium pinnatisectum	Tuolumne button-celery	—	—	1B.2	June–August	Cismontane woodlands, lower montane coniferous forests, and vernal pools in mesic areas. From 230 to 300 feet in elevation.	Could Occur. Potential habitat exists in Zone 4 of the project area.

TABLE 1. SPECIAL-STATUS PLANT SPECIES POTENTIALLY OCCURRING IN ZONE 4 OF THE OFFSITE WATER FACILITIES STUDY AREA							
Scientific Name	**Common Name**	**Federal Status**	**State Status**	**CNPS List**	**Blooming Period/Fertile**	**Habitat**	**Occurrence Notes**
Gratiola heterosepala	Bogg's Lake hedge-hyssop	—	SE	1B.2	April–August	Marshes and swamps and vernal pools, clay. From 30 to 7,800 feet in elevation.	Likely to Occur. Potentially occurring in the project area.
Horkelia parryi	Parry's horkelia	—	—	1B.2	April–June	Chaparral and cismontane woodland, especially Ione formation. From 260 to 3,400 feet in elevation.	Unlikely to Occur. Unlikely to occur due to lack of suitable habitat in project area.
Juncus leiospermus var. ahartii	Ahart's dwarf rush	—	—	1B.2	March–May	Mesic areas in valley and foothill grassland. From 100 to 325 feet in elevation.	Likely to Occur. Potentially occurring in the project area.
Legenere limosa	legenere	—	—	1B.1	April–June	Vernal pools. From 3 to 2,900 feet in elevation.	Likely to Occur. Potentially occurring in the project area.
Navarretia myersii ssp. myersii	Pincushion navarretia	—	—	1B.1	May	Vernal pools. From 65 to 1,100 feet in elevation.	Likely to Occur. Potentially occurring in the project area.
Orcuttis tenuis	slender Orcutt grass	FT FX	SE	1B.1	May–October	Vernal pools. From 115 to 5,775 feet in elevation.	Known to Occur. Potentially occurring in the project area. The project area is located within Critical Habitat Unit 6 (Alternatives 2, 2A, 3, 3A, 4, and 4A).
Orcuttia viscida	Sacramento Orcutt grass	FE FX	SE	1B.1	April–July	Vernal pools. From 115 to 325 feet in elevation.	Potentially occurring in the project area. The project area is located within Critical Habitat Unit 2 (Alternatives 2, 2A, 3, 3A, 4, and 4A).
Pseudobahia bahifolia	Hartweg's golden sunburst	FE	SE	1B.1	March–April	Cismontane woodland and Valley and foothill grassland clay, often acidic soils. From 100 to 1,000 feet in elevation	Likely to Occur. Potentially occurring in the project area.
Sagittaria sanfordii	Sanford's arrowhead	—	—	1B.2	May–October	Marshes and swamps. From 0 to 2,000 feet in elevation.	Could Occur. Potentially occurring in the project area.

TABLE 1. SPECIAL-STATUS PLANT SPECIES POTENTIALLY OCCURRING IN ZONE 4 OF THE OFFSITE WATER FACILITIES STUDY AREA							
Scientific Name	**Common Name**	**Federal Status**	**State Status**	**CNPS List**	**Blooming Period/Fertile**	**Habitat**	**Occurrence Notes**
LEGEND: Federal Status FT = Federal Threatened FE = Federal Endangered FC = Federal Candidate FX = Critical Habitat State Status SR = listed by California as Rare ST = California Threatened SE = California Endangered		CNPS Status (California Native Plant Society) 1B = rare, threatened or endangered in California and elsewhere. 2 = rare in California but more common elsewhere. 3 = need more information 4 = plants of limited distribution; a watch list. _.1 = Seriously endangered in California (over 80% of occurrences threatened / high degree and immediacy of threat) _.2 = Fairly endangered in California (20-80% occurrences threatened) _.3 = Not very endangered in California (<20% of occurrences threatened or no current threats known)					

TABLE 2. SPECIAL-STATUS WILDLIFE SPECIES POTENTIALLY OCCURRING IN ZONE 4 OF THE OFFSITE WATER FACILITIES STUDY AREA					
Scientific Name	**Common Name**	**Federal Status**	**State Status**	**Habitat**	**Occurrence notes**
Branchinecta conservatio	Conservancy fairy shrimp	FE	—	Large vernal pools with cool, moderately turbid water	Could Occur. Potentially occurring in the project area. The project area is not within designated critical habitat.
Branchinecta lynchi	vernal pool fairy shrimp	FT FX	—	Vernal pools throughout California west of the Sierra.	Known to Occur. Potentially occurring in the project area. The project area is within Critical Habitat Unit 13 (Alternatives 2, 2A, 3, 3A, 4, and 4A).
Desmocerus californicus dimorphus	valley elderberry longhorn beetle	FT FPD	—	Elderberry shrubs throughout the Central Valley and foothills below 3,000 feet elevation.	Known to Occur. Potentially occurring in the project area. Several elderberry shrubs were detected in the project area during surveys along White Rock Road and the Alternative 1A alignment.
Lepidurus packardi	vernal pool tadpole shrimp	FE FX	—	Vernal pools in the Central Valley containing clear to highly turbid water.	Known to Occur. Potentially occurring in the project area. The project area is within Critical Habitat Unit 8 (Alternatives 2, 2A, 3, 3A, 4, and 4A).
Hypomesus transpacificus	delta smelt	FT FX	ST	Estuaries, river channels, tidally influenced backwaters in Contra Costa, Sacramento, San Joaquin, Solano, and Yolo counties.	Unlikely to Occur (Zone 4). No rivers or streams in Zone 4 of project area. Suitable habitat is provided for this species within Zone 2.
Oncorhynchus mykiss	Central Valley steelhead	FT FX	CFP	Streams with deep, low-velocity pools tolerant of a wide variety of temperatures.	Unlikely to Occur (Zone 4). Unlikely to occur in zone 4 due to lack of suitable habitat. Outside species current range. This species is documented within Zone 2.
Oncorhynchus tshawytscha	Central Valley spring-run chinook salmon	FT	SE	Headwater streams of large river systems. Migrate to estuaries.	Unlikely to Occur (Zone 4). Unlikely to occur in zone due to lack of suitable habitat. Outside species current range. This species is documented within Zone 2.
Oncorhynchus tshawytscha	Central Valley winter-run chinook salmon, Sacramento River	FE	SSC	Headwater streams of large river systems. Migrate to estuaries.	Unlikely to Occur (Zone 4). Unlikely to occur in Zone 4 due to lack of suitable habitat and outside species current range. This species is documented as occurring in zone 2.

TABLE 2. SPECIAL-STATUS WILDLIFE SPECIES POTENTIALLY OCCURRING IN ZONE 4 OF THE OFFSITE WATER FACILITIES STUDY AREA					
Scientific Name	**Common Name**	**Federal Status**	**State Status**	**Habitat**	**Occurrence notes**
Ambystoma californiense	California tiger salamander	FT (central population)	CSC	Needs underground refuges, especially ground squirrel burrows, and vernal pools or other seasonal water sources for breeding.	Unlikely to Occur. Nearest recorded sighting is south of the Cosumnes River; over 3 miles south of the project area. Further, no contributing drainages to the Cosumnes River intersect the study area.
Rana aurora draytonii	California red-legged frog	FT	CSC	Breeding habitat includes aquatic areas with dense, shrubby, or emergent riparian vegetation and a permanent source of deep (greater than 2 1/3 feet deep) still or slow moving water. Upland dispersal habitat includes areas within 1 mile of aquatic breeding habitat with no impassable dispersal barriers (suburban areas, suburban developments, wide or fast flowing rivers or streams, lakes greater than 50 acres, and heavily traveled roads without underpasses or culverts).	Unlikely to occur. There are no known occurrences of CRLF in Sacramento County. Sacramento County is not within the current range of the species. The closest known records for CRLF are located in El Dorado County which includes a 2005 record for a single juvenile CRLF found in a drainage leading to Folsom Lake, located at Fitch Way (CNDDB 2009). This record is located approximately 8 miles northeast of the Project area.
Spea hammondii	western spadefoot toad	—	CSC	Requires vernal pools and seasonal wetlands below 4,500 feet that lack predators for breeding. Also occurs in grassland habitat and occasionally in valley-foothill oak woodlands and orchards.	Known to Occur. Potentially occurring in the project area.
Actinemys marmorata marmorata	northwestern pond turtle	—	CSC	Occurs in perennial wetlands and slow moving creeks and ponds that are at least 1.6 feet deep and support overhanging vegetation and rock outcrops or floating debris for basking from 0 to 6,000 feet in elevation.	Known to Occur. Potentially occurring in the project area.
Thamnophis gigas	giant garter snake	FT	ST	Marshes, sloughs, ponds, small lakes, low gradient streams, irrigation and drainage canals, and rice fields. Typically absent from larger rivers because of lack of suitable habitat, and from wetlands with sand, gravel, or rock substrates. Riparian woodlands do not provide suitable habitat because of excessive shade and inadequate prey resources.	Unlikely to Occur (Zone 4). Potentially occurring in Zones 1 and 2 of the Offsite Water Facilities Study Area. No documented sightings or suitable habitat were observed within Zone 4 of the project area.
Ammodramus savannarum	grasshopper sparrow	—	CSC (nesting)	Dry, dense grasslands and prairies, especially those with a variety of grasses and tall forbs and scattered shrubs for singing perches. Nests are built of grasses and forbs in a slight	Could occur. Potentially occurring in the project area. May nest and forage in project area.

TABLE 2. SPECIAL-STATUS WILDLIFE SPECIES POTENTIALLY OCCURRING IN ZONE 4 OF THE OFFSITE WATER FACILITIES STUDY AREA					
Scientific Name	**Common Name**	**Federal Status**	**State Status**	**Habitat**	**Occurrence notes**
				depression in ground, hidden at base of an overhanging clump of grasses or forbs.	
Athene cunicularia hypugaea	western burrowing owl	—	CSC	Yearlong resident of open, dry grassland and desert habitats and in grass, forb, and open shrub stages of pinyon-juniper and ponderosa pine habitats up to 5,300 feet.	Known to Occur. Potentially occurring in the project area. May nest and forage in project area.
Agelaius tricolor	tricolored blackbird	—	CSC	Breeds near freshwater, preferably in emergent wetland with tall dense cattails or tules, but also in willow, blackberry, wild rose, and tall herbs. Forages in grassland and cropland in the Central Valley and on the coast.	Known to Occur. Potentially occurring in the project area. May forage in project area.
Aquila chrysaetos	golden eagle	—	CFP	Grasslands and early successional stages of forest and shrub habitats for foraging up to 11,500 feet. Secluded cliffs with overhanging ledges or large trees in open areas with unobstructed views for nesting.	Could Occur. Potentially occurring in the project area. May forage in the project area. No suitable nesting habitat in the project area.
Buteo swainsoni	Swainson's hawk	—	ST	Uncommon breeding resident and migrant in the Central Valley, Klamath Basin, Northeastern Plateau, Lassen County, and Mojave Desert. Riparian woodlands, juniper-sage flats, and oak woodlands for nesting. Grasslands and agricultural areas for foraging.	Known to Occur. Potentially occurring in the project area. May nest and forage in project area.
Circus cyaneus	northern harrier	—	CSC (breeding)	Grasslands, marshes, and agricultural areas for foraging and nesting.	Likely to Occur. Potentially occurring in the project area. May nest and forage in project area.
Elanus leucurus	white-tailed kite	—	CFP	Open woodland, marshes, partially cleared lands and cultivated fields, mostly in lowland situations. Nests in trees, often near a marsh, usually 20 to 50 feet above the ground in branches near the top of a tree.	Known to Occur. Potentially occurring in the project area. May nest and forage in project area.
Haliaeetus leucocephalus	bald eagle	FT FD	SE CFP	Year-round resident in ice-free regions of California. Foraging areas include regulated and unregulated rivers, reservoirs, lakes, estuaries, and coastal marine ecosystems. Majority of bald eagles in California breed near reservoirs and nests are usually located within one mile of foraging habitat.	Unlikely to occur. No appropriate nesting or foraging habitat present in the project area.

TABLE 2. SPECIAL-STATUS WILDLIFE SPECIES POTENTIALLY OCCURRING IN ZONE 4 OF THE OFFSITE WATER FACILITIES STUDY AREA					
Scientific Name	**Common Name**	**Federal Status**	**State Status**	**Habitat**	**Occurrence notes**
Lanius ludovicianus	Loggerhead shrike	—	CSC (nesting)	Open habitats with sparse shrubs and trees (or other suitable perch sites) and bare ground and/or low, sparse herbaceous cover; oak woodlands for nesting. Found in lowlands and foothills throughout California.	Likely to Occur. Potentially occurring in the project area. May nest and forage in project area.
Riparia riparia	bank swallow	—	ST	Sporadic colonial breeder, frequently near flowing water. Nests in steep sand, dirt, or gravel banks, in a burrow dug near the top of the bank, along the edge of inland water or in gravel pits, road embankments, etc.	Unlikely to occur. No appropriate nesting or foraging habitat present in the project area.
Antrozous pallidus	pallid bat	—	CSC	Inhabits grasslands, shrublands, woodlands, and forests from sea level up through mixed conifer forests. Typically roosts in caves, crevices, or mines. Requires open habitat for foraging.	Likely to Occur. Potentially occurring in the project area. May forage in project area.
Taxidea taxus	American badger	—	CSC	Dry, open stages of most shrub, forest, and herbaceous habitats, with friable soils. Cultivated lands have been reported to provide little usable habitat.	Likely to Occur. Potentially occurring in the project area. Not observed during field surveys.

LEGEND:

Federal Status
FT = Federal Threatened
FE = Federal Endangered
FC = Federal Candidate
FD = Federal Delisted
FX = Critical Habitat
FPD = Federally Proposed Delisting

State Status
SR = listed by California as Rare
ST = California Threatened
SE = California Endangered
CSC = California Species of Concern
CFP = California Fully Protected

TABLE 3. POTENTIAL RESOURCE ISSUES IN ZONE 4 OF THE OFFSITE WATER FACILITIES STUDY AREA.				
Resource Issue	**Alternative 1 and 1A**	**Alternative 2 and 2A**	**Alternative 3 and 3A**	**Alternative 4 and 4A**
Potential impacts to vernal pool fairy shrimp and its habitat: Vernal pool fairy shrimp habitat, (defined as vernal pools) is present in the project area. Construction activities, such as grading and excavation, could result in removal or disturbance to habitat or direct impacts to individuals.	X	X	X	X
Potential impacts to vernal pool fairy shrimp critical habitat: Vernal pool fairy shrimp critical habitat, as designated by USFWS, is present along several of the alternative alignments. Construction activities, such as grading and excavation, could result in removal or disturbance to designated critical habitat.		X	X	X
Potential impacts to valley elderberry longhorn beetle (VELB) and its habitat: Potential habitat (defined as elderberry shrubs below 3,000 feet in elevation) was detected in several locations along White Rock Road and private property along the Alternative 1A alignment. Potential direct and indirect impacts to VELB include removal or disturbance of shrubs. Direct impacts to VELB could also potentially occur if construction is planned during the beetle's emergence period (late March through June).	X	X	X	X
Potential impacts to vernal pool tadpole shrimp and its habitat: Vernal pool tadpole shrimp habitat (defined as vernal pools) is present in the project area. Construction activities, such as grading and excavation, could result in removal or disturbance to habitat or direct or indirect impacts to individuals.	X	X	X	X
Potential impacts to vernal pool tadpole shrimp critical habitat: Vernal pool tadpole shrimp critical habitat, as designated by USFWS, is present along several of the alternative alignments. Construction activities, such as grading and excavation, could result in removal or disturbance to designated critical habitat.		X	X	X

TABLE 3. POTENTIAL RESOURCE ISSUES IN ZONE 4 OF THE OFFSITE WATER FACILITIES STUDY AREA.				
Resource Issue	**Alternative 1 and 1A**	**Alternative 2 and 2A**	**Alternative 3 and 3A**	**Alternative 4 and 4A**
Potential impacts to special-status reptiles and amphibians, including western spadefoot toad and northwestern pond turtle: Construction activities in or adjacent to potential habitat could cause direct or indirect impacts to these species. Construction-related activities could potentially disturb individual animals result in removal or disturbance of habitat or impacts to individuals.	X	X	X	X
Potential disturbance of special-status birds and raptors, and migratory nesting birds and raptors: Disturbance of active nests of special-status species or other nesting species protected by the Migratory Bird Treaty Act could occur if construction is scheduled for the nesting season (March 1 through August 15). Construction activities and related noise may cause short-term, temporary disturbance of special-status species while foraging in the project area.	X	X	X	X
Potential impacts to special-status plants: Eleven special-status plant species were identified as potentially occurring in the project area. If any special-status plant species are present in the project area, construction activities, such as grading and excavation, could result in disturbance of habitat or loss of individuals.	X	X	X	X
Potential impacts to slender Orcutt grass critical habitat: Critical habitat, as designated by USFWS, is present along several of the alternative alignments. Construction activities, such as grading and excavation, could result in removal of or disturbance to designated critical habitat.		X	X	X
Potential impacts to sensitive natural communities, including vernal pools: Sensitive natural communities, including vernal pools and seasonal wetlands, are present in the project area. Construction activities, such as grading and excavation, could result in disturbance to these areas.	X	X	X	X
Potential impacts to vernal pool ecosystems critical habitat: Critical habitat, as designated by USFWS, is present along several of the alternative alignments.		X	X	X

TABLE 3. POTENTIAL RESOURCE ISSUES IN ZONE 4 OF THE OFFSITE WATER FACILITIES STUDY AREA.				
Resource Issue	**Alternative 1 and 1A**	**Alternative 2 and 2A**	**Alternative 3 and 3A**	**Alternative 4 and 4A**
Construction activities, such as grading and excavation, could result in removal or disturbance to designated critical habitat.				
Potential impacts to jurisdictional wetlands and other Waters of the United States: Based on recent U.S. Supreme Court decisions in Rapanos v. United States & Carabell v. United States, Waters of the U.S. are now defined to include traditional navigable waters, wetlands adjacent to traditional navigable water, non-navigable tributaries of traditional navigable waters that are relatively permanent where the tributaries typically flow year-round or have continuous flow at leas seasonally (typically three months), and wetland that directly abut such tributaries'. Agencies will decide jurisdiction over the following waters based on a fact-specific analysis to determine whether they have a significant nexus with traditional navigable waters: non-navigable tributaries that are not relatively permanent, wetland adjacent to non-navigable tributaries that are not relatively permanent, wetlands adjacent to but that do no directly abut a relatively permanent non-navigable tributary. Agencies will generally not assert jurisdiction over the following features: swales or erosional features (e.g. gullies, small washes characterized by low volume, infrequent or short duration flow) or ditches (including roadside ditches) excavated wholly in and draining only uplands and that do not carry a relatively permanent flow of water. Jurisdictional wetlands potentially occur in the project area. Construction activities, such as grading and excavation, could potentially result in discharge of dredged materials or placement of fill materials into waters of the United States.	X	X	X	X

Table 5-3. Life Stage Timing and Distribution of Selected Species Potentially Affected by the Proposed Alternatives

	Distribution	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
Late Fall–run Chinook Salmon													
Adult Migration	SF Bay to Upper Sacramento River and Tributaries, Mokelumne River, and San Joaquin River Tributaries	■	■								■	■	■
Spawning	Upper Sacramento River and Tributaries, Mokelumne River and San Joaquin River Tributaries	■	■	■									
Egg Incubation	Upper Sacramento River and Tributaries, Mokelumne River and San Joaquin River Tributaries	■	■	■	■	■							
Juvenile Rearing (Natal Stream)	Upper Sacramento River and Tributaries, Mokelumne River and San Joaquin River Tributaries	■	■	■	■	■	■	■	■	■	■	■	■
Juvenile Movement and Rearing	Upper Sacramento River and Tributaries, Mokelumne River and San Joaquin River Tributaries	■	■	■	■	■	■				■	■	■
Fall-run Chinook Salmon													
Adult Migration and Holding	SF Bay to Upper Sacramento River and Tributaries							■	■	■	■	■	■
Spawning[1]	Upper Sacramento River and Tributaries										■	■	■
Egg Incubation[1]	Upper Sacramento River and Tributaries	■	■	■							■	■	■
Juvenile Rearing (Natal Stream)	Upper Sacramento River and Tributaries	■	■	■	■	■	■						
Juvenile Movement	Upper Sacramento River and Tributaries to SF Bay				■	■	■						
Spring-run Chinook Salmon													
Adult Migration and Holding	SF Bay to Upper Sacramento River and Tributaries			■	■	■	■	■	■	■			
Spawning	Upper Sacramento River and Tributaries								■	■	■		
Egg Incubation	Upper Sacramento River and Tributaries								■	■	■	■	■
Juvenile Rearing (Natal Stream)	Upper Sacramento River and Tributaries	■	■	■	■	■	■	■	■	■	■	■	■
Juvenile Movement	Upper Sacramento River and Tributaries to SF Bay	■	■	■	■	■					■	■	■
Winter-run Chinook Salmon													
Adult Migration and Holding	SF Bay to Upper Sacramento River	■	■	■	■	■	■	▨					▨

Table 5-3. Continued

	Distribution	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
Spawning	Upper Sacramento River												
Egg Incubation	Upper Sacramento River												
Juvenile Rearing (Natal Stream)	Upper Sacramento River to SF Bay												
Juvenile Movement and Rearing	Upper Sacramento River to SF Bay												
Steelhead													
Adult Migration	SF Bay to Upper Sacramento River and Tributaries												
Spawning	Upper Sacramento River and Tributaries												
Egg Incubation	Upper Sacramento River and Tributaries												
Juvenile Rearing	Upper Sacramento River and Tributaries to SF Bay												
Juvenile Movement	Upper Sacramento River and Tributaries to SF Bay												
Southern Oregon/Northern California Coasts Coho Salmon													
Adult Migration	Trinity River												
Juvenile Rearing	Trinity River												
Juvenile Movement	Trinity River												
Splittail													
Adult Migration	Suisun Marsh, Upper Delta, Yolo and Sutter Bypasses, Sacramento River and San Joaquin River												
Spawning	Suisun Marsh, Upper Delta, Yolo and Sutter Bypasses, lower Sacramento, Mokelumne and San Joaquin Rivers												
Larval and Early Juvenile Rearing and Movement	Suisun Marsh, Upper Delta, Yolo Bypass, Sutter Bypass, Lower Sacramento and San Joaquin Rivers												
Adult and Juvenile Rearing	Delta, Suisun Bay												

Table 5-3. Continued

	Distribution	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
Delta Smelt													
Adult Migration	Delta	■	■	■									■
Spawning	Delta, Suisun Marsh	■	■	■	■	■	▨	▨					
Larval and Early Juvenile Rearing	Delta, Suisun Marsh	■	■	■	■	■	■	▨					
Estuarine Rearing: Juveniles and Adults	Lower Delta, Suisun Bay	■	■	■	■	■	■	■	■	■	■	■	■

▨ Low probability of occurrence, not included in the assessment of the project effect

■ Primary occurrence included in the assessment of project effects

[1] Spawning and incubation occurs from October to February in the Feather, American, and Mokelumne Rivers

Sources: Brown 1991, Wang and Brown 1993, U.S. Fish and Wildlife Service 1996c, McEwan 2001, Moyle 2002, Hallock 1989.

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SNAME	CNAME	ACCURACY	PRESENCE	SITEDATE	FEDLIST	CALLIST	CNPSLIST
Accipiter cooperii	Cooper's hawk	1/5 mile	Presumed Extant	19880423	None	None	
Accipiter cooperii	Cooper's hawk	80 meters	Presumed Extant	19970528	None	None	
Accipiter cooperii	Cooper's hawk	80 meters	Presumed Extant	19900514	None	None	
Accipiter cooperii	Cooper's hawk	80 meters	Presumed Extant	19900630	None	None	
Actinemys marmorata marm	northwestern pond turtle	1/5 mile	Presumed Extant	19910426	None	None	
Actinemys marmorata marm	northwestern pond turtle	1/5 mile	Presumed Extant	XXXXXXXX	None	None	
Actinemys marmorata marm	northwestern pond turtle	nonspecific area	Presumed Extant	20010926	None	None	
Actinemys marmorata marm	northwestern pond turtle	80 meters	Presumed Extant	20070517	None	None	
Actinemys marmorata marm	northwestern pond turtle	80 meters	Presumed Extant	199208XX	None	None	
Actinemys marmorata marm	northwestern pond turtle	80 meters	Presumed Extant	19930425	None	None	
Actinemys marmorata marm	northwestern pond turtle	80 meters	Presumed Extant	19910307	None	None	
Actinemys marmorata marm	northwestern pond turtle	80 meters	Presumed Extant	XXXXXXXX	None	None	
Actinemys marmorata marm	northwestern pond turtle	specific area	Presumed Extant	20070428	None	None	
Agelaius tricolor	tricolored blackbird	1 mile	Presumed Extant	1972XXXX	None	None	
Agelaius tricolor	tricolored blackbird	nonspecific area	Presumed Extant	19910610	None	None	
Agelaius tricolor	tricolored blackbird	nonspecific area	Presumed Extant	19930422	None	None	
Agelaius tricolor	tricolored blackbird	1/5 mile	Possibly Extirpated	19920616	None	None	
Agelaius tricolor	tricolored blackbird	1/5 mile	Presumed Extant	19960519	None	None	
Agelaius tricolor	tricolored blackbird	1/5 mile	Presumed Extant	19940423	None	None	
Agelaius tricolor	tricolored blackbird	1/5 mile	Extirpated	19820605	None	None	
Agelaius tricolor	tricolored blackbird	1/5 mile	Possibly Extirpated	19920616	None	None	
Agelaius tricolor	tricolored blackbird	1/5 mile	Presumed Extant	197205XX	None	None	
Agelaius tricolor	tricolored blackbird	1/5 mile	Presumed Extant	19940423	None	None	
Agelaius tricolor	tricolored blackbird	1/5 mile	Presumed Extant	19940423	None	None	
Agelaius tricolor	tricolored blackbird	nonspecific area	Presumed Extant	1997XXXX	None	None	
Agelaius tricolor	tricolored blackbird	nonspecific area	Presumed Extant	20000422	None	None	
Agelaius tricolor	tricolored blackbird	nonspecific area	Presumed Extant	1994XXXX	None	None	
Agelaius tricolor	tricolored blackbird	nonspecific area	Presumed Extant	19950422	None	None	
Agelaius tricolor	tricolored blackbird	nonspecific area	Presumed Extant	20000422	None	None	
Agelaius tricolor	tricolored blackbird	specific area	Presumed Extant	1997XXXX	None	None	
Agelaius tricolor	tricolored blackbird	nonspecific area	Presumed Extant	20000422	None	None	
Agelaius tricolor	tricolored blackbird	1/10 mile	Presumed Extant	19960519	None	None	
Agelaius tricolor	tricolored blackbird	1/10 mile	Presumed Extant	199106XX	None	None	

Agelaius tricolor	tricolored blackbird	1/10 mile	Presumed Extant	20000422	None	None
Agelaius tricolor	tricolored blackbird	1/10 mile	Presumed Extant	199205XX	None	None
Agelaius tricolor	tricolored blackbird	specific area	Presumed Extant	199406XX	None	None
Agelaius tricolor	tricolored blackbird	specific area	Presumed Extant	199205XX	None	None
Agelaius tricolor	tricolored blackbird	specific area	Presumed Extant	199005XX	None	None
Agelaius tricolor	tricolored blackbird	80 meters	Presumed Extant	19990511	None	None
Agelaius tricolor	tricolored blackbird	80 meters	Presumed Extant	1997XXXX	None	None
Agelaius tricolor	tricolored blackbird	80 meters	Presumed Extant	199106XX	None	None
Agelaius tricolor	tricolored blackbird	80 meters	Presumed Extant	199404XX	None	None
Agelaius tricolor	tricolored blackbird	80 meters	Presumed Extant	19890604	None	None
Agelaius tricolor	tricolored blackbird	80 meters	Presumed Extant	19990511	None	None
Agelaius tricolor	tricolored blackbird	specific area	Presumed Extant	20070601	None	None
Agelaius tricolor	tricolored blackbird	specific area	Presumed Extant	19920612	None	None
Agelaius tricolor	tricolored blackbird	specific area	Presumed Extant	19910522	None	None
Andrena blennospermatis	Blennosperma vernal pool ar	2/5 mile	Presumed Extant	19XXXXXX	None	None
Andrena subapasta	A vernal pool andrenid bee	1 mile	Presumed Extant	19XXXXXX	None	None
Antrozous pallidus	pallid bat	3/5 mile	Presumed Extant	19410624	None	None
Ardea alba	great egret	1/5 mile	Possibly Extirpated	1990	None	None
Ardea alba	great egret	specific area	Presumed Extant	20050318	None	None
Ardea alba	great egret	specific area	Presumed Extant	20050225	None	None
Ardea herodias	great blue heron	1/5 mile	Presumed Extant	19900318	None	None
Ardea herodias	great blue heron	1/5 mile	Presumed Extant	19900318	None	None
Ardea herodias	great blue heron	1/5 mile	Possibly Extirpated	1990XXXX	None	None
Ardea herodias	great blue heron	specific area	Presumed Extant	20050318	None	None
Ardea herodias	great blue heron	specific area	Presumed Extant	20050225	None	None
Ardea herodias	great blue heron	80 meters	Presumed Extant	200406XX	None	None
Athene cunicularia	burrowing owl	nonspecific area	Presumed Extant	19910213	None	None
Athene cunicularia	burrowing owl	nonspecific area	Presumed Extant	2003XXXX	None	None
Athene cunicularia	burrowing owl	specific area	Presumed Extant	19890614	None	None
Athene cunicularia	burrowing owl	80 meters	Presumed Extant	199404XX	None	None
Athene cunicularia	burrowing owl	80 meters	Presumed Extant	199404XX	None	None
Athene cunicularia	burrowing owl	80 meters	Presumed Extant	19890428	None	None
Athene cunicularia	burrowing owl	80 meters	Presumed Extant	19890428	None	None
Athene cunicularia	burrowing owl	80 meters	Presumed Extant	19890428	None	None

Athene cunicularia	burrowing owl	80 meters	Presumed Extant	19890715	None	None
Athene cunicularia	burrowing owl	80 meters	Presumed Extant	19890428	None	None
Branchinecta lynchi	vernal pool fairy shrimp	nonspecific area	Presumed Extant	19930302	Threatened	None
Branchinecta lynchi	vernal pool fairy shrimp	nonspecific area	Presumed Extant	20060314	Threatened	None
Branchinecta lynchi	vernal pool fairy shrimp	nonspecific area	Presumed Extant	19990223	Threatened	None
Branchinecta lynchi	vernal pool fairy shrimp	nonspecific area	Presumed Extant	19960322	Threatened	None
Branchinecta lynchi	vernal pool fairy shrimp	specific area	Presumed Extant	19920403	Threatened	None
Branchinecta lynchi	vernal pool fairy shrimp	3/5 mile	Presumed Extant	19930302	Threatened	None
Branchinecta lynchi	vernal pool fairy shrimp	3/5 mile	Presumed Extant	19930325	Threatened	None
Branchinecta lynchi	vernal pool fairy shrimp	nonspecific area	Presumed Extant	20000315	Threatened	None
Branchinecta lynchi	vernal pool fairy shrimp	specific area	Presumed Extant	19960308	Threatened	None
Branchinecta lynchi	vernal pool fairy shrimp	nonspecific area	Presumed Extant	20041204	Threatened	None
Branchinecta lynchi	vernal pool fairy shrimp	specific area	Presumed Extant	19980128	Threatened	None
Branchinecta lynchi	vernal pool fairy shrimp	nonspecific area	Presumed Extant	19940511	Threatened	None
Branchinecta lynchi	vernal pool fairy shrimp	nonspecific area	Presumed Extant	19910406	Threatened	None
Branchinecta lynchi	vernal pool fairy shrimp	nonspecific area	Presumed Extant	2004XXXX	Threatened	None
Branchinecta lynchi	vernal pool fairy shrimp	1/5 mile	Presumed Extant	19950201	Threatened	None
Branchinecta lynchi	vernal pool fairy shrimp	nonspecific area	Presumed Extant	20040304	Threatened	None
Branchinecta lynchi	vernal pool fairy shrimp	specific area	Presumed Extant	20020315	Threatened	None
Branchinecta lynchi	vernal pool fairy shrimp	specific area	Presumed Extant	19970314	Threatened	None
Branchinecta lynchi	vernal pool fairy shrimp	1/10 mile	Presumed Extant	19910406	Threatened	None
Branchinecta lynchi	vernal pool fairy shrimp	specific area	Presumed Extant	199404XX	Threatened	None
Branchinecta lynchi	vernal pool fairy shrimp	specific area	Presumed Extant	20070227	Threatened	None
Branchinecta lynchi	vernal pool fairy shrimp	nonspecific area	Presumed Extant	19950105	Threatened	None
Branchinecta lynchi	vernal pool fairy shrimp	specific area	Presumed Extant	20020131	Threatened	None
Branchinecta lynchi	vernal pool fairy shrimp	nonspecific area	Presumed Extant	19950201	Threatened	None
Branchinecta lynchi	vernal pool fairy shrimp	specific area	Presumed Extant	19960310	Threatened	None
Branchinecta lynchi	vernal pool fairy shrimp	nonspecific area	Presumed Extant	19950421	Threatened	None
Branchinecta lynchi	vernal pool fairy shrimp	80 meters	Presumed Extant	19990216	Threatened	None
Branchinecta lynchi	vernal pool fairy shrimp	80 meters	Presumed Extant	199404XX	Threatened	None
Branchinecta lynchi	vernal pool fairy shrimp	80 meters	Presumed Extant	20050220	Threatened	None
Branchinecta lynchi	vernal pool fairy shrimp	80 meters	Presumed Extant	20010311	Threatened	None
Branchinecta lynchi	vernal pool fairy shrimp	80 meters	Presumed Extant	19920403	Threatened	None
Branchinecta lynchi	vernal pool fairy shrimp	80 meters	Presumed Extant	19950403	Threatened	None

Branchinecta lynchi	vernal pool fairy shrimp	80 meters	Presumed Extant	19960130	Threatene	None
Branchinecta lynchi	vernal pool fairy shrimp	80 meters	Presumed Extant	19950324	Threatene	None
Branchinecta lynchi	vernal pool fairy shrimp	specific area	Presumed Extant	19950205	Threatene	None
Branchinecta lynchi	vernal pool fairy shrimp	specific area	Presumed Extant	20050220	Threatene	None
Branchinecta mesovallensis	midvalley fairy shrimp	nonspecific area	Presumed Extant	19910328	None	None
Branchinecta mesovallensis	midvalley fairy shrimp	nonspecific area	Presumed Extant	1995XXXX	None	None
Branchinecta mesovallensis	midvalley fairy shrimp	nonspecific area	Presumed Extant	20000315	None	None
Branchinecta mesovallensis	midvalley fairy shrimp	1/10 mile	Presumed Extant	XXXXXXXX	None	None
Branchinecta mesovallensis	midvalley fairy shrimp	1/10 mile	Presumed Extant	XXXXXXXX	None	None
Branchinecta mesovallensis	midvalley fairy shrimp	1/10 mile	Presumed Extant	19911903	None	None
Branchinecta mesovallensis	midvalley fairy shrimp	specific area	Presumed Extant	199502XX	None	None
Branchinecta mesovallensis	midvalley fairy shrimp	specific area	Presumed Extant	199502XX	None	None
Buteo regalis	ferruginous hawk	nonspecific area	Presumed Extant	19910214	None	None
Buteo swainsoni	Swainson's hawk	1/5 mile	Presumed Extant	19840517	None	Threatened
Buteo swainsoni	Swainson's hawk	1/5 mile	Presumed Extant	19820628	None	Threatened
Buteo swainsoni	Swainson's hawk	1/5 mile	Presumed Extant	19900531	None	Threatened
Buteo swainsoni	Swainson's hawk	1/5 mile	Presumed Extant	19820628	None	Threatened
Buteo swainsoni	Swainson's hawk	1/5 mile	Presumed Extant	19820628	None	Threatened
Buteo swainsoni	Swainson's hawk	specific area	Presumed Extant	20070516	None	Threatened
Buteo swainsoni	Swainson's hawk	80 meters	Presumed Extant	19980701	None	Threatened
Buteo swainsoni	Swainson's hawk	80 meters	Presumed Extant	20060502	None	Threatened
Buteo swainsoni	Swainson's hawk	80 meters	Presumed Extant	20010412	None	Threatened
Buteo swainsoni	Swainson's hawk	80 meters	Presumed Extant	20010602	None	Threatened
Buteo swainsoni	Swainson's hawk	80 meters	Presumed Extant	20010625	None	Threatened
Buteo swainsoni	Swainson's hawk	80 meters	Presumed Extant	1994XXXX	None	Threatened
Buteo swainsoni	Swainson's hawk	80 meters	Presumed Extant	19950613	None	Threatened
Buteo swainsoni	Swainson's hawk	80 meters	Presumed Extant	1994XXXX	None	Threatened
Buteo swainsoni	Swainson's hawk	80 meters	Presumed Extant	19950613	None	Threatened
Buteo swainsoni	Swainson's hawk	80 meters	Presumed Extant	19950613	None	Threatened
Buteo swainsoni	Swainson's hawk	80 meters	Presumed Extant	1994XXXX	None	Threatened
Buteo swainsoni	Swainson's hawk	80 meters	Presumed Extant	19950613	None	Threatened
Buteo swainsoni	Swainson's hawk	80 meters	Presumed Extant	19950613	None	Threatened
Buteo swainsoni	Swainson's hawk	80 meters	Presumed Extant	1994XXXX	None	Threatened
Buteo swainsoni	Swainson's hawk	80 meters	Presumed Extant	19930617	None	Threatened

Buteo swainsoni	Swainson's hawk	80 meters	Presumed Extant	19930617	None	Threatened	
Clarkia biloba ssp. brandegee	Brandegee's clarkia	1 mile	Presumed Extant	19900523	None	None	1B.2
Desmocerus californicus dim	valley elderberry longhorn b	1 mile	Presumed Extant	196404XX	Threatene	None	
Desmocerus californicus dim	valley elderberry longhorn b	specific area	Presumed Extant	19870423	Threatene	None	
Desmocerus californicus dim	valley elderberry longhorn b	nonspecific area	Presumed Extant	1984XXXX	Threatene	None	
Desmocerus californicus dim	valley elderberry longhorn b	nonspecific area	Presumed Extant	1996XXXX	Threatene	None	
Desmocerus californicus dim	valley elderberry longhorn b	specific area	Presumed Extant	19870512	Threatene	None	
Desmocerus californicus dim	valley elderberry longhorn b	1/5 mile	Presumed Extant	19870423	Threatene	None	
Desmocerus californicus dim	valley elderberry longhorn b	specific area	Presumed Extant	1990629	Threatene	None	
Desmocerus californicus dim	valley elderberry longhorn b	80 meters	Presumed Extant	19950421	Threatene	None	
Desmocerus californicus dim	valley elderberry longhorn b	80 meters	Presumed Extant	20000124	Threatene	None	
Downingia pusilla	dwarf downingia	specific area	Presumed Extant	199104XX	None	None	2.2
Downingia pusilla	dwarf downingia	80 meters	Presumed Extant	20020402	None	None	2.2
Dumontia oregonensis	hairy water flea	nonspecific area	Presumed Extant	200404XX	None	None	
Elanus leucurus	white-tailed kite	1/5 mile	Presumed Extant	197402XX	None	None	
Elanus leucurus	white-tailed kite	1/5 mile	Presumed Extant	19900623	None	None	
Elanus leucurus	white-tailed kite	specific area	Presumed Extant	19880313	None	None	
Elanus leucurus	white-tailed kite	1/10 mile	Presumed Extant	19900507	None	None	
Elanus leucurus	white-tailed kite	80 meters	Presumed Extant	19900422	None	None	
Elanus leucurus	white-tailed kite	80 meters	Presumed Extant	19900603	None	None	
Elanus leucurus	white-tailed kite	80 meters	Presumed Extant	19880227	None	None	
Elanus leucurus	white-tailed kite	80 meters	Presumed Extant	19900218	None	None	
Elanus leucurus	white-tailed kite	80 meters	Presumed Extant	19900505	None	None	
Elanus leucurus	white-tailed kite	80 meters	Presumed Extant	198806XX	None	None	
Elanus leucurus	white-tailed kite	80 meters	Presumed Extant	19900601	None	None	
Elanus leucurus	white-tailed kite	80 meters	Presumed Extant	19910310	None	None	
Elanus leucurus	white-tailed kite	80 meters	Presumed Extant	19890620	None	None	
Elanus leucurus	white-tailed kite	80 meters	Presumed Extant	19900602	None	None	
Elanus leucurus	white-tailed kite	80 meters	Presumed Extant	198906XX	None	None	
Gratiola heterosepala	Boggs Lake hedge-hyssop	nonspecific area	Presumed Extant	19930618	None	Endangere	1B.2
Gratiola heterosepala	Boggs Lake hedge-hyssop	nonspecific area	Extirpated	20020830	None	Endangere	1B.2
Gratiola heterosepala	Boggs Lake hedge-hyssop	specific area	Presumed Extant	19930428	None	Endangere	1B.2
Gratiola heterosepala	Boggs Lake hedge-hyssop	specific area	Presumed Extant	199104XX	None	Endangere	1B.2
Gratiola heterosepala	Boggs Lake hedge-hyssop	80 meters	Presumed Extant	199104XX	None	Endangere	1B.2

Gratiola heterosepala	Boggs Lake hedge-hyssop	80 meters	Presumed Extant	20020428	None	Endangere	1B.2
Gratiola heterosepala	Boggs Lake hedge-hyssop	80 meters	Presumed Extant	19910513	None	Endangere	1B.2
Gratiola heterosepala	Boggs Lake hedge-hyssop	80 meters	Presumed Extant	19910509	None	Endangere	1B.2
Gratiola heterosepala	Boggs Lake hedge-hyssop	specific area	Presumed Extant	19890602	None	Endangere	1B.2
Gratiola heterosepala	Boggs Lake hedge-hyssop	specific area	Presumed Extant	20000517	None	Endangere	1B.2
Hydrochara rickseckeri	Ricksecker's water scavenger	specific area	Presumed Extant	1997XXXX	None	None	
Hydrochara rickseckeri	Ricksecker's water scavenger	nonspecific area	Presumed Extant	XXXXXXXX	None	None	
Juncus leiospermus var. ahar	Ahart's dwarf rush	1/5 mile	Possibly Extirpated	XXXXXXXX	None	None	1B.2
Juncus leiospermus var. ahar	Ahart's dwarf rush	specific area	Presumed Extant	20000501	None	None	1B.2
Lasionycteris noctivagans	silver-haired bat	1 mile	Presumed Extant	19900925	None	None	
Lasionycteris noctivagans	silver-haired bat	3/5 mile	Presumed Extant	19390405	None	None	
Legenere limosa	legenere	specific area	Presumed Extant	199104XX	None	None	1B.1
Legenere limosa	legenere	specific area	Presumed Extant	19880326	None	None	1B.1
Legenere limosa	legenere	specific area	Presumed Extant	19990502	None	None	1B.1
Legenere limosa	legenere	specific area	Presumed Extant	19880326	None	None	1B.1
Legenere limosa	legenere	80 meters	Presumed Extant	20030520	None	None	1B.1
Legenere limosa	legenere	80 meters	Presumed Extant	20020523	None	None	1B.1
Legenere limosa	legenere	80 meters	Presumed Extant	19930506	None	None	1B.1
Legenere limosa	legenere	80 meters	Presumed Extant	19830531	None	None	1B.1
Legenere limosa	legenere	80 meters	Presumed Extant	19830531	None	None	1B.1
Legenere limosa	legenere	specific area	Presumed Extant	1997XXXX	None	None	1B.1
Legenere limosa	legenere	specific area	Presumed Extant	20020402	None	None	1B.1
Legenere limosa	legenere	specific area	Presumed Extant	1997XXXX	None	None	1B.1
Legenere limosa	legenere	specific area	Presumed Extant	1997XXXX	None	None	1B.1
Lepidurus packardi	vernal pool tadpole shrimp	nonspecific area	Presumed Extant	19960322	Endangere	None	
Lepidurus packardi	vernal pool tadpole shrimp	nonspecific area	Presumed Extant	19970212	Endangere	None	
Lepidurus packardi	vernal pool tadpole shrimp	nonspecific area	Presumed Extant	19930216	Endangere	None	
Lepidurus packardi	vernal pool tadpole shrimp	nonspecific area	Presumed Extant	19990223	Endangere	None	
Lepidurus packardi	vernal pool tadpole shrimp	specific area	Presumed Extant	19920403	Endangere	None	
Lepidurus packardi	vernal pool tadpole shrimp	3/5 mile	Presumed Extant	19920402	Endangere	None	
Lepidurus packardi	vernal pool tadpole shrimp	nonspecific area	Presumed Extant	20000315	Endangere	None	
Lepidurus packardi	vernal pool tadpole shrimp	specific area	Presumed Extant	19900101	Endangere	None	
Lepidurus packardi	vernal pool tadpole shrimp	specific area	Presumed Extant	19980128	Endangere	None	
Lepidurus packardi	vernal pool tadpole shrimp	nonspecific area	Presumed Extant	19940511	Endangere	None	

Lepidurus packardi	vernal pool tadpole shrimp	nonspecific area	Presumed Extant	20040212	Endangere	None
Lepidurus packardi	vernal pool tadpole shrimp	1/5 mile	Presumed Extant	19920402	Endangere	None
Lepidurus packardi	vernal pool tadpole shrimp	1/5 mile	Presumed Extant	19950524	Endangere	None
Lepidurus packardi	vernal pool tadpole shrimp	specific area	Presumed Extant	199701XX	Endangere	None
Lepidurus packardi	vernal pool tadpole shrimp	nonspecific area	Presumed Extant	2004XX	Endangere	None
Lepidurus packardi	vernal pool tadpole shrimp	specific area	Presumed Extant	20020315	Endangere	None
Lepidurus packardi	vernal pool tadpole shrimp	nonspecific area	Presumed Extant	199404XX	Endangere	None
Lepidurus packardi	vernal pool tadpole shrimp	nonspecific area	Presumed Extant	19970129	Endangere	None
Lepidurus packardi	vernal pool tadpole shrimp	specific area	Presumed Extant	19930202	Endangere	None
Lepidurus packardi	vernal pool tadpole shrimp	specific area	Presumed Extant	199404XX	Endangere	None
Lepidurus packardi	vernal pool tadpole shrimp	nonspecific area	Presumed Extant	19950331	Endangere	None
Lepidurus packardi	vernal pool tadpole shrimp	specific area	Presumed Extant	20040309	Endangere	None
Lepidurus packardi	vernal pool tadpole shrimp	specific area	Presumed Extant	199701XX	Endangere	None
Lepidurus packardi	vernal pool tadpole shrimp	specific area	Presumed Extant	199701XX	Endangere	None
Lepidurus packardi	vernal pool tadpole shrimp	specific area	Presumed Extant	20050220	Endangere	None
Lepidurus packardi	vernal pool tadpole shrimp	80 meters	Presumed Extant	19990227	Endangere	None
Lepidurus packardi	vernal pool tadpole shrimp	80 meters	Presumed Extant	199404XX	Endangere	None
Lepidurus packardi	vernal pool tadpole shrimp	80 meters	Presumed Extant	199404XX	Endangere	None
Lepidurus packardi	vernal pool tadpole shrimp	80 meters	Presumed Extant	199701XX	Endangere	None
Lepidurus packardi	vernal pool tadpole shrimp	80 meters	Presumed Extant	199701XX	Endangere	None
Lepidurus packardi	vernal pool tadpole shrimp	80 meters	Presumed Extant	19970212	Endangere	None
Lepidurus packardi	vernal pool tadpole shrimp	80 meters	Presumed Extant	199404XX	Endangere	None
Lepidurus packardi	vernal pool tadpole shrimp	80 meters	Presumed Extant	20050220	Endangere	None
Lepidurus packardi	vernal pool tadpole shrimp	80 meters	Presumed Extant	20070227	Endangere	None
Lepidurus packardi	vernal pool tadpole shrimp	80 meters	Presumed Extant	19920402	Endangere	None
Lepidurus packardi	vernal pool tadpole shrimp	80 meters	Presumed Extant	19920403	Endangere	None
Lepidurus packardi	vernal pool tadpole shrimp	80 meters	Presumed Extant	19950228	Endangere	None
Lepidurus packardi	vernal pool tadpole shrimp	specific area	Presumed Extant	19960321	Endangere	None
Lepidurus packardi	vernal pool tadpole shrimp	nonspecific area	Presumed Extant	19900317	Endangere	None
Lepidurus packardi	vernal pool tadpole shrimp	specific area	Presumed Extant	19960321	Endangere	None
Lepidurus packardi	vernal pool tadpole shrimp	specific area	Presumed Extant	20050414	Endangere	None
Lepidurus packardi	vernal pool tadpole shrimp	specific area	Presumed Extant	199701XX	Endangere	None
Linderiella occidentalis	California linderiella	nonspecific area	Presumed Extant	19960321	None	None
Linderiella occidentalis	California linderiella	nonspecific area	Presumed Extant	19960322	None	None

Linderiella occidentalis	California linderiella	4/5 mile	Presumed Extant	19920402	None	None
Linderiella occidentalis	California linderiella	specific area	Presumed Extant	19960323	None	None
Linderiella occidentalis	California linderiella	nonspecific area	Presumed Extant	19940511	None	None
Linderiella occidentalis	California linderiella	nonspecific area	Presumed Extant	19930331	None	None
Linderiella occidentalis	California linderiella	nonspecific area	Presumed Extant	20040115	None	None
Linderiella occidentalis	California linderiella	1/5 mile	Presumed Extant	19920402	None	None
Linderiella occidentalis	California linderiella	1/5 mile	Presumed Extant	19920403	None	None
Linderiella occidentalis	California linderiella	specific area	Presumed Extant	199701XX	None	None
Linderiella occidentalis	California linderiella	nonspecific area	Presumed Extant	20040115	None	None
Linderiella occidentalis	California linderiella	nonspecific area	Presumed Extant	19940327	None	None
Linderiella occidentalis	California linderiella	specific area	Presumed Extant	20020315	None	None
Linderiella occidentalis	California linderiella	specific area	Presumed Extant	19960310	None	None
Linderiella occidentalis	California linderiella	nonspecific area	Presumed Extant	19970129	None	None
Linderiella occidentalis	California linderiella	specific area	Presumed Extant	199701XX	None	None
Linderiella occidentalis	California linderiella	nonspecific area	Presumed Extant	19930401	None	None
Linderiella occidentalis	California linderiella	specific area	Presumed Extant	19930202	None	None
Linderiella occidentalis	California linderiella	nonspecific area	Presumed Extant	19960610	None	None
Linderiella occidentalis	California linderiella	nonspecific area	Presumed Extant	19950331	None	None
Linderiella occidentalis	California linderiella	specific area	Presumed Extant	20020131	None	None
Linderiella occidentalis	California linderiella	specific area	Presumed Extant	199701XX	None	None
Linderiella occidentalis	California linderiella	specific area	Presumed Extant	199701XX	None	None
Linderiella occidentalis	California linderiella	specific area	Presumed Extant	20050220	None	None
Linderiella occidentalis	California linderiella	nonspecific area	Presumed Extant	19900317	None	None
Linderiella occidentalis	California linderiella	specific area	Presumed Extant	20050228	None	None
Linderiella occidentalis	California linderiella	nonspecific area	Presumed Extant	19950421	None	None
Linderiella occidentalis	California linderiella	80 meters	Presumed Extant	199701XX	None	None
Linderiella occidentalis	California linderiella	80 meters	Presumed Extant	19920402	None	None
Linderiella occidentalis	California linderiella	80 meters	Presumed Extant	20010328	None	None
Linderiella occidentalis	California linderiella	80 meters	Presumed Extant	19920402	None	None
Linderiella occidentalis	California linderiella	80 meters	Presumed Extant	19920403	None	None
Linderiella occidentalis	California linderiella	80 meters	Presumed Extant	19920402	None	None
Linderiella occidentalis	California linderiella	80 meters	Presumed Extant	19960130	None	None
Linderiella occidentalis	California linderiella	80 meters	Presumed Extant	19900317	None	None
Linderiella occidentalis	California linderiella	specific area	Presumed Extant	1997XXXX	None	None

Linderiella occidentalis	California linderiella	specific area	Presumed Extant	20020220	None	None	
Linderiella occidentalis	California linderiella	specific area	Presumed Extant	199701XX	None	None	
Linderiella occidentalis	California linderiella	nonspecific area	Presumed Extant	19900317	None	None	
Linderiella occidentalis	California linderiella	specific area	Presumed Extant	19960321	None	None	
Linderiella occidentalis	California linderiella	specific area	Presumed Extant	199701XX	None	None	
Linderiella occidentalis	California linderiella	specific area	Presumed Extant	20050407	None	None	
Linderiella occidentalis	California linderiella	specific area	Presumed Extant	20050407	None	None	
Linderiella occidentalis	California linderiella	specific area	Presumed Extant	20050407	None	None	
Navarretia myersii ssp. myer	pincushion navarretia	specific area	Presumed Extant	19940419	None	None	1B.1
Northern Hardpan Vernal Po	Northern Hardpan Vernal Po	specific area	Presumed Extant	198406XX	None	None	
Northern Hardpan Vernal Po	Northern Hardpan Vernal Po	1 mile	Presumed Extant	1983XXXX	None	None	
Northern Hardpan Vernal Po	Northern Hardpan Vernal Po	1 mile	Presumed Extant	1983XXXX	None	None	
Northern Hardpan Vernal Po	Northern Hardpan Vernal Po	1 mile	Presumed Extant	1983XXXX	None	None	
Northern Hardpan Vernal Po	Northern Hardpan Vernal Po	1 mile	Presumed Extant	1983XXXX	None	None	
Northern Hardpan Vernal Po	Northern Hardpan Vernal Po	1 mile	Presumed Extant	1983XXXX	None	None	
Northern Hardpan Vernal Po	Northern Hardpan Vernal Po	1 mile	Presumed Extant	1983XXXX	None	None	
Northern Hardpan Vernal Po	Northern Hardpan Vernal Po	1 mile	Presumed Extant	197608XX	None	None	
Northern Hardpan Vernal Po	Northern Hardpan Vernal Po	1 mile	Presumed Extant	1983XXXX	None	None	
Northern Hardpan Vernal Po	Northern Hardpan Vernal Po	1 mile	Presumed Extant	1983XXXX	None	None	
Northern Hardpan Vernal Po	Northern Hardpan Vernal Po	specific area	Presumed Extant	1983XXXX	None	None	
Northern Hardpan Vernal Po	Northern Hardpan Vernal Po	specific area	Presumed Extant	1983XXXX	None	None	
Northern Hardpan Vernal Po	Northern Hardpan Vernal Po	specific area	Presumed Extant	1983XXXX	None	None	
Northern Hardpan Vernal Po	Northern Hardpan Vernal Po	specific area	Presumed Extant	1983XXXX	None	None	
Northern Hardpan Vernal Po	Northern Hardpan Vernal Po	specific area	Presumed Extant	19880418	None	None	
Northern Hardpan Vernal Po	Northern Hardpan Vernal Po	specific area	Presumed Extant	1983XXXX	None	None	
Northern Hardpan Vernal Po	Northern Hardpan Vernal Po	specific area	Presumed Extant	1983XXXX	None	None	
Northern Hardpan Vernal Po	Northern Hardpan Vernal Po	1/5 mile	Presumed Extant	19870617	None	None	
Northern Hardpan Vernal Po	Northern Hardpan Vernal Po	1/5 mile	Presumed Extant	1983XXXX	None	None	
Northern Hardpan Vernal Po	Northern Hardpan Vernal Po	1/5 mile	Presumed Extant	1983XXXX	None	None	
Northern Hardpan Vernal Po	Northern Hardpan Vernal Po	1/5 mile	Presumed Extant	19800513	None	None	
Northern Hardpan Vernal Po	Northern Hardpan Vernal Po	1/5 mile	Presumed Extant	1983XXXX	None	None	
Orcuttia tenuis	slender orcutt grass	80 meters	Presumed Extant	19930603	Threatened	Endangere	1B.1
Orcuttia tenuis	slender orcutt grass	80 meters	Presumed Extant	19930520	Threatened	Endangere	1B.1
Orcuttia tenuis	slender orcutt grass	specific area	Presumed Extant	20040607	Threatened	Endangere	1B.1

Orcuttia viscida	Sacramento orcutt grass	1/5 mile	Presumed Extant	19980730	Endangere	Endangere	1B.1
Orcuttia viscida	Sacramento orcutt grass	1/5 mile	Extirpated	19860616	Endangere	Endangere	1B.1
Orcuttia viscida	Sacramento orcutt grass	specific area	Presumed Extant	19980727	Endangere	Endangere	1B.1
Orcuttia viscida	Sacramento orcutt grass	specific area	Presumed Extant	19970714	Endangere	Endangere	1B.1
Orcuttia viscida	Sacramento orcutt grass	specific area	Presumed Extant	19950817	Endangere	Endangere	1B.1
Orcuttia viscida	Sacramento orcutt grass	specific area	Presumed Extant	19980728	Endangere	Endangere	1B.1
Orcuttia viscida	Sacramento orcutt grass	80 meters	Presumed Extant	19950712	Endangere	Endangere	1B.1
Orcuttia viscida	Sacramento orcutt grass	80 meters	Presumed Extant	19871019	Endangere	Endangere	1B.1
Orcuttia viscida	Sacramento orcutt grass	80 meters	Presumed Extant	19970616	Endangere	Endangere	1B.1
Phalacrocorax auritus	double-crested cormorant	specific area	Presumed Extant	20050225	None	None	
Riparia riparia	bank swallow	1/5 mile	Presumed Extant	19870522	None	Threatened	
Riparia riparia	bank swallow	specific area	Presumed Extant	19890506	None	Threatened	
Riparia riparia	bank swallow	specific area	Presumed Extant	19900427	None	Threatened	
Riparia riparia	bank swallow	80 meters	Presumed Extant	19950612	None	Threatened	
Sagittaria sanfordii	Sanford's arrowhead	nonspecific area	Presumed Extant	20050519	None	None	1B.2
Sagittaria sanfordii	Sanford's arrowhead	nonspecific area	Possibly Extirpated	199608XX	None	None	1B.2
Sagittaria sanfordii	Sanford's arrowhead	nonspecific area	Presumed Extant	19930819	None	None	1B.2
Sagittaria sanfordii	Sanford's arrowhead	nonspecific area	Possibly Extirpated	199XXXXX	None	None	1B.2
Sagittaria sanfordii	Sanford's arrowhead	specific area	Presumed Extant	19970617	None	None	1B.2
Sagittaria sanfordii	Sanford's arrowhead	nonspecific area	Presumed Extant	19960524	None	None	1B.2
Sagittaria sanfordii	Sanford's arrowhead	specific area	Possibly Extirpated	1993XXXX	None	None	1B.2
Sagittaria sanfordii	Sanford's arrowhead	specific area	Presumed Extant	19970617	None	None	1B.2
Sagittaria sanfordii	Sanford's arrowhead	specific area	Presumed Extant	20040708	None	None	1B.2
Sagittaria sanfordii	Sanford's arrowhead	80 meters	Presumed Extant	20050611	None	None	1B.2
Sagittaria sanfordii	Sanford's arrowhead	80 meters	Presumed Extant	19940529	None	None	1B.2
Sagittaria sanfordii	Sanford's arrowhead	80 meters	Presumed Extant	19930731	None	None	1B.2
Sagittaria sanfordii	Sanford's arrowhead	specific area	Presumed Extant	20020805	None	None	1B.2
Spea hammondii	western spadefoot	nonspecific area	Presumed Extant	19780307	None	None	
Spea hammondii	western spadefoot	1/5 mile	Presumed Extant	199403XX	None	None	
Spea hammondii	western spadefoot	nonspecific area	Presumed Extant	19780305	None	None	
Spea hammondii	western spadefoot	specific area	Presumed Extant	199701XX	None	None	
Spea hammondii	western spadefoot	80 meters	Presumed Extant	20070225	None	None	
Taxidea taxus	American badger	1 mile	Presumed Extant	XXXXXXXX	None	None	
Taxidea taxus	American badger	nonspecific area	Presumed Extant	19910115	None	None	

Taxidea taxus	American badger	1/10 mile	Presumed Extant	19900412	None	None
Valley Needlegrass Grasslanc	Valley Needlegrass Grasslanc	1/5 mile	Presumed Extant	19881209	None	None

APPENDIX M6

Archaeological Report

Individual cultural resources reports may contain confidential information, including locations of sensitive resources.

Please contact the City of Folsom to review these reports

APPENDIX M7

Hazardous Materials Database Search

TRACK ➤ INFO SERVICES, LLC

Environmental FirstSearch™ Report

Target Property:

RANCHO CORDOVA CA 95742

Job Number: 0165-002

PREPARED FOR:

RMC Water and Enviroment

2868 Propect Park Dr. Suite 130

Rancho Cordova, CA 95670

10-13-08

Tel: (866) 664-9981 *Fax: (818) 249-4227*

Environmental FirstSearch
Search Summary Report

Target Site:

RANCHO CORDOVA CA 95742

FirstSearch Summary

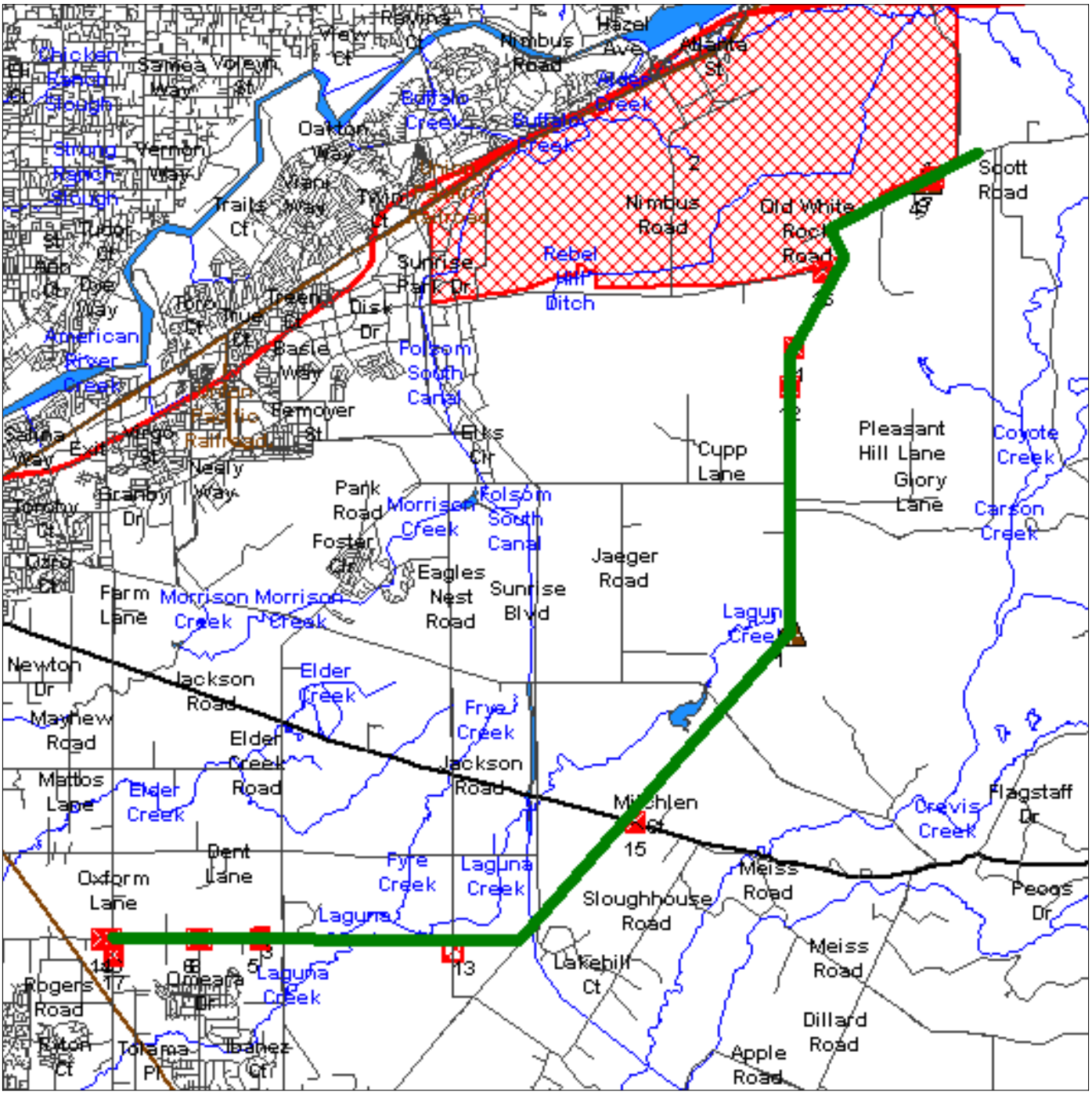
Database	Sel	Updated	Radius	Site	1/8	1/4	1/2	1/2>	ZIP	TOTALS
NPL	Y	07-09-08	0.25	1	0	0	-	-	0	1
NPL Delisted	Y	07-09-08	0.25	0	0	0	-	-	0	0
CERCLIS	Y	07-09-08	0.25	0	0	0	-	-	0	0
NFRAP	Y	07-09-08	0.25	0	0	0	-	-	1	1
RCRA COR ACT	Y	07-03-08	0.25	0	0	0	-	-	0	0
RCRA TSD	Y	07-03-08	0.25	0	0	0	-	-	0	0
RCRA GEN	Y	07-03-08	0.25	0	0	0	-	-	5	5
RCRA NLR	Y	07-03-08	0.12	0	0	-	-	-	0	0
Federal IC / EC	Y	10-01-08	0.25	0	0	0	-	-	0	0
ERNS	Y	07-30-08	0.12	0	1	-	-	-	33	34
Tribal Lands	Y	12-01-05	0.25	0	0	0	-	-	5	5
State/Tribal Sites	Y	10-03-08	0.25	0	0	0	-	-	12	12
State Spills 90	Y	11-06-07	0.12	0	0	-	-	-	5	5
State/Tribal SWL	Y	09-02-08	0.25	1	1	0	-	-	4	6
State/Tribal LUST	Y	04-11-08	0.25	0	1	0	-	-	2	3
State/Tribal UST/AST	Y	07-01-08	0.25	1	0	0	-	-	13	14
State/Tribal EC	Y	NA	0.25	0	0	0	-	-	0	0
State/Tribal IC	Y	09-03-08	0.25	0	0	0	-	-	0	0
State/Tribal VCP	Y	10-03-08	0.25	0	0	0	-	-	0	0
State/Tribal Brownfields	Y	08-08-07	0.25	0	0	0	-	-	0	0
State Permits	Y	04-16-08	0.25	3	2	1	-	-	7	13
State Other	Y	10-03-08	0.25	2	5	1	-	-	88	96
- TOTALS -				8	10	2	0	0	175	195

Environmental FirstSearch

1 Mile Radius from Line

Single Map:

, RANCHO CORDOVA CA 95742



Source: U.S. Census TIGER Files

Linear Search Line .....

Identified Site, Multiple Sites, Receptor .....

NPL, DELNPL, Brownfield, Solid Waste Landfill (SWL), Hazardous Waste

Triballand.....

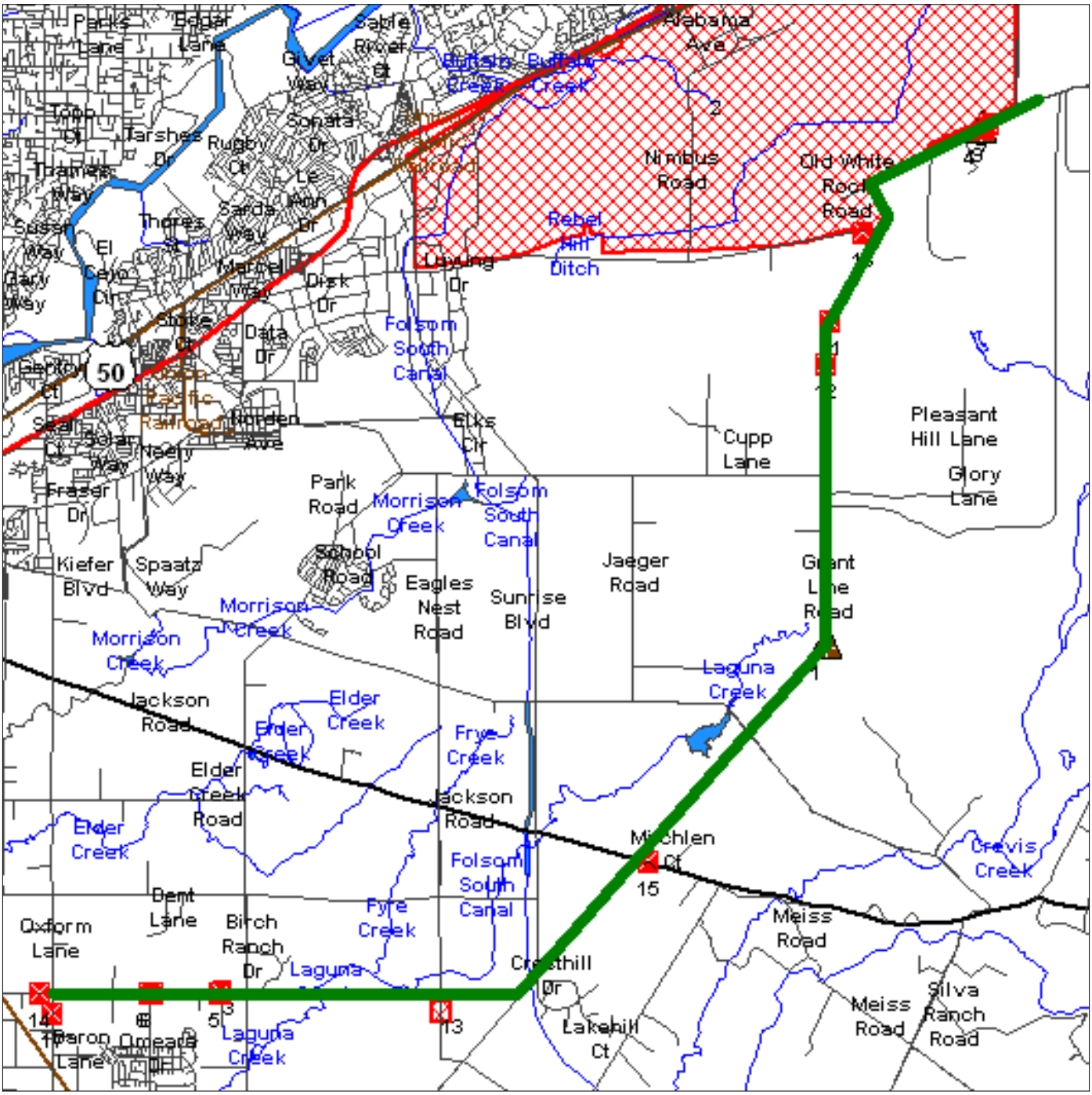
Railroads .....

Environmental FirstSearch

.25 Mile Radius from Line

LINEAR: Multiple Databases

, RANCHO CORDOVA CA 95742



Source: U.S. Census TIGER Files

Linear Search Line .....

Identified Site, Multiple Sites, Receptor .....

NPL, DELNPL, Brownfield, Solid Waste Landfill (SWL), Hazardous Waste

Triballand.....

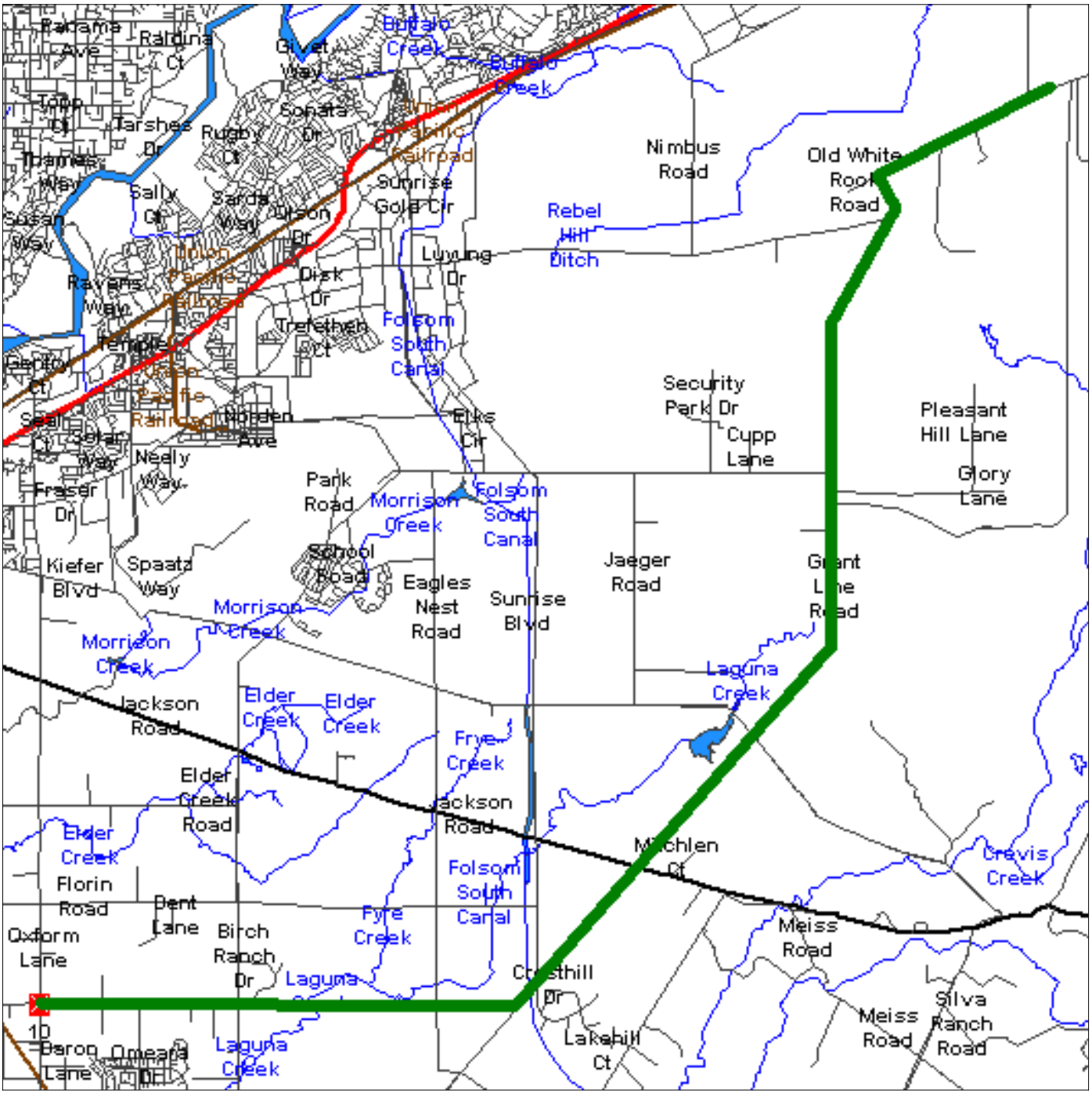
Railroads .....

Environmental FirstSearch

.12 Mile Radius from Line

LINEAR: SPILLS90, ERNS, RCRANLR

, RANCHO CORDOVA CA 95742



Source: U.S. Census TIGER Files

Linear Search Line .....

Identified Site, Multiple Sites, Receptor .....

NPL, DELNPL, Brownfield, Solid Waste Landfill (SWL), Hazardous Waste

Triballand.....

Railroads .....

Environmental FirstSearch
Site Information Report

Request Date:	10-13-08	**Search Type:**	LINEAR
Requestor Name:	RMC Water		16.60 mile(s)
Standard:	LINEAR	**Job Number:**	0165-002

Target Site:

RANCHO CORDOVA CA 95742

Demographics

Sites:	195	**Non-Geocoded:**	175	**Population:**	NA
Radon:	NA				

Site Location

	Degrees (Decimal)	**Degrees (Min/Sec)**		**UTMs**
Longitude:	-121.240655	-121:14:26	**Easting:**	653317.104
Latitude:	38.548705	38:32:55	**Northing:**	4267958.039
			Zone:	10

Comment

Comment:

Additional Requests/Services

Adjacent ZIP Codes: 1 Mile(s)

ZIP Code	City Name	ST	Dist/Dir	Sel
95624	ELK GROVE	CA	0.00 --	Y
95683	SLOUGHHOUSE	CA	0.00 --	Y
95829	SACRAMENTO	CA	0.00 --	Y
95830	SACRAMENTO	CA	0.00 --	Y
95630	FOLSOM	CA	0.02 NW	N

Services:

	Requested?	Date
Sanborns	No	
Aerial Photographs	No	
Historical Topos	No	
City Directories	No	
Title Search/Env Liens	No	
Municipal Reports	No	
Online Topos	No	

Environmental FirstSearch
Sites Summary Report

Target Property: RANCHO CORDOVA CA 95742

JOB: 0165-002

TOTAL: 195 **GEOCODED:** 20 **NON GEOCODED:** 175 **SELECTED:** 0

Page No.	DB Type	Site Name/ID/Status	Address	Dist/Dir	Map ID
1	UST	AMERICAN RIVER ASPHALT INC AST551/AST SWRCB REG.5S	3417 GRANT LINE RD RANCHO CORDOVA CA 95742	0.00 --	1
2	PERMITS	TEICHERT AGGREGATES INC CAL000231531/ACTIVE	3417 GRANTLINE RD RANCHO CORDOVA CA 95742	0.00 --	1
3	NPL	AEROJET GENERAL CORP. CAD980358832/FINAL	HWY US 50 and AEROJET RD RANCHO CORDOVA CA 95670	0.00 --	2
9	SWL	GERBER ROAD LANDFILL SWIS34-AA-0023/CLOSED	10401 GERBER ROAD SACRAMENTO CA 95829	0.00 --	3
10	OTHER	PRAIRIE CITY STATE RECREATION AREA FA0018262/NOT REPORTED	13300 WHITE ROCK RD RANCHO CORDOVA CA 95670	0.00 --	4
11	PERMITS	DPR PRAIRIE CITY SVRA CAL000061569/ACTIVE	13300 WHITE ROCK RD RANCHO CORDOVA CA 95742	0.00 --	4
12	PERMITS	RACECRAFT MOTORSPORTS LLC (PRAIRIE CAL000289124/ACTIVE	13300 WHITE ROCK RD RANCHO CORDOVA CA 95742	0.00 --	4
12	OTHER	B and E SALVAGE FA0010646/NOT REPORTED	10401 GERBER RD SACRAMENTO CA 95829	0.00 --	5
13	LUST	WAYNE SILVA RESIDENCE T0606765457/CASE CLOSED	10141 GERBER ROAD SACRAMENTO CA 95829	0.01 SW	6
14	OTHER	TEICHERT AGGREGATES FA0015421/NOT REPORTED	13333 WHITE ROCK RD RANCHO CORDOVA CA 95742	0.01 SE	7
14	OTHER	WAYNE SILVA RESIDENCE RO0001527/NOT REPORTED	10141 GERBER RD SACRAMENTO CA	0.01 SW	8
15	PERMITS	TEICHERT AGGREGATES/PRAIRIE CITY P CAL000239932/ACTIVE	13333 WHITEROCK RD RANCHO CORDOVA CA 95670	0.01 SE	9
16	ERNS	SANTA FE PACIFIC PIPELINE 320542/FIXED FACILITY	GERBER AND BRADSHAW ROAD SACRAMENTO CA 95829	0.01 SW	10
17	OTHER	TEICHERT AGGREGATES FA0009318/NOT REPORTED	3417 GRANT LINE RD RANCHO CORDOVA CA 95742	0.02 SE	11
18	OTHER	VERIZON WIRELESS GRANT LINE FA0019213/NOT REPORTED	3601 GRANT LINE RD RANCHO CORDOVA CA 95670	0.02 NE	12
19	SWL	MULCH FARM WMUD5A345007001/HISTORICAL	7420 EAGLES NEST RD SACRAMENTO CA 95830	0.07 SW	13
20	OTHER	MOHAN S IRON WORKS FA0009291/NOT REPORTED	9681 GERBER RD SACRAMENTO CA 95829	0.12 SW	14
20	PERMITS	THE DOCTORS INN PET HOSPITAL and B CAL000324844/ACTIVE	12141 JACKSON RD SLOUGHHOUSE CA 95683	0.12 SE	15
21	PERMITS	GR TRUCKING LLC CAL000289890/ACTIVE	12584 WHITE ROCK RD RANCHO CORDOVA CA 95742	0.13 NW	16
21	OTHER	CINGULAR WIRELESS FA0008586/NOT REPORTED	7249 BRADSHAW RD SACRAMENTO CA 95829	0.22 SW	17

Environmental FirstSearch
Sites Summary Report

Target Property: RANCHO CORDOVA CA 95742 **JOB:** 0165-002

TOTAL: 195 **GEOCODED:** 20 **NON GEOCODED:** 175 **SELECTED:** 0

Page No.	DB Type	Site Name/ID/Status	Address	Dist/Dir	Map ID
22	STATE	RANCHO MURIETA ELEMENTARY SCHOOL CAL34000005/NO ACTION - FOR CALM	STONEHOUSE ROAD/ESCUELA DRI RANCHO MURIETA CA 95683	NON GC	
23	STATE	SMUD PCB SUBSTATION SITE 10 CAL34490035/INACTIVE - NEEDS EVA	ELK GROVE-FLORIN ROAD SACRAMENTO CA 95829	NON GC	
24	SPILLS	AEROJET GENERAL CORPORATION - RANC G_SL185992958/NOT REPORTED	AEROJET RD and FOLSOM BLVD RANCHO CORDOVA CA	NON GC	
25	SPILLS	HOME DEPOT - RANCHO CORDOVA G_SLT5S1593198/CASE OPEN	7820 FOLSOM BLVD. RANCHO CORDOVA CA	NON GC	
25	SPILLS	J and G AGROW-TEK G_SLT5S3573731/CASE OPEN	3841-F FITZGERALD RD RANCHO CORDOVA CA 95742	NON GC	
26	STATE	ELEMENTARY SCHOOL NO. 34 CAL34000008/NO FURTHER ACTION	STONE HOUSE ROAD/JACKSON HW RANCHO MURIETA CA 95683	NON GC	
27	SPILLS	SACRAMENTO SAVINGS BANK, SUNRISE I G_SLT5S2493288/CASE OPEN	SITE BOUNDED BY- HWY 50 and RANCHO CORDOVA CA	NON GC	
28	STATE	CRITICALLY OVERCROWED SCHOOL 1 CAL34650005/NO FURTHER ACTION FO	FRANKLIN BLVD./LAGUNA PARK ELK GROVE CA 95624	NON GC	
29	SPILLS	MCDONNELL DOUGLAS/AEROJET INACTIVE G_SL205493018/NOT REPORTED	4000 ACRES BOUNDED BY DOUGL RANCHO CORDOVA CA	NON GC	
30	STATE	WILDHAWK ELEMENTARY SCHOOL 38 CAL34000001/NO ACTION - FOR CALM	WILDHAWK WEST DRIVE/PRAIRIE ELK GROVE CA 95624	NON GC	
31	STATE	PLEASANT GROVE HI/KATHERINE ALBIAN CAL34020002/CERTIFIED	BOND ROAD/BRADSHAW ROAD ELK GROVE CA 95624	NON GC	
32	STATE	HIGH SCHOOL/MIDDLE SCHOOL 7 CAL34010015/NO ACTION - FOR CALM	CALVINE ROAD/AUBERRY DRIVE ELK GROVE CA 95624	NON GC	
33	STATE	ELEMENTARY SCHOOL NO. 42 CAL34010025/NO FURTHER ACTION FO	DOUGLAS ROAD/SUNRISE BOULEV RANCHO CORDOVA CA 95742	NON GC	
34	STATE	EDNA BATEY ELEMENTARY CAL34020001/NO ACTION - FOR CALM	BRADSHAW ROAD/ELK GROVE BOU ELK GROVE CA 95624	NON GC	
35	STATE	CRESLEIGH RANCH 39 CAL34010016/NO ACTION - FOR CALM	ELK GROVE BOULEVARD/FOULKS ELK GROVE CA 95624	NON GC	
36	SWL	AEROJET (LANDFILL) WMUD5A342000003/ACTIVE	DEPT 5784/BLDG 20019 RANCHO CORDOVA CA	NON GC	
38	OTHER	AAA DRIVE SHAFT OF SACRAMENTO FA0012062/NOT REPORTED	11336 SUNCO DR D RANCHO CORDOVA CA 95742	NON GC	
39	STATE	FRANKLIN MEADOWS ELEMENTARY SCHOOL CAL34000002/NO ACTION - FOR CALM	FIRE POPPY DRIVE/BLOSSOM RA ELK GROVE CA 95624	NON GC	
40	PERMITS	WAEGELL RANCH CAL000252268/ACTIVE	7700 EAGLE NEST RD SACRAMENTO CA 95830	NON GC	
41	OTHER	AEROJET BLDG 01037 RO0000143/NOT REPORTED	AEROJET RD RANCHO CORDOVA CA	NON GC	

Environmental FirstSearch
Sites Summary Report

Target Property: RANCHO CORDOVA CA 95742

JOB: 0165-002

TOTAL: 195 **GEOCODED:** 20 **NON GEOCODED:** 175 **SELECTED:** 0

Page No.	DB Type	Site Name/ID/Status	Address	Dist/Dir	Map ID
41	OTHER	AEROJET BLDG 01034 RO0000142/CLOSED	AEROJET RD RANCHO CORDOVA CA	NON GC	
42	OTHER	AEROJET BLDG 01028 RO0000141/CLOSED	AEROJET RD RANCHO CORDOVA CA	NON GC	
42	OTHER	AEROJET BLDG 01022 RO0000140/CLOSED	AEROJET RD RANCHO CORDOVA CA	NON GC	
43	OTHER	AEROJET BLDG 01001 RO0000139/CLOSED	AEROJET RD RANCHO CORDOVA CA	NON GC	
43	OTHER	AEROJET BLDG 00002 RO0000138/CLOSED	AEROJET RD RANCHO CORDOVA CA	NON GC	
44	OTHER	AEROJET - 20025 RO0000159/NOT REPORTED	AEROJET RD RANCHO CORDOVA CA	NON GC	
45	PERMITS	LOPEZ AG SERVICE INC CAL000248640/ACTIVE	6925 EAGLES NEST RD SACRAMENTO CA 95829	NON GC	
46	ERNS	513127/FIXED FACILITY	LEVEL ONE COMMUNICATIONS, 9 RANCHO CORDOVA CA	NON GC	
47	SWL	AEROJET LRC WASTE WATER LAGOON SWIS34-AA-0009/CLOSED	1.5 MI SE NIMBUS DAM RANCHO CORDOVA CA	NON GC	
49	STATE	ELEMENTARY SCHOOL NO 42 CAL34010023/NO ACTION - FOR CALM	DOUGLAS ROAD/SUNRISE BOULEV RANCHO CORDOVA CA 95742	NON GC	
50	PERMITS	UTTERBACK SOD FARM CAL000313881/ACTIVE	12800 MEISS RD SLOUGHHOUSE CA 95683	NON GC	
50	PERMITS	MASTER AUTO REPAIR CAL000278270/ACTIVE	8118 ORCHARD LOOP LN ELK GROVE CA 95624	NON GC	
51	PERMITS	COUNTY OF SACRAMENTO CAL000040494/INACTIVE	BLDG X-21 8521 LAGUNA STA R ELK GROVE CA 95624	NON GC	
52	PERMITS	INTERMOUNTAIN SLURRY CAL000324723/ACTIVE	3811 RECYCLE RD STE 1 RANCHO CORDOVA CA 95742	NON GC	
53	PERMITS	FOLSOM LAKE ASPHALT INC CAL000145242/ACTIVE	2951 A MERCANTILE DRIVE RANCHO CORDOVA CA 95742	NON GC	
54	SWL	WHITE ROCK ROAD LANDFILL - SOUTH SWIS34-CR-5046/CLOSED	S SIDE WHITE ROCK RD 1M W G RANCHO CORDOVA CA	NON GC	
55	SWL	WHITE ROCK ROAD DISPOSAL SITE - NO SWIS34-AA-0012/CLOSED	WHITE ROCK RD and GRANT LIN RANCHO CORDOVA CA	NON GC	
56	OTHER	ADVANCED TRANSMISSIONS FA0009756/NOT REPORTED	2660 MERCANTILE DR E RANCHO CORDOVA CA 95742	NON GC	
57	ERNS	AERO JET 471528/FIXED FACILITY	HWY 50 AT AERO JET RD RANCHO CORDOVA CA	NON GC	
58	ERNS	AMERICAN ENVIRONMENTAL 73638/UNKNOWN	AMERICAN ENVIRONMENTAL RANCHO CORDOVA CA	NON GC	

Environmental FirstSearch
Sites Summary Report

Target Property: RANCHO CORDOVA CA 95742 **JOB:** 0165-002

TOTAL: 195 **GEOCODED:** 20 **NON GEOCODED:** 175 **SELECTED:** 0

Page No.	DB Type	Site Name/ID/Status	Address	Dist/Dir	Map ID
58	ERNS	AEROJET STRATEGIC PROPULSION 73174/UNKNOWN	F AREA (FD) RANCHO CORDOVA CA	NON GC	
59	ERNS	AEROJET PROPULSION DIV. 467206/FIXED FACILITY	HWY 50 AND AEROJET RD RANCHO CORDOVA CA	NON GC	
61	ERNS	AEROJET PROPOLSION DIV. 235051/FIXED FACILITY	HWY 50 AND AEROJET RD RANCHO CORDOVA CA	NON GC	
63	ERNS	AEROJET 634469/FIXED FACILITY	HWY 50 AT HAZEL, BUILDING RANCHO CORDOVA CA	NON GC	
64	ERNS	AEROJET 634988/FIXED FACILITY	HWY 50 AT HAZEL, BUILDING RANCHO CORDOVA CA	NON GC	
65	ERNS	AERO JET PROPULSION DIV 205246/FIXED FACILITY	AERO JET GENERAL HWY 50 AND RANCHO CORDOVA CA	NON GC	
67	ERNS	71559/UNKNOWN	BUSINESS LOCATION RANCHO CORDOVA CA	NON GC	
68	ERNS	AERO JET CO 226418/FIXED FACILITY	AERO JET PROPERTY HWY 50 AN RANCHO CORDOVA CA	NON GC	
70	ERNS	COOK CO 72869/UNKNOWN	COOK CO RANCHO CORDOVA CA	NON GC	
71	ERNS	AERO JET 479498/FIXED FACILITY	HWY 50 AT AERO JET RD RANCHO CORDOVA CA	NON GC	
72	RCRAGN	JB RADIATOR SPECIALTIES INC CAR000191486/LGN	8441 SPECIALTY CIRCLE SACRAMENTO CA 95829	NON GC	
73	RCRAGN	RANCHO MURIETA ASSOCIATION CAD983607839/SGN	6411 STONEHOUSE RD RANCHO MURIETA CA 95683	NON GC	
74	RCRAGN	THE GLIDDEN COMPANY DBA ICI PAINT CAR000179622/LGN	10471 GRANTLINE RD ELK GROVE CA 95624	NON GC	
75	RCRAGN	PACIFIC BELL CAT080017189/SGN	KAMMERER ROAD W/O HIGHWAY 9 ELK GROVE CA 95624	NON GC	
76	RCRAGN	CHEVRON 210285 CAR000163030/LGN	9615 W TARON DR ELK GROVE CA 95624	NON GC	
77	NFRAP	EAGLES NEST PAINT CAD983641051/NFRAP-N	NEAR INTERSEC OF EAGLES NES RANCHO CORDOVA CA 95830	NON GC	
78	ERNS	AERO JET CORP 256874/FIXED FACILITY	INTERSECTION OF HY 50 and H RANCHO CORDOVA CA	NON GC	
80	OTHER	AEROJET BLDG 01062 RO0000146/CLOSED	AEROJET RD RANCHO CORDOVA CA	NON GC	
81	ERNS	UNKNOWN 278060/HIGHWAY RELATED	4900 SUNRISE BLVD SACRAMENTO CA 95830	NON GC	
83	ERNS	UNKNOWN 274813/UNKNOWN (EPA REGIONS	KEIFER RD, WEST OF EAGLE NE SACRAMENTO CA 95830	NON GC	

Environmental FirstSearch
Sites Summary Report

Target Property: RANCHO CORDOVA CA 95742 **JOB:** 0165-002

TOTAL: 195 **GEOCODED:** 20 **NON GEOCODED:** 175 **SELECTED:** 0

Page No.	DB Type	Site Name/ID/Status	Address	Dist/Dir	Map ID
85	ERNS	UNKNOWN 274823/UNKNOWN (EPA REGIONS	EAGLES NEST RD AT KEIFER BL SACRAMENTO CA 95830	NON GC	
87	ERNS	513071/HIGHWAY RELATED	EXCELSIOR ROAD 1/2 MILE N O SACRAMENTO CA 95829	NON GC	
88	ERNS	UNKNOWN DIVE SHOP 448851/FIXED FACILITY	ELK GROVE BLVD BETWEEN WATE ELK GROVE CA 95624	NON GC	
89	ERNS	UNKNOWN 358032/HIGHWAY RELATED	GRANT LINE RD and EAGLES NE ELK GROVE CA 95624	NON GC	
90	ERNS	KINGFORD INC. 178770/FIXED FACILITY	100 WALERMAN RD. CA 95624	NON GC	
91	ERNS	BRADSHAW KINDER MORGAN NRC-827155/MOBILE	RANCHO CORDOVA CA	NON GC	
94	ERNS	465959	EAST SIDE OF BUILDING SEWAR RANCHO CORDOVA CA	NON GC	
95	ERNS	CLC INVESTMENT CORP 262223/FIXED FACILITY	NW CORNER OF GRANT LINE WHI RANCHO CORDOVA CA 95742	NON GC	
97	ERNS	60430/UNKNOWN	CUSTOMER- AMERICAN ENVIRONM RANCHO CORDOVA CA	NON GC	
97	ERNS	UNKNOWN 21673/UNKNOWN	LINCOLN VILLAGE CENTER RANCHO CORDOVA CA	NON GC	
98	ERNS	UNK 109777/UNKNOWN	GOULD and SACRAMENTO RANCHO CORDOVA CA	NON GC	
98	ERNS	UNK 108208/UNKNOWN	NR OLSON DR AND ZINFANDEL S RANCHO CORDOVA CA	NON GC	
99	ERNS	MINI-LUBE 74096/UNKNOWN	MINI-LUBE RANCHO CORDOVA CA	NON GC	
100	ERNS	JACKSON ROAD AND BRADSHAW ROAD NRC-811667/PIPELINE	RANCHO CORDOVA CA	NON GC	
103	ERNS	FOUR PAWS PETS 73637/UNKNOWN	FOUR PAWS PETS RANCHO CORDOVA CA	NON GC	
104	ERNS	UNKNOWN 217665/FIXED FACILITY	EAGLE NEST RD CROSS ST KEIF SACRAMENTO CA 95830	NON GC	
106	ERNS	GOERGIA PACIFIC 475390/UNKNOWN (NRC)	1099 E. STOCKTON BLVD ELK GROVE CA 95624	NON GC	
107	OTHER	PWA: SEASONS DR WELL SITE(W41) FA0010154/NOT REPORTED	SEASONS DR/BRUCEVILLE RD ELK GROVE CA 95624	NON GC	
107	OTHER	VERIZON WIRELESS FA0019436/NOT REPORTED	15731 JACKSON HWY RANCHO MURIETA CA 95683	NON GC	
107	OTHER	SAN JOAQUIN HELICOPTERS FA0017384/NOT REPORTED	7443 MURIETA DR HANG A RANCHO MURIETA CA 95683	NON GC	

Environmental FirstSearch
Sites Summary Report

Target Property: RANCHO CORDOVA CA 95742

JOB: 0165-002

TOTAL: 195 **GEOCODED:** 20 **NON GEOCODED:** 175 **SELECTED:** 0

Page No.	DB Type	Site Name/ID/Status	Address	Dist/Dir	Map ID
108	OTHER	RMCSD: RIO OSO WATER TANK FA0010059/NOT REPORTED	RIO OSO DR/3 PARK SLOUGHHOUSE CA 95683	NON GC	
108	OTHER	RANCHO MURIETA CSD: VAN VLECK FA0009422/NOT REPORTED	HWY 16/VAN VLECK REC RD SLOUGHHOUSE CA 95683	NON GC	
108	OTHER	RANCHO MURIETA ASSOC (MAINT) FA0010255/NOT REPORTED	6411 STONE HOUSE RD SLOUGHHOUSE CA 95683	NON GC	
109	OTHER	OPERATING ENGINEERS LOCAL 3 FA0015170/NOT REPORTED	JACKSON RD RANCHO MURIETA CA 95683	NON GC	
110	OTHER	ELEMENTARY SCHOOL NO. 34 CAL34000008/NO FURTHER ACTION	STONE HOUSE ROAD/JACKSON HW RANCHO MURIETA CA 95683	NON GC	
112	OTHER	SURVEY ROAD WELL (W-28) FA0018977/NOT REPORTED	SW GRANT LINE RD ELK GROVE CA 95624	NON GC	
112	OTHER	SPRINT FA0010385/NOT REPORTED	TWIN CITIES RD/FRANKLIN BLV ELK GROVE CA 95624	NON GC	
112	OTHER	CITIZENS TELECOM CO OF CA INC FA0009538/NOT REPORTED	6301 LAGUNA BLVD ELK GROVE CA 95624	NON GC	
113	OTHER	PWA: SOARING OAKS WELL (W49) FA0010528/NOT REPORTED	WYMARK BL/SOARING OAKS DR ELK GROVE CA 95624	NON GC	
113	OTHER	PWA: ANDALUSIAN DR WELL (W62) FA0008355/NOT REPORTED	ANDALUSIAN DR/DRESSAGE WAY SACRAMENTO CA 95829	NON GC	
113	OTHER	PWA: KILCONNEL WELL SITE (W44) FA0009510/NOT REPORTED	KILCONNEL DR/BRUCEVILLE RD ELK GROVE CA 95624	NON GC	
114	OTHER	PWA: FEATHER CREEK WELL (W47) FA0008977/NOT REPORTED	FEATHER CREEK/OLD CREEK ELK GROVE CA 95624	NON GC	
114	OTHER	PWA: BIG HORN SOUTH WELL (W50) FA0008879/NOT REPORTED	ELK GROVE BL/BIG HORN BLVD ELK GROVE CA 95624	NON GC	
114	OTHER	PWA: BIG HORN NORTH WELL (W52) FA0008616/NOT REPORTED	BRUCEVILLE RD/BIG HORN BLVD ELK GROVE CA 95624	NON GC	
115	OTHER	PWA: BIG HORN CENTRAL WELL(W51) FA0009541/NOT REPORTED	LAGUNA BL/BIG HORN BLVD ELK GROVE CA 95624	NON GC	
115	OTHER	MCI WORLDCOM FA0010189/NOT REPORTED	4004 SIMS RD ELK GROVE CA 95624	NON GC	
115	OTHER	MASTER AUTO REPAIR FA0019626/NOT REPORTED	8118 ORCHARD LOOP LN ELK GROVE CA 95624	NON GC	
116	OTHER	FINISHLINE RACING EQUIPMENT FA0013290/NOT REPORTED	10535 E STOCKTON BLVD E ELK GROVE CA 95624	NON GC	
116	OTHER	ELK GROVE WATER SERVICE WELL 10 FA0008875/NOT REPORTED	9351 FEICKERT (SIDE) DR ELK GROVE CA 95624	NON GC	
117	OTHER	AEROJET BLDG 01056 RO0000144/CLOSED	AEROJET RD RANCHO CORDOVA CA	NON GC	

Environmental FirstSearch
Sites Summary Report

Target Property: RANCHO CORDOVA CA 95742

JOB: 0165-002

TOTAL: 195 **GEOCODED:** 20 **NON GEOCODED:** 175 **SELECTED:** 0

Page No.	DB Type	Site Name/ID/Status	Address	Dist/Dir	Map ID
117	OTHER	PWA: WF-1 CALVINE MEADOWS WATER TX FA0017717/NOT REPORTED	10140 CALVINE RD ELK GROVE CA 95624	NON GC	
118	UST	FIRE STATION 58 (AMERICAN TISID-STATE7445/INACTIVE	7520 SLOUGHHOUSE SLOUGHHOUSE CA 95683	NON GC	
119	TRIBALLAND	BUREAU OF INDIAN AFFAIRS CONTACT I BIA-95829	UNKNOWN CA 95829	NON GC	
119	TRIBALLAND	BUREAU OF INDIAN AFFAIRS CONTACT I BIA-95683	UNKNOWN CA 95683	NON GC	
120	TRIBALLAND	BUREAU OF INDIAN AFFAIRS CONTACT I BIA-95624	UNKNOWN CA 95624	NON GC	
120	TRIBALLAND	BUREAU OF INDIAN AFFAIRS CONTACT I BIA-95742	UNKNOWN CA 95742	NON GC	
121	LUST	RANCHO SECO T0606700756/CASE CLOSED	RANCHO SECO PARK HERALD CA 95683	NON GC	
122	LUST	FAA REMOTE REPEATER T0606700624/CASE CLOSED	RODGERS RD ELK GROVE CA 95624	NON GC	
123	UST	SACRAMENTO RENDERING CO. TISID-STATE38297/ACTIVE	0 KIEFER BLVD SACRAMENTO CA 95830	NON GC	
124	UST	WESTERBERG LIVESTOCK INC. TISID-STATE37763/ACTIVE	0 MIESS RD SLOUGHHOUSE CA 95683	NON GC	
125	UST	WATER STORAGE TANK/RIO OSO TISID-STATE37236/ACTIVE	0 RIO OSO DR and 3 PARK RANCHO MURIETA CA 95683	NON GC	
126	UST	TOM TANNER TISID-STATE37640/ACTIVE	11935 CRESTHILL SLOUGHHOUSE CA 95683	NON GC	
127	OTHER	VERIZON WIRELESS FA0018043/NOT REPORTED	6307 STONE HOUSE RD RANCHO MURIETA CA 95683	NON GC	
127	UST	ROONEY BROTHERS INC. TISID-STATE37613/ACTIVE	7513 SLOUGHHOUSE SLOUGHHOUSE CA 95683	NON GC	
128	OTHER	HYDRA WAREHOUSING FA0010466/NOT REPORTED	6300 S WATT AVE SACRAMENTO CA 95829	NON GC	
128	UST	WALT DAVIS CHEVROLET TISID-STATE37485/ACTIVE	9501 99 ELK GROVE CA 95624	NON GC	
129	UST	SHELL SERVICE STATION TISID-STATE37700/ACTIVE	0 EMERALD VISTA/ELK GR BLVD ELK GROVE CA 95624	NON GC	
130	UST	QSL - RMLR TISID-STATE38191/ACTIVE	0 ELK GROVE ELK GROVE CA 95624	NON GC	
131	UST	ELK GROVE WATER WORKS-MAINT. D TISID-STATE37868/ACTIVE	9086 REAR ELK GROVE ELK GROVE CA 95624	NON GC	
132	UST	ELK GROVE RADIO RELAY TISID-STATE38254/ACTIVE	5925 LAS POSITAS ELK GROVE CA 95624	NON GC	

Environmental FirstSearch
Sites Summary Report

Target Property: RANCHO CORDOVA CA 95742

JOB: 0165-002

TOTAL: 195 **GEOCODED:** 20 **NON GEOCODED:** 175 **SELECTED:** 0

Page No.	DB Type	Site Name/ID/Status	Address	Dist/Dir	Map ID
133	UST	ANTHONY SOUZA TISID-STATE37744/ACTIVE	0 STOCKTON BLVD W. FRON ELK GROVE CA 95624	NON GC	
134	OTHER	VERIZON WIRELESS FA0018044/NOT REPORTED	7409 SUNRISE BLVD SACRAMENTO CA 95830	NON GC	
134	OTHER	PWA: SHELDON WATER WELL (W65) FA0010164/NOT REPORTED	SHELDON RD/SHORTLINE RD SACRAMENTO CA 95829	NON GC	
134	OTHER	PWA: EQUINE DR WELL SITE (W63) FA0008931/NOT REPORTED	EQUINE DR/POLO CROSSE AVE SACRAMENTO CA 95829	NON GC	
135	OTHER	CITIZENS TELECOM CO OF CA INC FA0008880/NOT REPORTED	8224 ELK GROVE FLORIN RD ELK GROVE CA 95624	NON GC	
135	UST	SACRAMENTO COUNTY BOYS RANCH TISID-STATE37924/ACTIVE	0 STAR RT BOX SLOUGHHOUSE CA 95683	NON GC	
136	OTHER	AEROJET BLDG 48021 RO0000157/CLOSED	AEROJET RD RANCHO CORDOVA CA	NON GC	
136	OTHER	CORDOVA RENTALS RO0000495/CLOSED	10077 FOLSOM BLVD RANCHO CORDOVA CA	NON GC	
137	OTHER	CEDAR ROOF CARE FA0010306/NOT REPORTED	11295 SUNRISE GOLD CIR E RANCHO CORDOVA CA 95742	NON GC	
137	OTHER	BEST BUY POOL SUPPLY LLC FA0018795/NOT REPORTED	11285 SUNRISE GOLD CIR E RANCHO CORDOVA CA 95742	NON GC	
137	OTHER	BARRY PAULSEN BOAT FA0009741/NOT REPORTED	2419 MERCANTILE DR E RANCHO CORDOVA CA 95742	NON GC	
138	OTHER	AURA HARDWOOD LUMBER FA0013614/NOT REPORTED	2477 MERCANTILE DR E RANCHO CORDOVA CA 95742	NON GC	
138	OTHER	ASH MARBLE and GRANITE-TOPS INC FA0018801/NOT REPORTED	11300 TRADE CENTER DR E RANCHO CORDOVA CA 95742	NON GC	
138	OTHER	ARDEN CORDOVA WATER SVCE (SCIBS) FA0015228/NOT REPORTED	11200 COLOMA RD RANCHO CORDOVA CA 95742	NON GC	
139	OTHER	ALLEN IMPORTS FA0018723/NOT REPORTED	11300 SUNRISE GOLD CIR C RANCHO CORDOVA CA 95742	NON GC	
139	OTHER	AEROJET TANK 20019 RO0000158/CLOSED	AEROJET RD RANCHO CORDOVA CA	NON GC	
140	OTHER	ELK GROVE FA0013039/NOT REPORTED	MILE POST 122,9 ELK GROVE CA 95624	NON GC	
141	OTHER	AEROJET FINE CHEMICALS FA0014181/NOT REPORTED	HWY 50/AEROJET RD RANCHO CORDOVA CA 95742	NON GC	
142	OTHER	G.S.V. DISMANTLER FA0018118/NOT REPORTED	3383 FITZGERALD ST E RANCHO CORDOVA CA 95742	NON GC	
142	OTHER	AEROJET BLDG 20009 RO0000155/CLOSED	AEROJET RD RANCHO CORDOVA CA	NON GC	

Environmental FirstSearch
Sites Summary Report

Target Property: RANCHO CORDOVA CA 95742 **JOB:** 0165-002

TOTAL: 195 **GEOCODED:** 20 **NON GEOCODED:** 175 **SELECTED:** 0

Page No.	DB Type	Site Name/ID/Status	Address	Dist/Dir	Map ID
143	OTHER	AEROJET BLDG 20001 RO0000154/NOT REPORTED	AEROJET RD RANCHO CORDOVA CA	NON GC	
143	OTHER	AEROJET BLDG 05068 RO0000153/CLOSED	AEROJET RD RANCHO CORDOVA CA	NON GC	
144	OTHER	AEROJET BLDG 05026 RO0000152/CLOSED	AEROJET RD RANCHO CORDOVA CA	NON GC	
144	OTHER	AEROJET BLDG 04090 RO0000151/CLOSED	AEROJET RD RANCHO CORDOVA CA	NON GC	
145	OTHER	AEROJET BLDG 04068 RO0000150/CLOSED	AEROJET RD RANCHO CORDOVA CA	NON GC	
145	OTHER	AEROJET BLDG 04045 RO0000149/CLOSED	AEROJET RD RANCHO CORDOVA CA	NON GC	
146	OTHER	AEROJET BLDG 01096 RO0000148/CLOSED	AEROJET RD RANCHO CORDOVA CA	NON GC	
146	OTHER	AEROJET BLDG 01086 RO0000147/CLOSED	AEROJET RD RANCHO CORDOVA CA	NON GC	
147	TRIBALLAND	BUREAU OF INDIAN AFFAIRS CONTACT I BIA-95830	UNKNOWN CA 95830	NON GC	
148	OTHER	AEROJET MISSILE AND SPACE PROP PLN FA0009425/NOT REPORTED	HWY 50/AEROJET RD RANCHO CORDOVA CA 95742	NON GC	
149	OTHER	SISLER and SISLER CONSTRUCTION FA0018573/NOT REPORTED	11385 SUNRISE BLVD 100 RANCHO CORDOVA CA 95742	NON GC	
149	OTHER	CINGULAR WIRELESS FA0009487/NOT REPORTED	8780 KAMMERER RD ELK GROVE CA 95624	NON GC	
149	OTHER	CALVINE 76 009 FA0013943/NOT REPORTED	8010 ORCHARD LOOP LN ELK GROVE CA 95624	NON GC	
150	OTHER	BIG O TIRES FA0013082/NOT REPORTED	8022 ORCHARD LOOP LN ELK GROVE CA 95624	NON GC	
150	OTHER	AT and T CORP FA0009160/NOT REPORTED	FRANKLIN BLVD/LAMBERT RD ELK GROVE CA 95624	NON GC	
150	OTHER	ARCO 5696 FA0002704/NOT REPORTED	9215 ELK GROVE FLORIN RD E ELK GROVE CA 95624	NON GC	
151	OTHER	NCLRCA251/NOT REPORTED	10418 S WHITE ROCK RD APT A RANCHO CORDOVA CA	NON GC	
151	OTHER	NCLRCA544/NOT REPORTED	10855 SEGOVIA WAY RANCHO CORDOVA CA	NON GC	
151	OTHER	ULTIMATE WATER SPORTS FA0018646/NOT REPORTED	2421 MERCANTILE DR D RANCHO CORDOVA CA 95742	NON GC	
152	OTHER	TRUEGREEN CHEMLAWN FA0010309/NOT REPORTED	11335 SUNRISE GOLD CIR C RANCHO CORDOVA CA 95742	NON GC	

Environmental FirstSearch
Sites Summary Report

Target Property: RANCHO CORDOVA CA 95742 **JOB:** 0165-002

TOTAL: 195 **GEOCODED:** 20 **NON GEOCODED:** 175 **SELECTED:** 0

Page No.	DB Type	Site Name/ID/Status	Address	Dist/Dir	Map ID
152	OTHER	SUNRISE TRACTOR FA0008913/NOT REPORTED	11428 ELKS CIR C RANCHO CORDOVA CA 95742	NON GC	
152	OTHER	DYNA-CYCLE FA0018265/NOT REPORTED	11525 AEROTEC CT RANCHO CORDOVA CA 95742	NON GC	
153	OTHER	SMEDING PERFORMANCE FA0012068/NOT REPORTED	3340 SUNRISE BLVD E RANCHO CORDOVA CA 95742	NON GC	
153	OTHER	FIRE STATION 62 RO0001369/NOT REPORTED	3646 BRADSHAW RD RANCHO CORDOVA CA	NON GC	
154	OTHER	SIERRA PACIFIC HOME and COMFORT FA0014872/NOT REPORTED	2550 MERCANTILE DR D RANCHO CORDOVA CA 95742	NON GC	
154	OTHER	SBC (UC70R) FA0009751/NOT REPORTED	2590 MERCANTILE DR M RANCHO CORDOVA CA 95742	NON GC	
154	OTHER	QUALITY DISCOUNT FRAME CO FA0009746/NOT REPORTED	2539 MERCANTILE DR D RANCHO CORDOVA CA 95742	NON GC	
155	OTHER	PENCOM FA0010310/NOT REPORTED	11353 SUNRISE GOLD CIR G RANCHO CORDOVA CA 95742	NON GC	
155	OTHER	KIEWIT PACIFIC FA0016529/NOT REPORTED	SUNRISE/DOUGLAS RANCHO CORDOVA CA 95742	NON GC	
155	OTHER	KELLY-MOORE PAINT CO INC FA0018135/NOT REPORTED	3068 SUNRISE BLVD B RANCHO CORDOVA CA 95742	NON GC	
156	OTHER	IRCTS WNN GROUNDWATER REMEDIATION FA0017375/NOT REPORTED	SUNRISE BLVD RANCHO CORDOVA CA 95742	NON GC	
156	OTHER	INTEGRATED PLASTICS FA0018943/NOT REPORTED	12167 FOLSOM BLVD B RANCHO CORDOVA CA 95742	NON GC	
156	OTHER	HI TECH FABRICATION FA0014937/NOT REPORTED	2530 MERCANTILE DR E RANCHO CORDOVA CA 95742	NON GC	
157	OTHER	AEROJET BLDG 01058 RO0000145/CLOSED	AEROJET RD RANCHO CORDOVA CA	NON GC	
157	OTHER	STONEPLUS FA0018649/NOT REPORTED	2431 MERCANTILE DR D RANCHO CORDOVA CA 95742	NON GC	

TRACK ➤ INFO SERVICES, LLC

Environmental FirstSearch™ Report

Target Property:

RANCHO CORDOVA CA 95742

Job Number: 0165-002

PREPARED FOR:

RMC Water and Enviroment

2868 Propect Park Dr. Suite 130

Rancho Cordova, CA 95670

10-13-08

Tel: (866) 664-9981 *Fax: (818) 249-4227*

Environmental FirstSearch
Search Summary Report

Target Site:

RANCHO CORDOVA CA 95742

FirstSearch Summary

Database	Sel	Updated	Radius	Site	1/8	1/4	1/2	1/2>	ZIP	TOTALS
NPL	Y	07-09-08	0.25	1	0	0	-	-	0	1
NPL Delisted	Y	07-09-08	0.25	0	0	0	-	-	0	0
CERCLIS	Y	07-09-08	0.25	0	0	0	-	-	0	0
NFRAP	Y	07-09-08	0.25	0	2	0	-	-	1	3
RCRA COR ACT	Y	07-03-08	0.25	0	1	0	-	-	1	2
RCRA TSD	Y	07-03-08	0.25	0	1	0	-	-	1	2
RCRA GEN	Y	07-03-08	0.25	0	6	2	-	-	8	16
RCRA NLR	Y	07-03-08	0.12	0	0	-	-	-	0	0
Federal IC / EC	Y	10-01-08	0.25	0	0	0	-	-	2	2
ERNS	Y	07-30-08	0.12	0	2	-	-	-	35	37
Tribal Lands	Y	12-01-05	0.25	0	0	0	-	-	5	5
State/Tribal Sites	Y	10-03-08	0.25	0	1	0	-	-	11	12
State Spills 90	Y	11-06-07	0.12	0	0	-	-	-	5	5
State/Tribal SWL	Y	09-02-08	0.25	1	0	0	-	-	6	7
State/Tribal LUST	Y	04-11-08	0.25	0	0	1	-	-	50	51
State/Tribal UST/AST	Y	07-01-08	0.25	0	5	1	-	-	13	19
State/Tribal EC	Y	NA	0.25	0	0	0	-	-	0	0
State/Tribal IC	Y	09-03-08	0.25	0	1	0	-	-	1	2
State/Tribal VCP	Y	10-03-08	0.25	0	0	0	-	-	0	0
State/Tribal Brownfields	Y	08-08-07	0.25	0	0	0	-	-	0	0
State Permits	Y	04-16-08	0.25	0	8	6	-	-	11	25
State Other	Y	10-03-08	0.25	1	12	9	-	-	91	113
- TOTALS -				3	39	19	0	0	241	302

Notice of Disclaimer

Due to the limitations, constraints, inaccuracies and incompleteness of government information and computer mapping data currently available to TRACK Info Services, certain conventions have been utilized in preparing the locations of all federal, state and local agency sites residing in TRACK Info Services's databases. All EPA NPL and state landfill sites are depicted by a rectangle approximating their location and size. The boundaries of the rectangles represent the eastern and western most longitudes; the northern and southern most latitudes. As such, the mapped areas may exceed the actual areas and do not represent the actual boundaries of these properties. All other sites are depicted by a point representing their approximate address location and make no attempt to represent the actual areas of the associated property. Actual boundaries and locations of individual properties can be found in the files residing at the agency responsible for such information.

Waiver of Liability

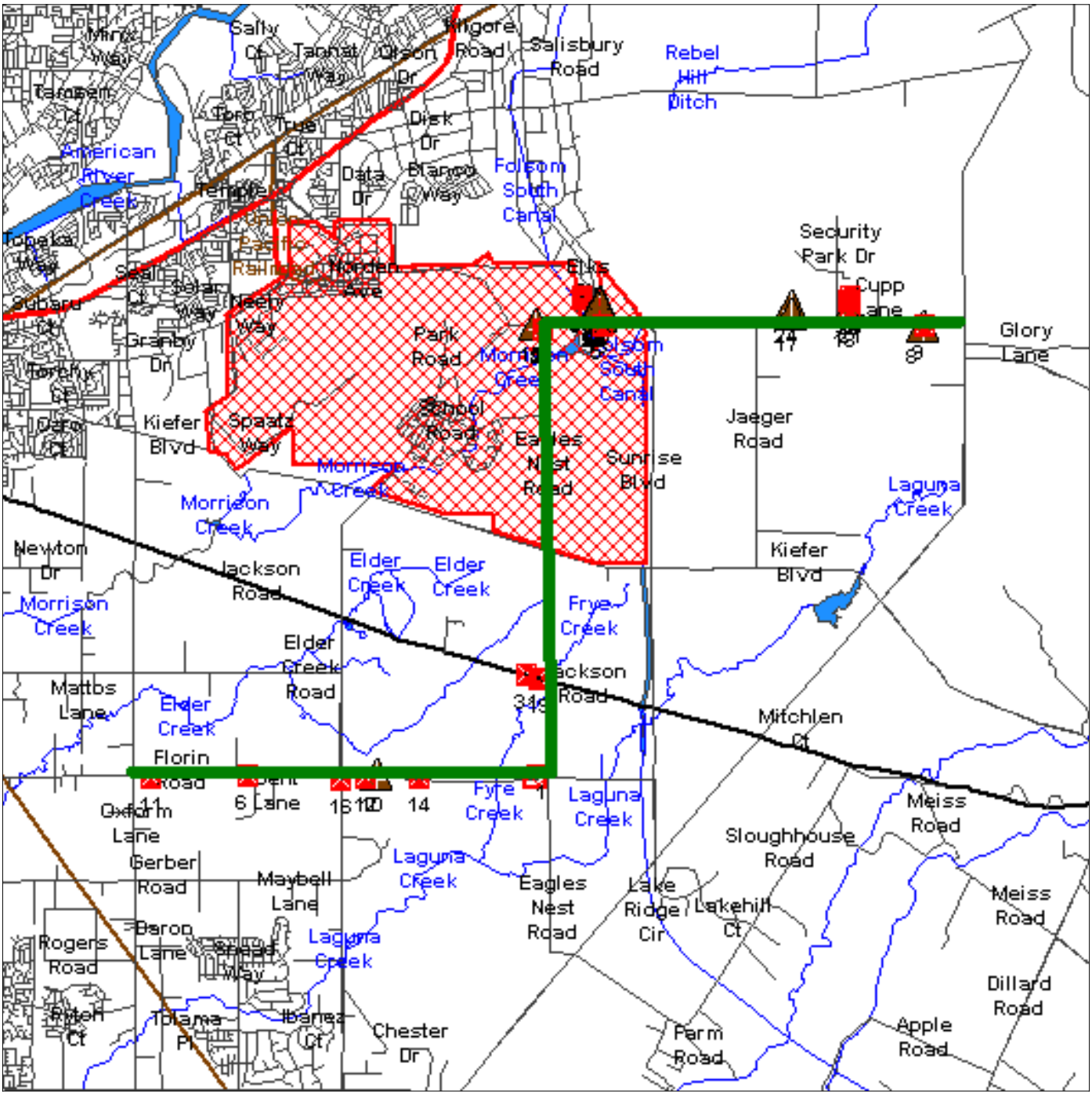
Although TRACK Info Services uses its best efforts to research the actual location of each site, TRACK Info Services does not and can not warrant the accuracy of these sites with regard to exact location and size. All authorized users of TRACK Info Services's services proceeding are signifying an understanding of TRACK Info Services's searching and mapping conventions, and agree to waive any and all liability claims associated with search and map results showing incomplete and or inaccurate site locations.

Environmental FirstSearch

1 Mile Radius from Line

Single Map:

, RANCHO CORDOVA CA 95742



Source: U.S. Census TIGER Files

Linear Search Line .....

Identified Site, Multiple Sites, Receptor .....

NPL, DELNPL, Brownfield, Solid Waste Landfill (SWL), Hazardous Waste

Triballand.....

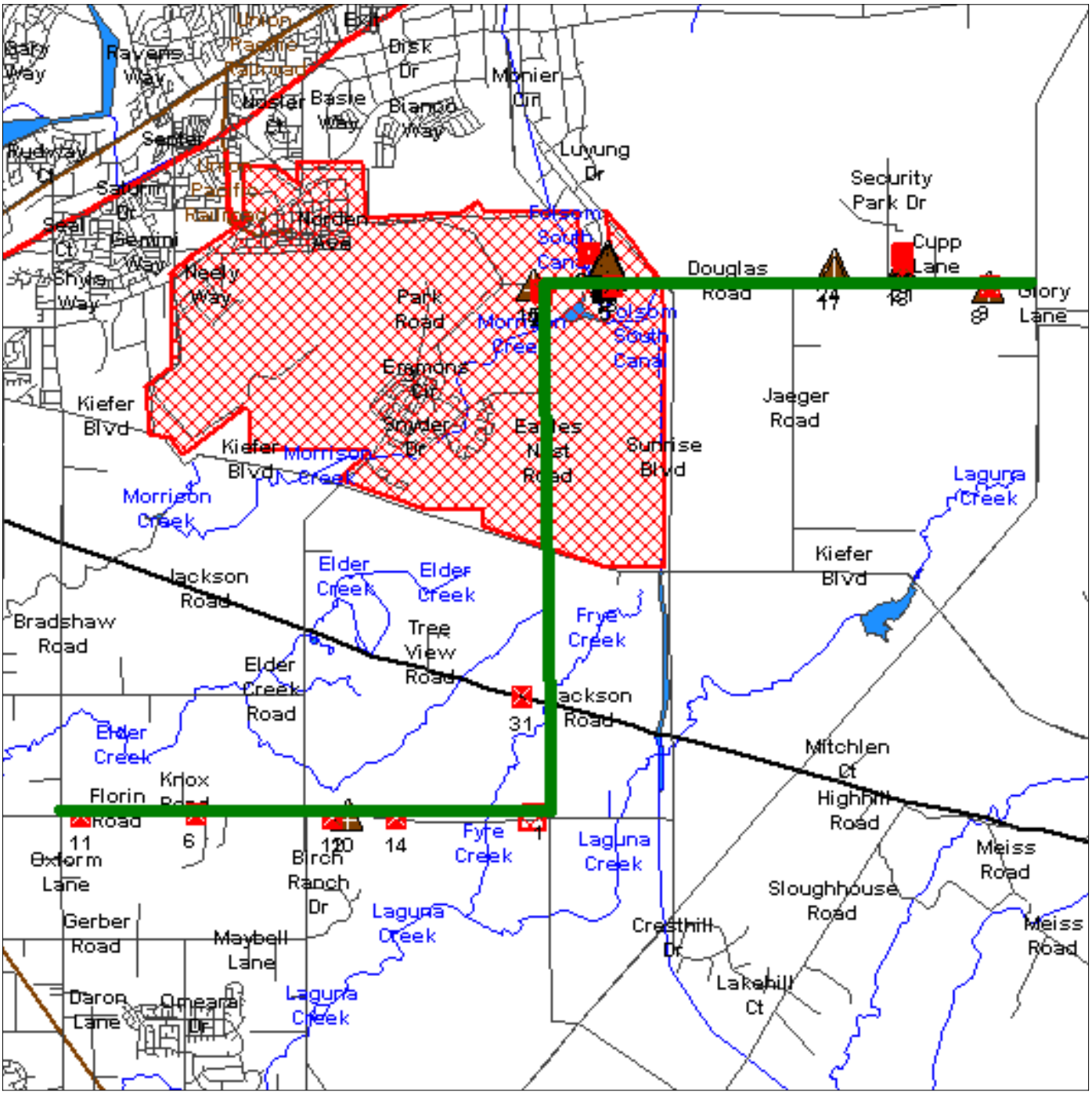
Railroads .....

Environmental FirstSearch

.25 Mile Radius from Line

LINEAR: Multiple Databases

, RANCHO CORDOVA CA 95742



Source: U.S. Census TIGER Files

Linear Search Line .....

Identified Site, Multiple Sites, Receptor .....

NPL, DELNPL, Brownfield, Solid Waste Landfill (SWL), Hazardous Waste

Triballand.....

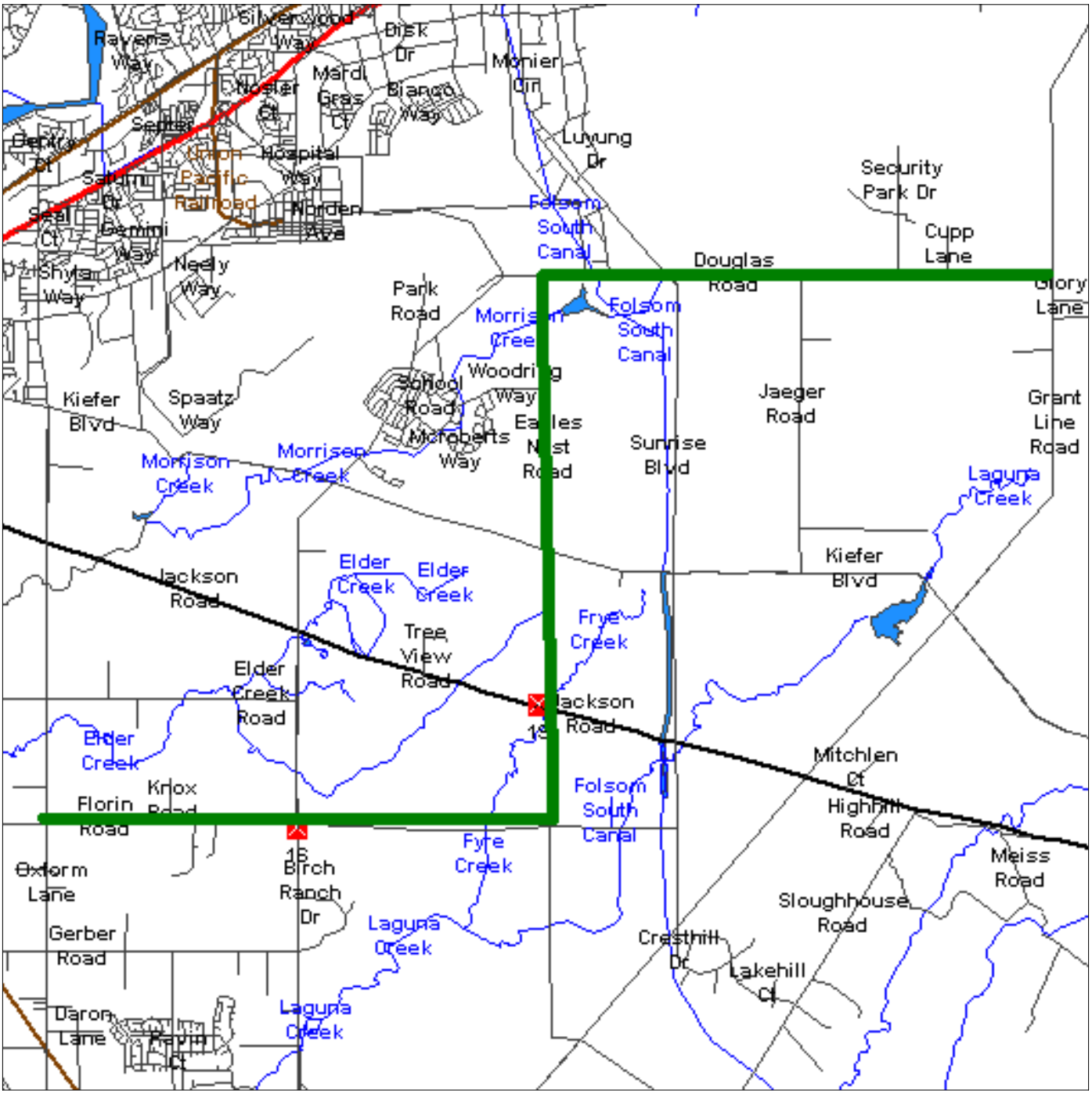
Railroads .....

Environmental FirstSearch

.12 Mile Radius from Line

LINEAR: SPILLS90, ERNS, RCRANLR

, RANCHO CORDOVA CA 95742



Source: U.S. Census TIGER Files

Linear Search Line .....

Identified Site, Multiple Sites, Receptor .....

NPL, DELNPL, Brownfield, Solid Waste Landfill (SWL), Hazardous Waste

Triballand.....

Railroads .....

Environmental FirstSearch
Site Information Report

Request Date:	10-13-08	**Search Type:**	LINEAR
Requestor Name:	RMC Water		12.42 mile(s)
Standard:	LINEAR	**Job Number:**	0165-002

Target Site:

RANCHO CORDOVA CA 95742

Demographics

Sites:	302	**Non-Geocoded:**	241	**Population:**	NA
Radon:	NA				

Site Location

	Degrees (Decimal)	**Degrees (Min/Sec)**		**UTMs**
Longitude:	-121.261594	-121:15:42	**Easting:**	651534.655
Latitude:	38.528502	38:31:43	**Northing:**	4265681.358
			Zone:	10

Comment

Comment:

Additional Requests/Services

Adjacent ZIP Codes: 0.25 Mile(s)

ZIP Code	City Name	ST	Dist/Dir	Sel
95624	ELK GROVE	CA	0.00 --	Y
95655	MATHER	CA	0.00 --	Y
95829	SACRAMENTO	CA	0.00 --	Y
95830	SACRAMENTO	CA	0.00 --	Y

Services:

	Requested?	Date
Sanborns	No	
Aerial Photographs	No	
Historical Topos	No	
City Directories	No	
Title Search/Env Liens	No	
Municipal Reports	No	
Online Topos	No	

Environmental FirstSearch
Sites Summary Report

Target Property: RANCHO CORDOVA CA 95742

JOB: 0165-002

TOTAL: 302 **GEOCODED:** 61 **NON GEOCODED:** 241 **SELECTED:** 0

Page No.	DB Type	Site Name/ID/Status	Address	Dist/Dir	Map ID
1	SWL	LOPEZ AG SERVICE, INC. SWIS34-AA-0203/ACTIVE	FLORIN ROAD and EAGLES NEST SACRAMENTO CA 95829	0.00 --	1
2	OTHER	MATHER GOLF COURSE FA0010597/NOT REPORTED	4103 EAGLES NEST RD MATHER AFB CA 95655	0.00 --	2
3	NPL	MATHER AIR FORCE BASE (ACandW DISP CA8570024143/FINAL	MATHER AIR FORCE BASE SACRAMENTO CA 95655	0.00 --	3
11	PERMITS	MATHER GOLF COURSE CAL000129958/ACTIVE	4103 EAGLES NEST ROAD MATHER CA 95655	0.01 SW	4
12	OTHER	RANCHO MARINE RECYCLING FA0015210/NOT REPORTED	3761 RECYCLE RD RANCHO CORDOVA CA 95742	0.02 SE	5
12	PERMITS	VINEYARD SURFACE WATER TREATMENT P CAL000330485/ACTIVE	10151 FLORIN RD SACRAMENTO CA 95829	0.03 SW	6
13	RCRAGN	INDEPENDENT DIESEL REPAIR CAR000077693/SGN	3780 RECYCLE RD STE 2 RANCHO CORDOVA CA 95742	0.03 NW	7
14	OTHER	MCDONNELL DOUGLAS - INACTIVE TEST DR_34370069/ACTIVE	11505 DOUGLAS RD RANCHO CORDOVA CA 95742	0.04 SE	8
15	RCRAGN	AMERICAN WASTE CONTAINER SERV INC CAD067825364/TR	11505 DOUGLAS RD RANCHO CORDOVA CA 95670	0.04 SE	8
16	UST	AEROJET INVESTMENTS, LTD. TISID-STATE37886/ACTIVE	11505 DOUGLAS RANCHO CORDOVA CA 95742	0.04 SE	8
17	NFRAP	AMERICAN WASTE CONTAINER SERV INC CAD067825364/NFRAP-N	11505 DOUGLAS RD RANCHO CORDOVA CA 95742	0.04 SE	8
18	STATE	MCDONNELL DOUGLAS - INACTIVE TEST CAL34370069/ACTIVE	11505 DOUGLAS RD RANCHO CORDOVA CA 95670	0.04 SE	8
29	INSTCONTROL	MCDONNELL DOUGLAS - INACTIVE TEST DR_34370069/ACTIVE	11505 DOUGLAS RD RANCHO CORDOVA CA 95742	0.04 SE	8
30	NFRAP	E-Z PRODUCTS CAD980694293/NFRAP-N	11505 DOUGLAS RD RANCHO CORDOVA CA 95742	0.04 SE	8
31	RCRACOR	AMERICAN WASTE CONTAINER SERV INC CAD067825364/CA	11505 DOUGLAS RD RANCHO CORDOVA CA 95742	0.04 SE	8
32	RCRAGN	MDC/AGC RANCHO CORDOVA SITE CAR000001735/SGN	11505 DOUGLAS ROAD RANCHO CORDOVA CA 95742	0.04 SE	9
33	UST	MATSUDA OF SACTO SACRAMENTO15480/NUMBER OF CERTIFIE	10600 FLORIN RD SACRAMENTO CA 95827	0.04 SW	10
33	UST	MATSUDA OF SACRAMENTO INC. TISID-STATE38109/ACTIVE	10600 FLORIN SACRAMENTO CA 95826	0.04 SW	10
34	OTHER	BAO BEI PROPERTY FA0011296/NOT REPORTED	9783 FLORIN RD SACRAMENTO CA 95829	0.05 SW	11
34	OTHER	MATSUDA OF SACTO FA0012810/NOT REPORTED	10600 FLORIN RD SACRAMENTO CA 95827	0.06 SW	12
35	PERMITS	STANICK S AUTO PARTS CAL000300829/ACTIVE	3791 RECYCLE RD UNIT 2 RANCHO CORDOVA CA 95742	0.06 NW	13

Environmental FirstSearch
Sites Summary Report

Target Property: RANCHO CORDOVA CA 95742 **JOB:** 0165-002

TOTAL: 302 **GEOCODED:** 61 **NON GEOCODED:** 241 **SELECTED:** 0

Page No.	DB Type	Site Name/ID/Status	Address	Dist/Dir	Map ID
35	PERMITS	CAPITAL AUTO DISMANTLER CAL000319387/ACTIVE	3791 RECYCLE RD STE 1 RANCHO CORDOVA CA 95742	0.06 NW	13
36	PERMITS	MATSUDA S OF SACRAMENTO, INC. CAD981403587/ACTIVE	10600 FLORIN ROAD SACRAMENTO CA 95826	0.06 SW	14
37	OTHER	SACRAMENTO SALVAGE POOL RO0000336/CLOSED	11499 DOUGLAS RD RANCHO CORDOVA CA	0.07 SW	15
37	PERMITS	CATCTHIC CAL000320154/ACTIVE	11499 DOUGLAS RD RANCHO CORDOVA CA 95742	0.07 SW	15
38	PERMITS	INSURANCE AUTO AUCTIONS INC CAL000211680/ACTIVE	11499 DOUGLAS RD RANCHO CORDOVA CA 95742	0.07 SW	15
39	OTHER	CHEVRON WEST FA0008789/NOT REPORTED	11499 DOUGLAS RD RANCHO CORDOVA CA 95742	0.07 SW	15
39	OTHER	INSURANCE AUTO AUCTION FA0008790/NOT REPORTED	11499 DOUGLAS RD RANCHO CORDOVA CA 95742	0.07 SW	15
40	OTHER	EMERY WORLDWIDE RO0001412/CLOSED	11499 DOUGLAS RD RANCHO CORDOVA CA	0.07 SW	15
40	RCRAGN	INSURANCE AUTO AUCTIONS INC CAP000077701/LGN	11499 DOUGLAS RD RANCHO CORDOVA CA 95742	0.07 SW	15
41	ERNS	UNKNOWN 365633/HIGHWAY RELATED	6830 EXCELSIOR SACRAMENTO CA 95829	0.07 SW	16
42	UST	DANIEL HANLEY TISID-STATE43237/ACTIVE	3806 SECURITY PARK RANCHO CORDOVA CA 95670	0.08 NW	17
43	UST	TRI TOOL INC. TISID-STATE7631/INACTIVE	3806 SECURITY PARK RANCHO CORDOVA CA 95670	0.08 NW	17
44	OTHER	TRI TOOL INC FA0010155/NOT REPORTED	3806 SECURITY PARK DR RANCHO CORDOVA CA 95742	0.08 NW	17
44	RCRAGN	TRI TOOL INC CAD981395148/SGN	3806 SECURITY PARK DRIVE RANCHO CORDOVA CA 95742	0.08 NW	17
45	RCRAGN	GENERAL ELECTRIC MEDICAL SYSTEMS CAD000819680/SGN	3920 SECURITY PARK DR RANCHO CORDOVA CA 95742	0.10 NW	18
46	RCRA	GENERAL ELECTRIC MEDICAL SYSTEMS CAD000819680/TSD	3920 SECURITY PARK DR RANCHO CORDOVA CA 95742	0.10 NW	18
47	PERMITS	AUTOMOTIVE IMPORTING and MFG INC CAL000078192/ACTIVE	3920 SECURITY PARK DR RANCHO CORDOVA CA 95742	0.10 NW	18
48	OTHER	AUTOMOTIVE IMPORTING MFG INC FA0010157/NOT REPORTED	3920 SECURITY PARK DR RANCHO CORDOVA CA 95742	0.10 NW	18
48	ERNS	UNK 72967/UNKNOWN	11181 JACKSON HWY SACRAMENTO CA 95830	0.10 SW	19
49	OTHER	ALL HYUNDAI and IZUZU AUTO RECYCLI FA0010030/NOT REPORTED	3750 RECYCLE RD 2 RANCHO CORDOVA CA 95742	0.12 NW	20

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49	OTHER	CHEVY SPORTS RECYCLING FA0011907/NOT REPORTED	3750 RECYCLE RD 1 RANCHO CORDOVA CA 95742	0.12 NW	20
50	PERMITS	WILSON UTILITY CONSTRUCTION CO CAL000327710/ACTIVE	3909 SECURITY PARK DR RANCHO CORDOVA CA 95742	0.13 NW	21
51	RCRAGN	CHEVY SPORTS RECYCLING INC CAD983620444/SGN	3750 RECYCLE RD 1 RANCHO CORDOVA CA 95742	0.14 NW	22
52	OTHER	RANCHO FORD TRUCK PARTS FA0011906/NOT REPORTED	3731 RECYCLE RD RANCHO CORDOVA CA 95742	0.14 NW	23
52	PERMITS	AAA DODGE TRUCK and VAN CAL000283876/ACTIVE	3731 RECYCLE RD RANCHO CORDOVA CA 95742	0.14 NW	23
53	RCRAGN	J and W SCIENTIFIC CAD981641194/SGN	3871 SECURITY PARK DR RANCHO CORDOVA CA 95742	0.15 NW	24
54	LUST	AZTECA CONSTRUCTION T0606700442/CASE CLOSED	3871 SECURITY PARK DR RANCHO CORDOVA CA 95670	0.15 NW	24
55	PERMITS	CAPITOL ONE AUTO DISMANTLER CAL000318722/ACTIVE	3781 RECYCLE RD STE 1 RANCHO CORDOVA CA 95742	0.15 NW	25
55	PERMITS	RECYCLE ROAD AUTO RECYCLING CAL000263433/ACTIVE	3723 RECYCLE RD RANCHO CORDOVA CA 95742	0.17 NW	26
56	OTHER	RECYCLE ROAD DISMANTLERS FA0011905/NOT REPORTED	3723 RECYCLE RD RANCHO CORDOVA CA 95742	0.17 NW	26
56	OTHER	BOB KING FA0015325/NOT REPORTED	3730 RECYCLE RD 1 RANCHO CORDOVA CA 95742	0.18 NW	27
56	OTHER	SPECIALTY PRODUCTS DESIGN FA0010029/NOT REPORTED	3730 RECYCLE RD, 8 RANCHO CORDOVA CA 95742	0.18 NW	27
57	OTHER	ZAYAS EXCAVATING INC FA0018261/NOT REPORTED	3915 SECURITY PARK DR STE A RANCHO CORDOVA CA 95742	0.20 NW	28
58	OTHER	CADILLAC AUTO RECYCLING FA0010028/NOT REPORTED	3715 RECYCLE RD RANCHO CORDOVA CA 95742	0.21 NW	29
59	PERMITS	SandT RECYCLING DBA CADILLAC AUTO CAL000148645/ACTIVE	3715 RECYCLE RD RANCHO CORDOVA CA 95742	0.21 NW	29
60	OTHER	CALIFORNIA-AMERICAN WATER CO FA0010156/NOT REPORTED	3880 SECURITY PARK DR RANCHO CORDOVA CA 95670	0.22 NW	30
60	OTHER	SAMUEL D TARPIN TRUST RO0000667/CLOSED	11118 JACKSON RD SACRAMENTO CA	0.23 SW	31
61	OTHER	AZTECA RO0001055/CLOSED	3871 SECURITY PARK DR RANCHO CORDOVA CA	0.24 NW	32
61	PERMITS	AZTEC MACHINE COMPANY CAL000261542/ACTIVE	11450 ELKS CIR RANCHO CORDOVA CA 95742	0.25 NW	33
62	UST	FOLSOM CORDOVA USD SACRAMENTO15282/NUMBER OF CERTIFIE	11458 ELKS CR RANCHO CORDOVA CA 95742	0.25 NW	34

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63	SPILLS	MCDONNELL DOUGLAS/AEROJET INACTIVE G_SL205493018/NOT REPORTED	4000 ACRES BOUNDED BY DOUGL RANCHO CORDOVA CA	NON GC	
64	SPILLS	AEROJET GENERAL CORPORATION - RANC G_SL185992958/NOT REPORTED	AEROJET RD and FOLSOM BLVD RANCHO CORDOVA CA	NON GC	
65	SPILLS	HOME DEPOT - RANCHO CORDOVA G_SLT5S1593198/CASE OPEN	7820 FOLSOM BLVD. RANCHO CORDOVA CA	NON GC	
66	SWL	AEROJET (LANDFILL) WMUD5A342000003/ACTIVE	DEPT 5784/BLDG 20019 RANCHO CORDOVA CA	NON GC	
68	SWL	WHITE ROCK ROAD LANDFILL - SOUTH SWIS34-CR-5046/CLOSED	S SIDE WHITE ROCK RD 1M W G RANCHO CORDOVA CA	NON GC	
69	SPILLS	SACRAMENTO SAVINGS BANK, SUNRISE I G_SLT5S2493288/CASE OPEN	SITE BOUNDED BY- HWY 50 and RANCHO CORDOVA CA	NON GC	
70	STATE	SMUD PCB SUBSTATION SITE 10 CAL34490035/INACTIVE - NEEDS EVA	ELK GROVE-FLORIN ROAD SACRAMENTO CA 95829	NON GC	
71	SWL	WHITE ROCK ROAD DISPOSAL SITE - NO SWIS34-AA-0012/CLOSED	WHITE ROCK RD and GRANT LIN RANCHO CORDOVA CA	NON GC	
72	STATE	EDNA BATEY ELEMENTARY CAL34020001/NO ACTION - FOR CALM	BRADSHAW ROAD/ELK GROVE BOU ELK GROVE CA 95624	NON GC	
73	SWL	AEROJET LRC WASTE WATER LAGOON SWIS34-AA-0009/CLOSED	1.5 MI SE NIMBUS DAM RANCHO CORDOVA CA	NON GC	
75	SPILLS	J and G AGROW-TEK G_SLT5S3573731/CASE OPEN	3841-F FITZGERALD RD RANCHO CORDOVA CA 95742	NON GC	
76	STATE	MATHER AIR FORCE BASE CAL34970003/ACTIVE	5485 ACRES 12 MI EA OF SACR SACRAMENTO CA 95655	NON GC	
96	STATE	WILDHAWK ELEMENTARY SCHOOL 38 CAL34000001/NO ACTION - FOR CALM	WILDHAWK WEST DRIVE/PRAIRIE ELK GROVE CA 95624	NON GC	
97	STATE	PLEASANT GROVE HI/KATHERINE ALBIAN CAL34020002/CERTIFIED	BOND ROAD/BRADSHAW ROAD ELK GROVE CA 95624	NON GC	
98	STATE	FRANKLIN MEADOWS ELEMENTARY SCHOOL CAL34000002/NO ACTION - FOR CALM	FIRE POPPY DRIVE/BLOSSOM RA ELK GROVE CA 95624	NON GC	
99	STATE	CRITICALLY OVERCROWED SCHOOL 1 CAL34650005/NO FURTHER ACTION FO	FRANKLIN BLVD./LAGUNA PARK ELK GROVE CA 95624	NON GC	
100	STATE	CRESLEIGH RANCH 39 CAL34010016/NO ACTION - FOR CALM	ELK GROVE BOULEVARD/FOULKS ELK GROVE CA 95624	NON GC	
101	SWL	MATHER AFB LANDFILL SWIS34-AA-0031/CLOSED	HDQTRS 323 D FLYING TRAININ RANCHO CORDOVA CA 95655	NON GC	
102	OTHER	AEROJET - 20025 RO0000159/NOT REPORTED	AEROJET RD RANCHO CORDOVA CA	NON GC	
103	STATE	ELEMENTARY SCHOOL NO. 42 CAL34010025/NO FURTHER ACTION FO	DOUGLAS ROAD/SUNRISE BOULEV RANCHO CORDOVA CA 95742	NON GC	

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104	STATE	ELEMENTARY SCHOOL NO 42 CAL34010023/NO ACTION - FOR CALM	DOUGLAS ROAD/SUNRISE BOULEV RANCHO CORDOVA CA 95742	NON GC	
105	STATE	HIGH SCHOOL/MIDDLE SCHOOL 7 CAL34010015/NO ACTION - FOR CALM	CALVINE ROAD/AUBERRY DRIVE ELK GROVE CA 95624	NON GC	
106	PERMITS	LOPEZ AG SERVICE INC CAL000248640/ACTIVE	6925 EAGLES NEST RD SACRAMENTO CA 95829	NON GC	
107	ERNS	AERO JET CO 226418/FIXED FACILITY	AERO JET PROPERTY HWY 50 AN RANCHO CORDOVA CA	NON GC	
109	ERNS	UNKNOWN 217665/FIXED FACILITY	EAGLE NEST RD CROSS ST KEIF SACRAMENTO CA 95830	NON GC	
111	OTHER	AEROJET BLDG 01037 RO0000143/NOT REPORTED	AEROJET RD RANCHO CORDOVA CA	NON GC	
111	OTHER	AEROJET BLDG 01034 RO0000142/CLOSED	AEROJET RD RANCHO CORDOVA CA	NON GC	
112	OTHER	AEROJET BLDG 01028 RO0000141/CLOSED	AEROJET RD RANCHO CORDOVA CA	NON GC	
112	OTHER	AEROJET BLDG 01022 RO0000140/CLOSED	AEROJET RD RANCHO CORDOVA CA	NON GC	
113	OTHER	AEROJET BLDG 01001 RO0000139/CLOSED	AEROJET RD RANCHO CORDOVA CA	NON GC	
113	OTHER	AEROJET BLDG 00002 RO0000138/CLOSED	AEROJET RD RANCHO CORDOVA CA	NON GC	
114	OTHER	AAA DRIVE SHAFT OF SACRAMENTO FA0012062/NOT REPORTED	11336 SUNCO DR D RANCHO CORDOVA CA 95742	NON GC	
115	PERMITS	WAEGELL RANCH CAL000252268/ACTIVE	7700 EAGLE NEST RD SACRAMENTO CA 95830	NON GC	
116	SWL	MATHER AFB, ENVIRONMENTAL MGMT WMUD5A340700001/ACTIVE	MATHER AFB SACRAMENTO CA 95655	NON GC	
118	PERMITS	WETLAND and EROSION TECHNOLOGIES I CAL000303126/ACTIVE	10201 SKYMASTER WAY MATHER CA 95655	NON GC	
119	PERMITS	TRAJEN FLIGHT SUPPORT, LP CAL000181481/INACTIVE	MATHER AFB RANCHO CORDOVA CA 95655	NON GC	
120	PERMITS	GOLDEN INTERSTATE SWEEPING CAL000326281/ACTIVE	10201 SKYMASTER WAY MATHER CA 95655	NON GC	
121	PERMITS	FEDERAL AVIATION ADMINISTRATION CAL000215009/ACTIVE	11375 DOUGLAS RD MATHER CA 95655	NON GC	
122	PERMITS	FAA CAL000215010/ACTIVE	4199 CONVAIR LINER RD MATHER CA 95655	NON GC	
123	PERMITS	MASTER AUTO REPAIR CAL000278270/ACTIVE	8118 ORCHARD LOOP LN ELK GROVE CA 95624	NON GC	

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124	PERMITS	COUNTY OF SACRAMENTO CAL000040494/INACTIVE	BLDG X-21 8521 LAGUNA STA R ELK GROVE CA 95624	NON GC	
125	PERMITS	INTERMOUNTAIN SLURRY CAL000324723/ACTIVE	3811 RECYCLE RD STE 1 RANCHO CORDOVA CA 95742	NON GC	
126	PERMITS	FOLSOM LAKE ASPHALT INC CAL000145242/ACTIVE	2951 A MERCANTILE DRIVE RANCHO CORDOVA CA 95742	NON GC	
127	OTHER	ADVANCED TRANSMISSIONS FA0009756/NOT REPORTED	2660 MERCANTILE DR E RANCHO CORDOVA CA 95742	NON GC	
127	RCRAGN	USNG CA ARMY AVIATION SUPPORT FACI CAD983666439/SGN	MATHER AFB BUILDING 4850 MATHER AFB CA 95655	NON GC	
128	ERNS	AERO JET PROPULSION DIV 205246/FIXED FACILITY	AERO JET GENERAL HWY 50 AND RANCHO CORDOVA CA	NON GC	
130	ERNS	AEROJET PROPULSION DIV. 467206/FIXED FACILITY	HWY 50 AND AEROJET RD RANCHO CORDOVA CA	NON GC	
132	ERNS	AEROJET PROPOLSION DIV. 235051/FIXED FACILITY	HWY 50 AND AEROJET RD RANCHO CORDOVA CA	NON GC	
134	ERNS	AEROJET 634469/FIXED FACILITY	HWY 50 AT HAZEL, BUILDING RANCHO CORDOVA CA	NON GC	
135	ERNS	AEROJET 634988/FIXED FACILITY	HWY 50 AT HAZEL, BUILDING RANCHO CORDOVA CA	NON GC	
136	OTHER	AEROJET BLDG 01058 RO0000145/CLOSED	AEROJET RD RANCHO CORDOVA CA	NON GC	
137	ERNS	AERO JET CORP 256874/FIXED FACILITY	INTERSECTION OF HY 50 and H RANCHO CORDOVA CA	NON GC	
139	OTHER	AEROJET BLDG 01062 RO0000146/CLOSED	AEROJET RD RANCHO CORDOVA CA	NON GC	
140	ERNS	AERO JET 471528/FIXED FACILITY	HWY 50 AT AERO JET RD RANCHO CORDOVA CA	NON GC	
141	ERNS	AMERICAN ENVIRONMENTAL 73638/UNKNOWN	AMERICAN ENVIRONMENTAL RANCHO CORDOVA CA	NON GC	
142	RCRAGN	JB RADIATOR SPECIALTIES INC CAR000191486/LGN	8441 SPECIALTY CIRCLE SACRAMENTO CA 95829	NON GC	
143	ERNS	BRADSHAW KINDER MORGAN NRC-827155/MOBILE	 RANCHO CORDOVA CA	NON GC	
146	RCRAGN	USAF MATHER CA8570024143/LGN	323 FTW EM MATHER AFB MATHER AFB CA 95655	NON GC	
148	RCRAGN	MATHER HEIGHTS ELEMENTARY SCHOOL CA5570090246/SGN	SCHOOL ST MATHER AFB CA 95655	NON GC	
149	RCRAGN	FOLSOM CORDOVA USD KITTY HAWK ELEM CA4570090247/SGN	DEAN TERRACE MATHER AFB CA 95655	NON GC	

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150	RCRAGN	THE GLIDDEN COMPANY DBA ICI PAINT CAR000179622/LGN	10471 GRANTLINE RD ELK GROVE CA 95624	NON GC	
151	RCRAGN	PACIFIC BELL CAT080017189/SGN	KAMMERER ROAD W/O HIGHWAY 9 ELK GROVE CA 95624	NON GC	
152	RCRAGN	CHEVRON 210285 CAR000163030/LGN	9615 W TARON DR ELK GROVE CA 95624	NON GC	
153	RCRACOR	USAF MATHER CA8570024143/CA	323 FTW EM MATHER AFB MATHERS AFB CA 95655	NON GC	
157	RCRA	USAF MATHER CA8570024143/TSD	323 FTW EM MATHER AFB MATHER AFB CA 95655	NON GC	
160	NFRAP	EAGLES NEST PAINT CAD983641051/NFRAP-N	NEAR INTERSEC OF EAGLES NES RANCHO CORDOVA CA 95830	NON GC	
161	ERNS	AERO JET 479498/FIXED FACILITY	HWY 50 AT AERO JET RD RANCHO CORDOVA CA	NON GC	
162	ERNS	513127/FIXED FACILITY	LEVEL ONE COMMUNICATIONS, 9 RANCHO CORDOVA CA	NON GC	
163	ERNS	UNKNOWN 274813/UNKNOWN (EPA REGIONS	KEIFER RD, WEST OF EAGLE NE SACRAMENTO CA 95830	NON GC	
165	ERNS	UNKNOWN 274823/UNKNOWN (EPA REGIONS	EAGLES NEST RD AT KEIFER BL SACRAMENTO CA 95830	NON GC	
167	ERNS	513071/HIGHWAY RELATED	EXCELSIOR ROAD 1/2 MILE N O SACRAMENTO CA 95829	NON GC	
168	ERNS	PIPE CROSSING MACREADY AVE, EST SI NRC-795272/PIPELINE	RANCHO CORDOVA CA 95655	NON GC	
171	ERNS	MATHER AFB 257315/PIPELINE RELATED	NEAR BASE SEWAGE TREATMENT SACRAMENTO CA 95655	NON GC	
173	ERNS	UNKNOWN DIVE SHOP 448851/FIXED FACILITY	ELK GROVE BLVD BETWEEN WATE ELK GROVE CA 95624	NON GC	
174	ERNS	UNKNOWN 358032/HIGHWAY RELATED	GRANT LINE RD and EAGLES NE ELK GROVE CA 95624	NON GC	
175	ERNS	KINGFORD INC. 178770/FIXED FACILITY	100 WALERMAN RD. CA 95624	NON GC	
176	ERNS	GOERGIA PACIFIC 475390/UNKNOWN (NRC)	1099 E. STOCKTON BLVD ELK GROVE CA 95624	NON GC	
177	ERNS	AEROJET STRATEGIC PROPULSION 73174/UNKNOWN	F AREA (FD) RANCHO CORDOVA CA	NON GC	
178	ERNS	465959	EAST SIDE OF BUILDING SEWAR RANCHO CORDOVA CA	NON GC	
179	ERNS	UNKNOWN 278060/HIGHWAY RELATED	4900 SUNRISE BLVD SACRAMENTO CA 95830	NON GC	

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181	ERNS		CUSTOMER- AMERICAN ENVIRONM		
		60430/UNKNOWN	RANCHO CORDOVA CA	NON GC	
181	ERNS	UNKNOWN 21673/UNKNOWN	LINCOLN VILLAGE CENTER RANCHO CORDOVA CA	NON GC	
182	ERNS	UNK 109777/UNKNOWN	GOULD and SACRAMENTO RANCHO CORDOVA CA	NON GC	
182	ERNS	UNK 108208/UNKNOWN	NR OLSON DR AND ZINFANDEL S RANCHO CORDOVA CA	NON GC	
183	ERNS	MINI-LUBE 74096/UNKNOWN	MINI-LUBE RANCHO CORDOVA CA	NON GC	
184	ERNS	JACKSON ROAD AND BRADSHAW ROAD NRC-811667/PIPELINE	RANCHO CORDOVA CA	NON GC	
187	ERNS	FOUR PAWS PETS 73637/UNKNOWN	FOUR PAWS PETS RANCHO CORDOVA CA	NON GC	
187	ERNS	COOK CO 72869/UNKNOWN	COOK CO RANCHO CORDOVA CA	NON GC	
188	ERNS	CLC INVESTMENT CORP 262223/FIXED FACILITY	NW CORNER OF GRANT LINE WHI RANCHO CORDOVA CA 95742	NON GC	
190	ERNS	71559/UNKNOWN	BUSINESS LOCATION RANCHO CORDOVA CA	NON GC	
190	OTHER	PWA: SEASONS DR WELL SITE(W41) FA0010154/NOT REPORTED	SEASONS DR/BRUCEVILLE RD ELK GROVE CA 95624	NON GC	
191	LUST	REFUELING STN 31 T0606700477/CASE CLOSED	31 MATHER FIELD BLVD MATHER AFB CA 95655	NON GC	
192	OTHER	MASTER AUTO REPAIR FA0019626/NOT REPORTED	8118 ORCHARD LOOP LN ELK GROVE CA 95624	NON GC	
192	OTHER	MCI WORLDCOM FA0010189/NOT REPORTED	4004 SIMS RD ELK GROVE CA 95624	NON GC	
192	OTHER	PWA: BIG HORN CENTRAL WELL(W51) FA0009541/NOT REPORTED	LAGUNA BL/BIG HORN BLVD ELK GROVE CA 95624	NON GC	
193	OTHER	PWA: BIG HORN NORTH WELL (W52) FA0008616/NOT REPORTED	BRUCEVILLE RD/BIG HORN BLVD ELK GROVE CA 95624	NON GC	
193	OTHER	PWA: BIG HORN SOUTH WELL (W50) FA0008879/NOT REPORTED	ELK GROVE BL/BIG HORN BLVD ELK GROVE CA 95624	NON GC	
194	OTHER	AEROJET BLDG 01056 RO0000144/CLOSED	AEROJET RD RANCHO CORDOVA CA	NON GC	
194	OTHER	PWA: KILCONNEL WELL SITE (W44) FA0009510/NOT REPORTED	KILCONNEL DR/BRUCEVILLE RD ELK GROVE CA 95624	NON GC	
195	LUST	BUILDING 8150 T0606700813/CASE CLOSED	8150 MATHER FIELD BLVD MATHER AFB CA 95655	NON GC	

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196	OTHER	PWA: SOARING OAKS WELL (W49) FA0010528/NOT REPORTED	WYMARK BL/SOARING OAKS DR ELK GROVE CA 95624	NON GC	
196	OTHER	PWA: WF-1 CALVINE MEADOWS WATER TX FA0017717/NOT REPORTED	10140 CALVINE RD ELK GROVE CA 95624	NON GC	
196	OTHER	SPRINT FA0010385/NOT REPORTED	TWIN CITIES RD/FRANKLIN BLV ELK GROVE CA 95624	NON GC	
197	OTHER	SHOPPETTE FA0012695/NOT REPORTED	MATHER RD SACRAMENTO CA 95655	NON GC	
197	OTHER	HYDRA WAREHOUSING FA0010466/NOT REPORTED	6300 S WATT AVE SACRAMENTO CA 95829	NON GC	
197	OTHER	PWA: ANDALUSIAN DR WELL (W62) FA0008355/NOT REPORTED	ANDALUSIAN DR/DRESSAGE WAY SACRAMENTO CA 95829	NON GC	
198	OTHER	PWA: EQUINE DR WELL SITE (W63) FA0008931/NOT REPORTED	EQUINE DR/POLO CROSSE AVE SACRAMENTO CA 95829	NON GC	
198	OTHER	PWA: FEATHER CREEK WELL (W47) FA0008977/NOT REPORTED	FEATHER CREEK/OLD CREEK ELK GROVE CA 95624	NON GC	
199	LUST	BUILDING 7010 T0606700808/CASE CLOSED	7010 MATHER FIELD BLVD MATHER AFB CA 95655	NON GC	
200	LUST	BUILDING 18051 T0606700349/CASE CLOSED	18051 MATHER FIELD BLVD MATHER AFB CA 95655	NON GC	
201	LUST	BUILDING 21030 T0606700344/CASE CLOSED	21030 MATHER FIELD BLVD MATHER AFB CA 95655	NON GC	
202	LUST	BUILDING 2410 T0606700353/CASE CLOSED	2410 MATHER FIELD BLVD MATHER AFB CA 95655	NON GC	
203	LUST	BUILDING 2595 T0606700803/LEAK BEING CONFIRMED	2595 MATHER FIELD BLVD MATHER AFB CA 95655	NON GC	
204	LUST	BUILDING 3169 T0606700804/LEAK BEING CONFIRMED	3169 MATHER FIELD BLVD MATHER AFB CA 95655	NON GC	
205	LUST	BUILDING 3171 T0606700636/LEAK BEING CONFIRMED	3171 MATHER FIELD BLVD MATHER AFB CA 95655	NON GC	
206	LUST	BUILDING 3226 T0606700376/POLLUTION CHARACTERI	3226 MATHER FIELD BLVD MATHER AFB CA 95655	NON GC	
207	LUST	BUILDING 8158 T0606700347/CASE CLOSED	8158 MATHER FIELD BLVD MATHER AFB CA 95655	NON GC	
208	LUST	BUILDING 3286 T0606700375/REMEDIAL ACTION	3286 MATHER FIELD BLVD MATHER AFB CA 95655	NON GC	
209	LUST	BUILDING 8152 T0606700635/LEAK BEING CONFIRMED	8152 MATHER FIELD BLVD MATHER AFB CA 95655	NON GC	
210	LUST	BUILDING 7022C T0606700345/CASE CLOSED	7022 MATHER FIELD BLVD MATHER AFB CA 95655	NON GC	

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211	LUST	BUILDING 7033 T0606700809/LEAK BEING CONFIRMED	7033 MATHER FIELD BLVD MATHER AFB CA 95655	NON GC	
212	LUST	BUILDING 7039 T0606700810/LEAK BEING CONFIRMED	7039 MATHER FIELD BLVD MATHER AFB CA 95655	NON GC	
213	LUST	BUILDING 7080 T0606700346/REMEDIAL ACTION	7080 MATHER FIELD BLVD MATHER AFB CA 95655	NON GC	
214	LUST	BUILDING 7090 T0606700811/REMEDIAL ACTION	7090 MATHER FIELD BLVD MATHER AFB CA 95655	NON GC	
215	LUST	BUILDING 7100 T0606700812/CASE CLOSED	7100 MATHER FIELD BLVD MATHER AFB CA 95655	NON GC	
216	UST	ANTHONY SOUZA TISID-STATE37744/ACTIVE	0 STOCKTON BLVD W. FRON ELK GROVE CA 95624	NON GC	
217	LUST	BUILDING 3272 T0606700348/CASE CLOSED	3272 MATHER FIELD BLVD MATHER AFB CA 95655	NON GC	
218	LUST	BUILDING 4844 T0606700352/CASE CLOSED	4844 MATHER FIELD BLVD MATHER AFB CA 95655	NON GC	
219	OTHER	PWA: SHELDON WATER WELL (W65) FA0010164/NOT REPORTED	SHELDON RD/SHORTLINE RD SACRAMENTO CA 95829	NON GC	
220	LUST	BUILDING 3388 T0606700373/CASE CLOSED	3388 MATHER FIELD BLVD MATHER AFB CA 95655	NON GC	
221	LUST	BUILDING 3389 T0606700372	3389 MATHER FIELD BLVD MATHER AFB CA 95655	NON GC	
222	LUST	BUILDING 3398 T0606700871/LEAK BEING CONFIRMED	3398 MATHER FIELD BLVD MATHER AFB CA 95655	NON GC	
223	LUST	BUILDING 3965 T0606700805/CASE CLOSED	3965 MATHER FIELD BLVD MATHER AFB CA 95655	NON GC	
224	LUST	BUILDING 4015 T0606700806/REMEDIAL ACTION	4015 MATHER FIELD BLVD MATHER AFB CA 95655	NON GC	
225	LUST	BUILDING 4145 T0606700639/CASE CLOSED	4145 MATHER FIELD BLVD MATHER AFB CA 95655	NON GC	
226	LUST	BUILDING 33206 T0606700820/CASE CLOSED	33206 MATHER FIELD BLVD MATHER AFB CA 95655	NON GC	
227	LUST	BUILDING 4587 T0606700807/CASE CLOSED	4587 MATHER FIELD BLVD MATHER AFB CA 95655	NON GC	
228	LUST	BUILDING 3308 T0606700374/CASE CLOSED	3308 MATHER FIELD BLVD MATHER AFB CA 95655	NON GC	
229	TRIBALLAND	BUREAU OF INDIAN AFFAIRS CONTACT I BIA-95742	UNKNOWN CA 95742	NON GC	
229	TRIBALLAND	BUREAU OF INDIAN AFFAIRS CONTACT I BIA-95624	UNKNOWN CA 95624	NON GC	

Environmental FirstSearch
Sites Summary Report

Target Property: RANCHO CORDOVA CA 95742 **JOB:** 0165-002

TOTAL: 302 **GEOCODED:** 61 **NON GEOCODED:** 241 **SELECTED:** 0

Page No.	DB Type	Site Name/ID/Status	Address	Dist/Dir	Map ID
230	TRIBALLAND	BUREAU OF INDIAN AFFAIRS CONTACT I BIA-95655	UNKNOWN CA 95655	NON GC	
230	TRIBALLAND	BUREAU OF INDIAN AFFAIRS CONTACT I BIA-95829	UNKNOWN CA 95829	NON GC	
231	TRIBALLAND	BUREAU OF INDIAN AFFAIRS CONTACT I BIA-95830	UNKNOWN CA 95830	NON GC	
232	FED IC / EC	MATHER AIR FORCE BASE (ACandW DISP CA8570024143-EC/EPA ENG CONTROL	MATHER AIR FORCE BASE MATHER CA 95655	NON GC	
242	FED IC / EC	MATHER AIR FORCE BASE (ACandW DISP CA8570024143-IC/EPA INST CONTROL	MATHER AIR FORCE BASE MATHER CA 95655	NON GC	
244	LUST	BUILDING 4150 T0606700638/CASE CLOSED	4150 MATHER FIELD BLVD MATHER AFB CA 95655	NON GC	
245	LUST	BUILDING 10300 T0606700356/CASE CLOSED	10300 MATHER FIELD BLVD MATHER AFB CA 95655	NON GC	
246	LUST	BUILDING 10072 T0606700359/CASE CLOSED	10072 MATHER FIELD BLVD MATHER AFB CA 95655	NON GC	
247	UST	ELK GROVE RADIO RELAY TISID-STATE38254/ACTIVE	5925 LAS POSITAS ELK GROVE CA 95624	NON GC	
248	UST	ELK GROVE WATER WORKS-MAINT. D TISID-STATE37868/ACTIVE	9086 REAR ELK GROVE ELK GROVE CA 95624	NON GC	
249	UST	QSL - RMLR TISID-STATE38191/ACTIVE	0 ELK GROVE ELK GROVE CA 95624	NON GC	
250	UST	SHELL SERVICE STATION TISID-STATE37700/ACTIVE	0 EMERALD VISTA/ELK GR BLVD ELK GROVE CA 95624	NON GC	
251	UST	WALT DAVIS CHEVROLET TISID-STATE37485/ACTIVE	9501 99 ELK GROVE CA 95624	NON GC	
252	LUST	BUILDING 10090 T0606700358/POLLUTION CHARACTERI	10090 MATHER FIELD BLVD MATHER AFB CA 95655	NON GC	
253	LUST	BUILDING 3385 T0606700872/LEAK BEING CONFIRMED	3385 MATHER FIELD BLVD MATHER AFB CA 95655	NON GC	
254	LUST	BUILDING 10120 T0606700744/CASE CLOSED	10120 MATHER FIELD BLVD MATHER AFB CA 95655	NON GC	
255	OTHER	VERIZON WIRELESS FA0018044/NOT REPORTED	7409 SUNRISE BLVD SACRAMENTO CA 95830	NON GC	
256	LUST	BUILDING 10400 T0606700454/CASE CLOSED	10400 MATHER FIELD BLVD MATHER AFB CA 95655	NON GC	
257	LUST	BUILDING 10410 T0606700816/NO ACTION	10410 MATHER FIELD BLVD MATHER AFB CA 95655	NON GC	
258	LUST	BUILDING 1218 T0606700351/CASE CLOSED	1218 MATHER FIELD BLVD MATHER AFB CA 95655	NON GC	

Environmental FirstSearch
Sites Summary Report

Target Property: RANCHO CORDOVA CA 95742 **JOB:** 0165-002

TOTAL: 302 **GEOCODED:** 61 **NON GEOCODED:** 241 **SELECTED:** 0

Page No.	DB Type	Site Name/ID/Status	Address	Dist/Dir	Map ID
259	LUST	BUILDING 14517 T0606700817/CASE CLOSED	14517 MATHER FIELD BLVD MATHER AFB CA 95655	NON GC	
260	LUST	BUILDING 14995 T0606700818/LEAK BEING CONFIRMED	14995 MATHER FIELD BLVD MATHER AFB CA 95655	NON GC	
261	LUST	BUILDING 16100 T0606700355/CASE CLOSED	16100 MATHER FIELD BLVD MATHER AFB CA 95655	NON GC	
262	LUST	BUILDING 18010 T0606700350/CASE CLOSED	18010 MATHER FIELD BLVD MATHER AFB CA 95655	NON GC	
263	LUST	BUILDING 10100 T0606700357/CASE CLOSED	10100 MATHER FIELD BLVD MATHER AFB CA 95655	NON GC	
264	OTHER	KIEWIT PACIFIC FA0016529/NOT REPORTED	SUNRISE/DOUGLAS RANCHO CORDOVA CA 95742	NON GC	
264	OTHER	SUNRISE TRACTOR FA0008913/NOT REPORTED	11428 ELKS CIR C RANCHO CORDOVA CA 95742	NON GC	
265	OTHER	CORDOVA RENTALS RO0000495/CLOSED	10077 FOLSOM BLVD RANCHO CORDOVA CA	NON GC	
265	OTHER	DYNA-CYCLE FA0018265/NOT REPORTED	11525 AEROTEC CT RANCHO CORDOVA CA 95742	NON GC	
266	OTHER	FIRE STATION 62 RO0001369/NOT REPORTED	3646 BRADSHAW RD RANCHO CORDOVA CA	NON GC	
266	OTHER	G.S.V. DISMANTLER FA0018118/NOT REPORTED	3383 FITZGERALD ST E RANCHO CORDOVA CA 95742	NON GC	
267	OTHER	HI TECH FABRICATION FA0014937/NOT REPORTED	2530 MERCANTILE DR E RANCHO CORDOVA CA 95742	NON GC	
267	OTHER	INTEGRATED PLASTICS FA0018943/NOT REPORTED	12167 FOLSOM BLVD B RANCHO CORDOVA CA 95742	NON GC	
267	OTHER	BEST BUY POOL SUPPLY LLC FA0018795/NOT REPORTED	11285 SUNRISE GOLD CIR E RANCHO CORDOVA CA 95742	NON GC	
268	OTHER	KELLY-MOORE PAINT CO INC FA0018135/NOT REPORTED	3068 SUNRISE BLVD B RANCHO CORDOVA CA 95742	NON GC	
268	OTHER	BARRY PAULSEN BOAT FA0009741/NOT REPORTED	2419 MERCANTILE DR E RANCHO CORDOVA CA 95742	NON GC	
269	OTHER	PENCOM FA0010310/NOT REPORTED	11353 SUNRISE GOLD CIR G RANCHO CORDOVA CA 95742	NON GC	
269	OTHER	QUALITY DISCOUNT FRAME CO FA0009746/NOT REPORTED	2539 MERCANTILE DR D RANCHO CORDOVA CA 95742	NON GC	
269	OTHER	SBC (UC70R) FA0009751/NOT REPORTED	2590 MERCANTILE DR M RANCHO CORDOVA CA 95742	NON GC	
270	OTHER	SIERRA PACIFIC HOME and COMFORT FA0014872/NOT REPORTED	2550 MERCANTILE DR D RANCHO CORDOVA CA 95742	NON GC	

Environmental FirstSearch
Sites Summary Report

Target Property: RANCHO CORDOVA CA 95742 **JOB:** 0165-002

TOTAL: 302 **GEOCODED:** 61 **NON GEOCODED:** 241 **SELECTED:** 0

Page No.	DB Type	Site Name/ID/Status	Address	Dist/Dir	Map ID
270	OTHER	SISLER and SISLER CONSTRUCTION FA0018573/NOT REPORTED	11385 SUNRISE BLVD 100 RANCHO CORDOVA CA 95742	NON GC	
270	OTHER	SMEDING PERFORMANCE FA0012068/NOT REPORTED	3340 SUNRISE BLVD E RANCHO CORDOVA CA 95742	NON GC	
271	LUST	BUILDING 18020 T0606700819/POLLUTION CHARACTERI	18020 MATHER FIELD BLVD MATHER AFB CA 95655	NON GC	
272	OTHER	IRCTS WNN GROUNDWATER REMEDIATION FA0017375/NOT REPORTED	SUNRISE BLVD RANCHO CORDOVA CA 95742	NON GC	
272	OTHER	AEROJET BLDG 48021 RO0000157/CLOSED	AEROJET RD RANCHO CORDOVA CA	NON GC	
273	OTHER	AEROJET BLDG 01086 RO0000147/CLOSED	AEROJET RD RANCHO CORDOVA CA	NON GC	
273	OTHER	AEROJET BLDG 01096 RO0000148/CLOSED	AEROJET RD RANCHO CORDOVA CA	NON GC	
274	OTHER	AEROJET BLDG 04045 RO0000149/CLOSED	AEROJET RD RANCHO CORDOVA CA	NON GC	
274	OTHER	AEROJET BLDG 04068 RO0000150/CLOSED	AEROJET RD RANCHO CORDOVA CA	NON GC	
275	OTHER	AEROJET BLDG 04090 RO0000151/CLOSED	AEROJET RD RANCHO CORDOVA CA	NON GC	
275	OTHER	AEROJET BLDG 05026 RO0000152/CLOSED	AEROJET RD RANCHO CORDOVA CA	NON GC	
276	OTHER	AEROJET BLDG 05068 RO0000153/CLOSED	AEROJET RD RANCHO CORDOVA CA	NON GC	
276	OTHER	CEDAR ROOF CARE FA0010306/NOT REPORTED	11295 SUNRISE GOLD CIR E RANCHO CORDOVA CA 95742	NON GC	
277	OTHER	AEROJET BLDG 20009 RO0000155/CLOSED	AEROJET RD RANCHO CORDOVA CA	NON GC	
277	OTHER	TRUEGREEN CHEMLAWN FA0010309/NOT REPORTED	11335 SUNRISE GOLD CIR C RANCHO CORDOVA CA 95742	NON GC	
278	OTHER	AEROJET FINE CHEMICALS FA0014181/NOT REPORTED	HWY 50/AEROJET RD RANCHO CORDOVA CA 95742	NON GC	
279	OTHER	AEROJET MISSILE AND SPACE PROP PLN FA0009425/NOT REPORTED	HWY 50/AEROJET RD RANCHO CORDOVA CA 95742	NON GC	
280	OTHER	AEROJET TANK 20019 RO0000158/CLOSED	AEROJET RD RANCHO CORDOVA CA	NON GC	
280	OTHER	ALLEN IMPORTS FA0018723/NOT REPORTED	11300 SUNRISE GOLD CIR C RANCHO CORDOVA CA 95742	NON GC	
281	OTHER	ARDEN CORDOVA WATER SVCE (SCIBS) FA0015228/NOT REPORTED	11200 COLOMA RD RANCHO CORDOVA CA 95742	NON GC	

Environmental FirstSearch
Sites Summary Report

Target Property: RANCHO CORDOVA CA 95742 **JOB:** 0165-002

TOTAL: 302 **GEOCODED:** 61 **NON GEOCODED:** 241 **SELECTED:** 0

Page No.	DB Type	Site Name/ID/Status	Address	Dist/Dir	Map ID
281	OTHER	ASH MARBLE and GRANITE-TOPS INC FA0018801/NOT REPORTED	11300 TRADE CENTER DR E RANCHO CORDOVA CA 95742	NON GC	
281	OTHER	AURA HARDWOOD LUMBER FA0013614/NOT REPORTED	2477 MERCANTILE DR E RANCHO CORDOVA CA 95742	NON GC	
282	OTHER	AEROJET BLDG 20001 RO0000154/NOT REPORTED	AEROJET RD RANCHO CORDOVA CA	NON GC	
282	UST	SAC-ARSR TISID-STATE38193/ACTIVE	0 MATHER AFB CA 95655	NON GC	
283	OTHER	STONEPLUS FA0018649/NOT REPORTED	2431 MERCANTILE DR D RANCHO CORDOVA CA 95742	NON GC	
283	OTHER	MATHER HOUSING WTP (WF-4) FA0019161/NOT REPORTED	HADDEN WAY MATHER CA 95655	NON GC	
283	OTHER	PWA: RECYCLE WELL SITE (W18) FA0010301/NOT REPORTED	RECYCLE RD MATHER CA 95655	NON GC	
284	OTHER	SAC ARMY AVIATION SUPPORT FAC FA0010327/NOT REPORTED	10616 SUPERFORTRESS AVE MATHER AFB CA 95655	NON GC	
284	OTHER	SAC REGIONAL DRIVERS TRAINING FA0017085/NOT REPORTED	3905 ALERT RD MATHER CA 95655	NON GC	
285	UST	MATHER AFB EXCHANGE HOUSING SE TISID-STATE38242/ACTIVE	0 SERVICE STA BLDG 210 MATHER AFB CA 95655	NON GC	
286	UST	MATHER AFB EXCHANGE SERVICE ST TISID-STATE38243/ACTIVE	0 BLDG 2410 5TH ST MATHER AFB CA 95655	NON GC	
287	OTHER	MATHER AIR FORCE BASE DR_34970003/ACTIVE	5,485 ACRES; 12 MI EA OF SA SACRAMENTO CA 95655	NON GC	
288	UST	MATHER AIR FORCE BASE TISID-STATE38153/ACTIVE	0 MATHER AFB C CA 95655	NON GC	
289	OTHER	FRANKLIN BOOSTER STATION (WB02) FA0015480/NOT REPORTED	FRANKLIN/BIG HORN BLVD SACRAMENTO CA 95655	NON GC	
289	UST	SACRAMENTO ARMY DEPOT EXCHANGE TISID-STATE38241/ACTIVE	0 BLDG 699 OKINAWA ST SACRAMENTO CA 95655	NON GC	
290	UST	SACRAMENTO RENDERING CO. TISID-STATE38297/ACTIVE	0 KIEFER BLVD SACRAMENTO CA 95830	NON GC	
291	LUST	FAA REMOTE REPEATER T0606700624/CASE CLOSED	RODGERS RD ELK GROVE CA 95624	NON GC	
292	LUST	BUILDING 10030 T0606700814/CASE CLOSED	10030 MATHER FIELD BLVD MATHER AFB CA 95655	NON GC	
293	LUST	BUILDING 10060 T0606700637/CASE CLOSED	10060 MATHER FIELD BLVD MATHER AFB CA 95655	NON GC	
294	LUST	BUILDING 10065 T0606700815/CASE CLOSED	10065 MATHER FIELD BLVD MATHER AFB CA 95655	NON GC	

Environmental FirstSearch
Sites Summary Report

Target Property: RANCHO CORDOVA CA 95742 **JOB:** 0165-002

TOTAL: 302 **GEOCODED:** 61 **NON GEOCODED:** 241 **SELECTED:** 0

Page No.	DB Type	Site Name/ID/Status	Address	Dist/Dir	Map ID
295	INSTCONTROL	MATHER AIR FORCE BASE DR_34970003/ACTIVE	5485 ACRES 12 MI EA OF SACR SACRAMENTO CA 95655	NON GC	
296	UST	MATHER AFB METERING STATION TISID-STATE37982/ACTIVE	0 OLD PLACERVILLE MATHER AFB CA 95655	NON GC	
297	OTHER	CITIZENS TELECOM CO OF CA INC FA0009538/NOT REPORTED	6301 LAGUNA BLVD ELK GROVE CA 95624	NON GC	
297	OTHER	ULTIMATE WATER SPORTS FA0018646/NOT REPORTED	2421 MERCANTILE DR D RANCHO CORDOVA CA 95742	NON GC	
297	OTHER	 NCLRCA544/NOT REPORTED	10855 SEGOVIA WAY RANCHO CORDOVA CA	NON GC	
298	OTHER	 NCLRCA251/NOT REPORTED	10418 S WHITE ROCK RD APT A RANCHO CORDOVA CA	NON GC	
298	OTHER	ARCO 5696 FA0002704/NOT REPORTED	9215 ELK GROVE FLORIN RD E ELK GROVE CA 95624	NON GC	
298	OTHER	AT and T CORP FA0009160/NOT REPORTED	FRANKLIN BLVD/LAMBERT RD ELK GROVE CA 95624	NON GC	
299	OTHER	BIG O TIRES FA0013082/NOT REPORTED	8022 ORCHARD LOOP LN ELK GROVE CA 95624	NON GC	
299	OTHER	CALVINE 76 009 FA0013943/NOT REPORTED	8010 ORCHARD LOOP LN ELK GROVE CA 95624	NON GC	
299	OTHER	MATHER AVIATION LLC FA0018222/NOT REPORTED	10360 MACREADY AVE A and B MATHER CA 95655	NON GC	
300	OTHER	CITIZENS TELECOM CO OF CA INC FA0008880/NOT REPORTED	8224 ELK GROVE FLORIN RD ELK GROVE CA 95624	NON GC	
301	LUST	BUILDING 18015 T0606700354/REMEDIAL ACTION	18015 MATHER FIELD BLVD MATHER AFB CA 95655	NON GC	
302	OTHER	ELK GROVE FA0013039/NOT REPORTED	MILE POST 122,9 ELK GROVE CA 95624	NON GC	
302	OTHER	ELK GROVE WATER SERVICE WELL 10 FA0008875/NOT REPORTED	9351 FEICKERT (SIDE) DR ELK GROVE CA 95624	NON GC	
302	OTHER	FINISHLINE RACING EQUIPMENT FA0013290/NOT REPORTED	10535 E STOCKTON BLVD E ELK GROVE CA 95624	NON GC	
303	OTHER	SURVEY ROAD WELL (W-28) FA0018977/NOT REPORTED	SW GRANT LINE RD ELK GROVE CA 95624	NON GC	
303	OTHER	CINGULAR WIRELESS FA0008802/NOT REPORTED	6925 EAGLES NEST RD MATHER AFB CA 95655	NON GC	
303	OTHER	FAA MHR/ARSR FA0008714/NOT REPORTED	4175 CONVAIR LINER RD MATHER AFB CA 95655	NON GC	
304	OTHER	FAA NORTHERN CALIFORNIA TERMINAL FA0014726/NOT REPORTED	11375 DOUGLAS RD MATHER CA 95655	NON GC	

Environmental FirstSearch
Sites Summary Report

Target Property: RANCHO CORDOVA CA 95742

JOB: 0165-002

TOTAL: 302 **GEOCODED:** 61 **NON GEOCODED:** 241 **SELECTED:** 0

Page No.	DB Type	Site Name/ID/Status	Address	Dist/Dir	Map ID
304	OTHER	CINGULAR WIRELESS FA0009487/NOT REPORTED	8780 KAMMERER RD ELK GROVE CA 95624	NON GC	

TRACK ➤ INFO SERVICES, LLC

Environmental FirstSearch™ Report

Target Property:

RANCHO CORDOVA CA 95742

Job Number: 0165-002

PREPARED FOR:

RMC Water and Enviroment

2868 Propect Park Dr. Suite 130

Rancho Cordova, CA 95670

10-13-08

Tel: (866) 664-9981 *Fax: (818) 249-4227*

Environmental FirstSearch
Search Summary Report

Target Site:

RANCHO CORDOVA CA 95742

FirstSearch Summary

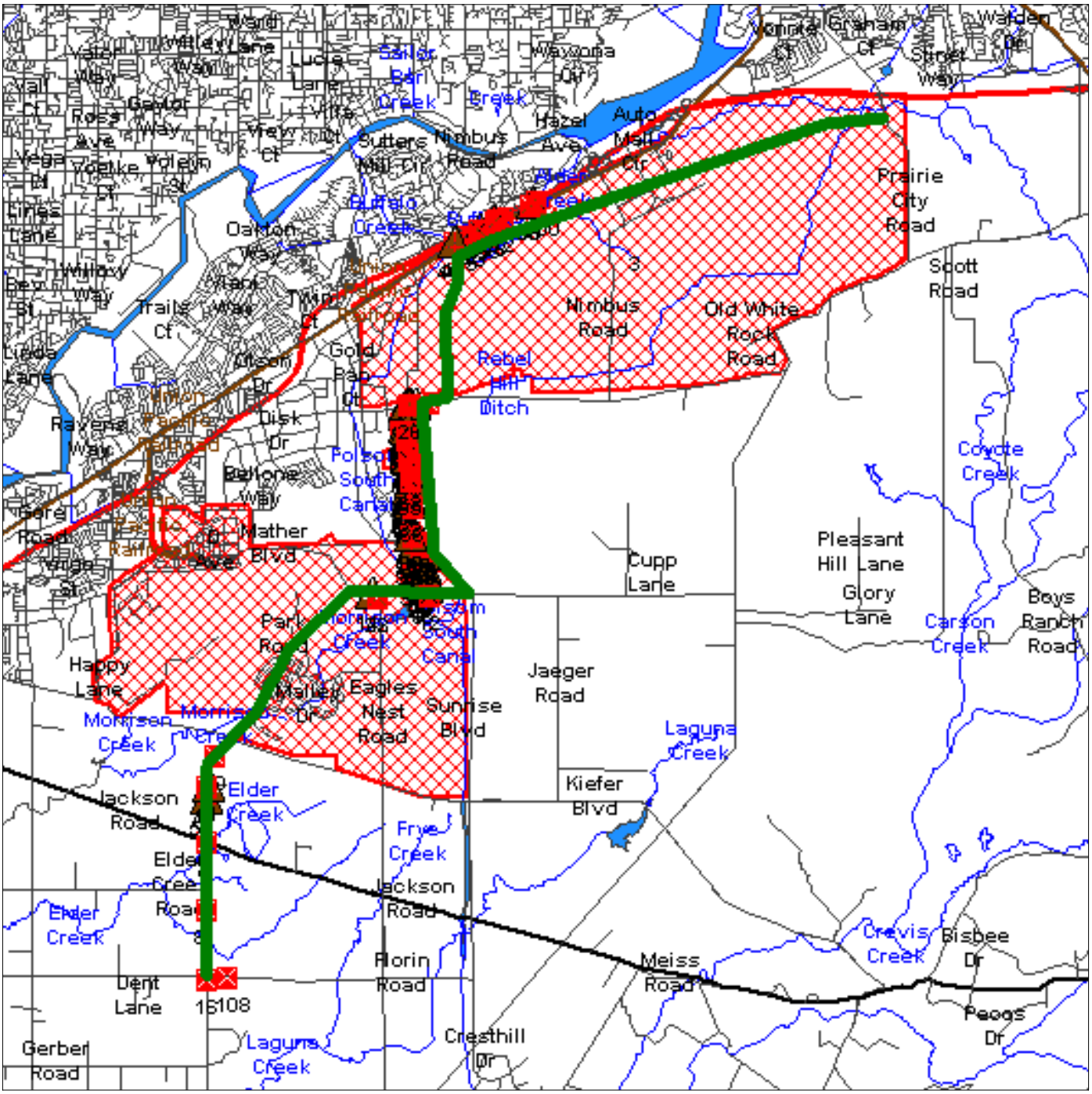
Database	Sel	Updated	Radius	Site	1/8	1/4	1/2	1/2>	ZIP	TOTALS
NPL	Y	07-09-08	0.25	2	0	0	-	-	0	2
NPL Delisted	Y	07-09-08	0.25	0	0	0	-	-	0	0
CERCLIS	Y	07-09-08	0.25	0	0	0	-	-	0	0
NFRAP	Y	07-09-08	0.25	0	1	1	-	-	0	2
RCRA COR ACT	Y	07-03-08	0.25	0	0	0	-	-	1	1
RCRA TSD	Y	07-03-08	0.25	0	0	0	-	-	1	1
RCRA GEN	Y	07-03-08	0.25	0	2	4	-	-	7	13
RCRA NLR	Y	07-03-08	0.12	0	0	-	-	-	0	0
Federal IC / EC	Y	10-01-08	0.25	0	0	0	-	-	2	2
ERNS	Y	07-30-08	0.12	0	3	-	-	-	27	30
Tribal Lands	Y	12-01-05	0.25	0	0	0	-	-	4	4
State/Tribal Sites	Y	10-03-08	0.25	0	0	1	-	-	6	7
State Spills 90	Y	11-06-07	0.12	0	0	-	-	-	5	5
State/Tribal SWL	Y	09-02-08	0.25	1	1	3	-	-	10	15
State/Tribal LUST	Y	04-11-08	0.25	0	0	1	-	-	52	53
State/Tribal UST/AST	Y	07-01-08	0.25	0	2	4	-	-	11	17
State/Tribal EC	Y	NA	0.25	0	0	0	-	-	0	0
State/Tribal IC	Y	09-03-08	0.25	0	0	0	-	-	2	2
State/Tribal VCP	Y	10-03-08	0.25	0	0	0	-	-	0	0
State/Tribal Brownfields	Y	08-08-07	0.25	0	0	0	-	-	0	0
State Permits	Y	04-16-08	0.25	0	11	36	-	-	13	60
State Other	Y	10-03-08	0.25	0	25	64	-	-	83	172
- TOTALS -				3	45	114	0	0	224	386

Environmental FirstSearch

1 Mile Radius from Line

Single Map:

, RANCHO CORDOVA CA 95742



Source: U.S. Census TIGER Files

Linear Search Line .....

Identified Site, Multiple Sites, Receptor .....

NPL, DELNPL, Brownfield, Solid Waste Landfill (SWL), Hazardous Waste

Triballand.....

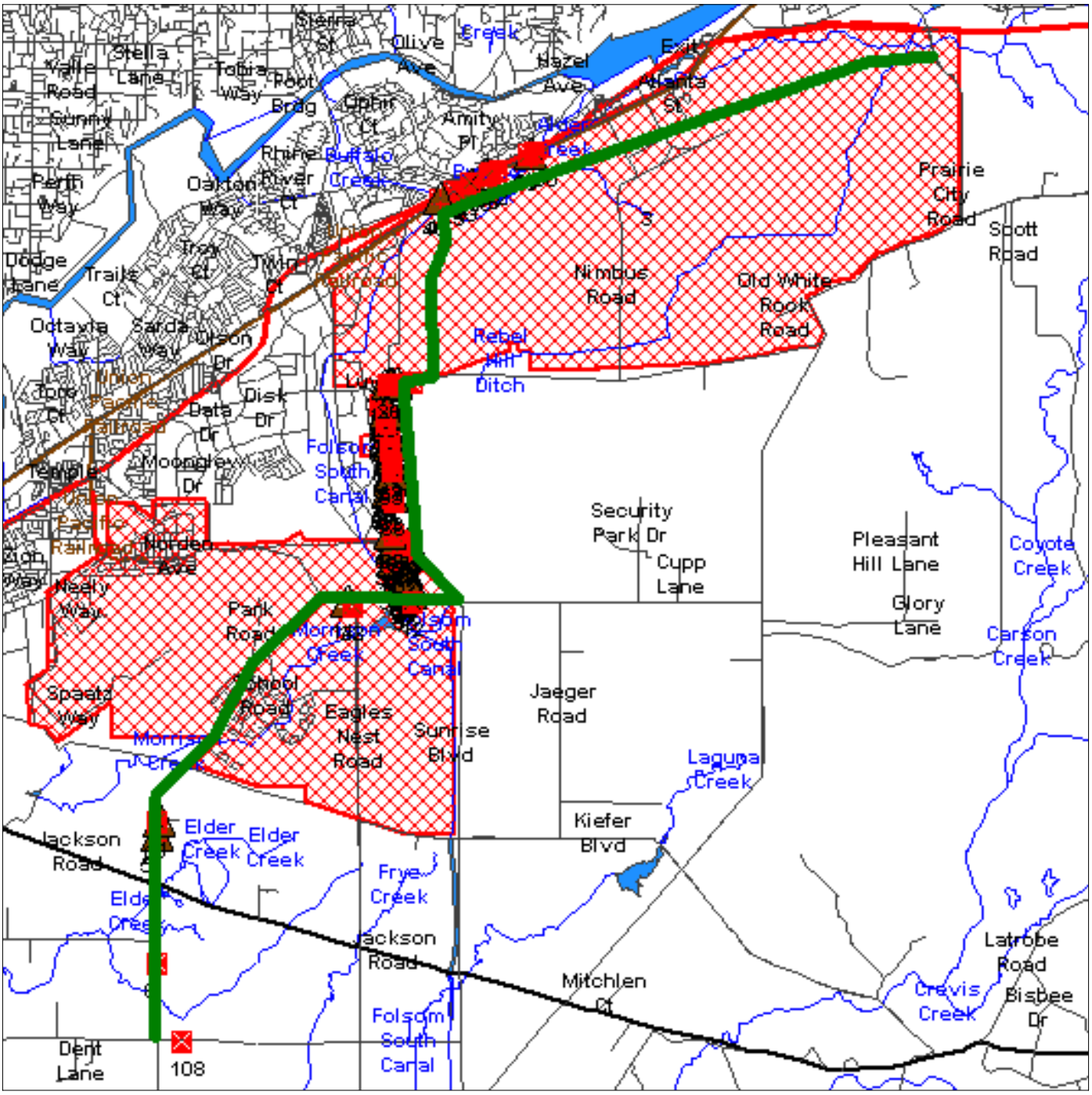
Railroads .....

Environmental FirstSearch

.25 Mile Radius from Line

LINEAR: Multiple Databases

, RANCHO CORDOVA CA 95742



Source: U.S. Census TIGER Files

Linear Search Line .....

Identified Site, Multiple Sites, Receptor .....

NPL, DELNPL, Brownfield, Solid Waste Landfill (SWL), Hazardous Waste

Triballand.....

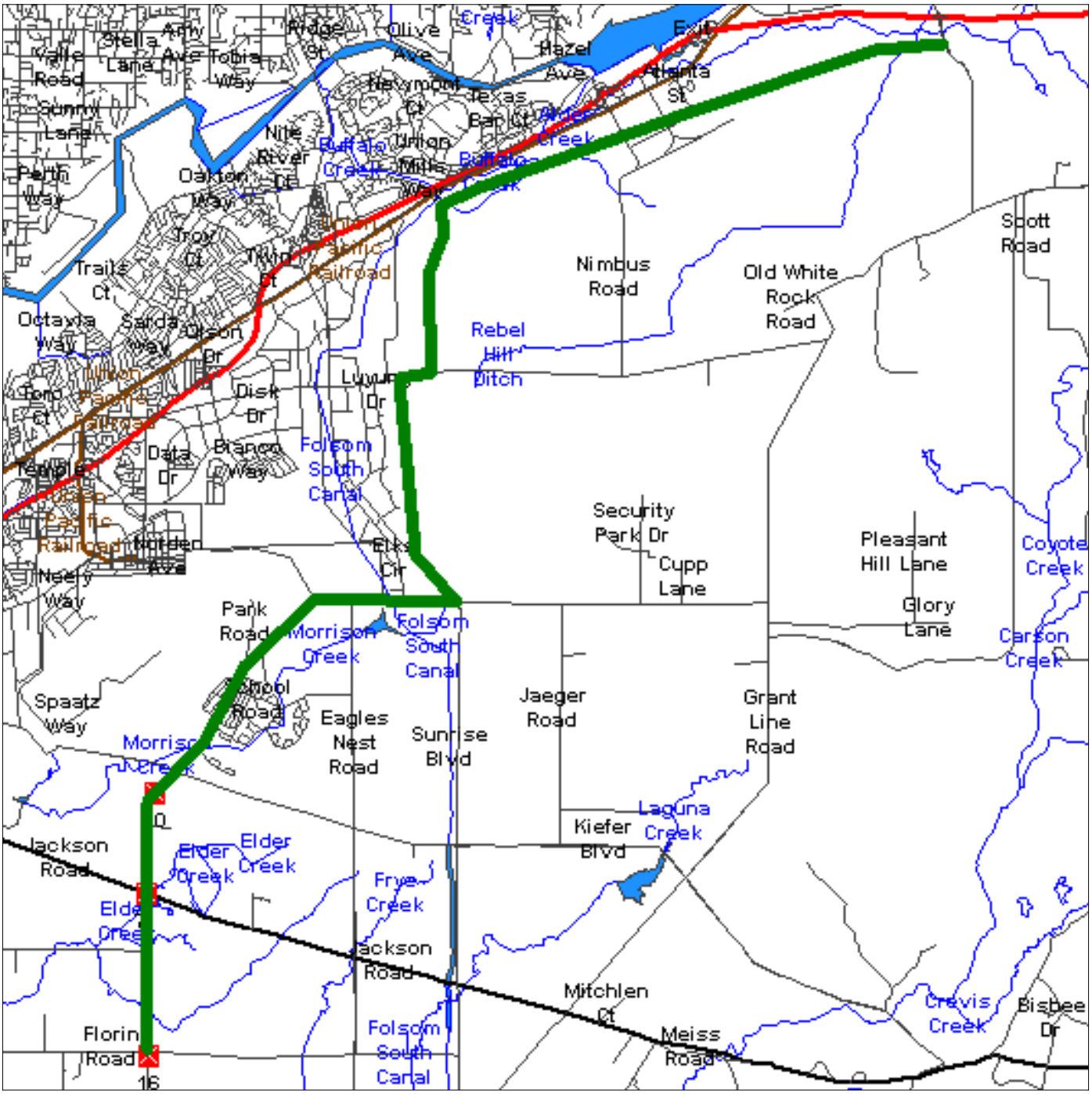
Railroads .....

Environmental FirstSearch

.12 Mile Radius from Line

LINEAR: SPILLS90, ERNS, RCRANLR

, RANCHO CORDOVA CA 95742



Source: U.S. Census TIGER Files

Linear Search Line .....

Identified Site, Multiple Sites, Receptor .....

NPL, DELNPL, Brownfield, Solid Waste Landfill (SWL), Hazardous Waste

Triballand.....

Railroads .....

Environmental FirstSearch
Site Information Report

Request Date:	10-13-08	**Search Type:**	LINEAR
Requestor Name:	RMC Water		15.78 mile(s)
Standard:	LINEAR	**Job Number:**	0165-002

Target Site:

RANCHO CORDOVA CA 95742

Demographics

Sites:	386	**Non-Geocoded:**	224	**Population:**	NA
Radon:	NA				

Site Location

	Degrees (Decimal)	**Degrees (Min/Sec)**		**UTMs**
Longitude:	-121.226914	-121:13:37	**Easting:**	654474.372
Latitude:	38.567512	38:34:3	**Northing:**	4270068.109
			Zone:	10

Comment

Comment:

Additional Requests/Services

Adjacent ZIP Codes: 0.25 Mile(s)

ZIP Code	City Name	ST	Dist/Dir	Sel
95655	MATHER	CA	0.00 --	Y
95827	SACRAMENTO	CA	0.00 --	Y
95829	SACRAMENTO	CA	0.00 --	Y
95630	FOLSOM	CA	0.03 NE	N
95670	RANCHO CORDOVA	CA	0.18 NW	N
95830	SACRAMENTO	CA	0.02 -E	N

Services:

	Requested?	Date
Sanborns	No	
Aerial Photographs	No	
Historical Topos	No	
City Directories	No	
Title Search/Env Liens	No	
Municipal Reports	No	
Online Topos	No	

Environmental FirstSearch
Sites Summary Report

Target Property: RANCHO CORDOVA CA 95742

JOB: 0165-002

TOTAL: 386 **GEOCODED:** 162 **NON GEOCODED:** 224 **SELECTED:** 0

Page No.	DB Type	Site Name/ID/Status	Address	Dist/Dir	Map ID
1	NPL	MATHER AIR FORCE BASE (ACandW DISP CA8570024143/FINAL	MATHER AIR FORCE BASE SACRAMENTO CA 95655	0.00 --	1
9	SWL	ROUNDTREE ROCK AND LANDSCAPING SWIS34-TI-1356/ACTIVE	5300 EXCELSIOR ROAD RANCHO CORDOVA CA 95827	0.00 --	2
11	NPL	AEROJET GENERAL CORP. CAD980358832/FINAL	HWY US 50 and AEROJET RD RANCHO CORDOVA CA 95670	0.00 --	3
17	NFRAP	DAVIES PROP CAD982358210/NFRAP-N	11491 WHITE ROCK RD RANCHO CORDOVA CA 95742	0.01 SE	4
17	PERMITS	ASSOCIATED TRANSPORTATION SERVICES CAL000323013/ACTIVE	5300 EXCELSIOR RD SACRAMENTO CA 95827	0.01 -E	5
18	PERMITS	K A BOOTH HEAVY EQUIPMENT INC CAL000231925/ACTIVE	5300 EXCELSIOR RD SACRAMENTO CA 95827	0.01 -E	5
19	PERMITS	ROUND TREE LANDSCAPE CAL000319441/ACTIVE	5300 EXCELSIOR RD SACRAMENTO CA 95827	0.01 -E	5
20	UST	ROP EQUIPMENT OPERATION AND RE TISID-STATE38213/ACTIVE	5308 EXCELSIOR SACRAMENTO CA 95826	0.01 -E	6
21	ERNS	UNKNOWN 342444/HIGHWAY RELATED	EXCELSIOR RD and JACKSON HW SACRAMENTO CA 95827	0.01 -E	7
22	UST	HOWARD INGHAM TISID-STATE37917/ACTIVE	6407 EXCELSIOR SACRAMENTO CA 95826	0.01 -E	8
23	RCRAGN	INDEPENDENT DIESEL REPAIR CAR000077693/SGN	3780 RECYCLE RD STE 2 RANCHO CORDOVA CA 95742	0.02 NE	9
24	ERNS	UNKNOWN 319504/UNKNOWN (NRC)	4781 EXCELSIOR RD FLORIN CA 95828	0.02 SE	10
25	OTHER	SACRAMENTO CO OFFICE OF EDUCATION FA0008935/NOT REPORTED	5304 EXCELSIOR RD SACRAMENTO CA 95827	0.02 -E	11
25	OTHER	RANCHO MARINE RECYCLING FA0015210/NOT REPORTED	3761 RECYCLE RD RANCHO CORDOVA CA 95742	0.03 SW	12
26	PERMITS	SACRAMENTO RACEWAY PARK CAL000074349/ACTIVE	5305 EXCELSIOR RD SACRAMENTO CA 95827	0.03 -E	13
27	OTHER	SACRAMENTO RACEWAY FA0010611/NOT REPORTED	5305 EXCELSIOR RD SACRAMENTO CA 95827	0.03 -E	13
27	RCRAGN	INSURANCE AUTO AUCTIONS INC CAP000077701/LGN	11499 DOUGLAS RD RANCHO CORDOVA CA 95742	0.04 SW	14
28	OTHER	SACRAMENTO SALVAGE POOL RO0000336/CLOSED	11499 DOUGLAS RD RANCHO CORDOVA CA	0.04 SW	14
28	OTHER	EMERY WORLDWIDE RO0001412/CLOSED	11499 DOUGLAS RD RANCHO CORDOVA CA	0.04 SW	14
29	OTHER	CHEVRON WEST FA0008789/NOT REPORTED	11499 DOUGLAS RD RANCHO CORDOVA CA 95742	0.04 SW	14
29	PERMITS	CATCTHIC CAL000320154/ACTIVE	11499 DOUGLAS RD RANCHO CORDOVA CA 95742	0.04 SW	14

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30	OTHER	INSURANCE AUTO AUCTION FA0008790/NOT REPORTED	11499 DOUGLAS RD RANCHO CORDOVA CA 95742	0.04 SW	14
31	PERMITS	INSURANCE AUTO AUCTIONS INC CAL000211680/ACTIVE	11499 DOUGLAS RD RANCHO CORDOVA CA 95742	0.04 SW	14
32	PERMITS	STANICK S AUTO PARTS CAL000300829/ACTIVE	3791 RECYCLE RD UNIT 2 RANCHO CORDOVA CA 95742	0.05 NE	15
32	PERMITS	CAPITAL AUTO DISMANTLER CAL000319387/ACTIVE	3791 RECYCLE RD STE 1 RANCHO CORDOVA CA 95742	0.05 NE	15
33	ERNS	UNKNOWN 365633/HIGHWAY RELATED	6830 EXCELSIOR SACRAMENTO CA 95829	0.05 SE	16
34	PERMITS	WOODMACK PRODUCTS INC CAL000135760/ACTIVE	11430 WHITE ROCK RD RANCHO CORDOVA CA 95742	0.06 SW	17
35	OTHER	WOODMACK PRODUCTS FA0010502/NOT REPORTED	11430 WHITE ROCK RD RANCHO CORDOVA CA 95742	0.06 SW	17
35	OTHER	CMF TITAN WAKE ACCESSORIES FA0015619/NOT REPORTED	11494 REFINEMENT RD RANCHO CORDOVA CA 95742	0.08 SW	18
35	OTHER	VITA LAWN FA0010039/NOT REPORTED	11496 REFINEMENT RD B RANCHO CORDOVA CA 95742	0.08 SW	19
36	PERMITS	PERFECT IT BODY and PAINT INC CAL000174405/ACTIVE	11496 REFINEMENT RD RANCHO CORDOVA CA 95742	0.08 SW	19
37	OTHER	PERFECT-IT BODY and PAINT FA0011909/NOT REPORTED	11496 REFINEMENT RD RANCHO CORDOVA CA 95742	0.08 SW	19
37	OTHER	GOLDEN STATE FENCE CO INC FA0019043/NOT REPORTED	11493 REFINEMENT RD RANCHO CORDOVA CA 95742	0.08 SW	20
37	OTHER	KLUE INC FA0010038/NOT REPORTED	11492 REFINEMENT RD RANCHO CORDOVA CA 95742	0.08 SW	21
38	PERMITS	MATHER GOLF COURSE CAL000129958/ACTIVE	4103 EAGLES NEST ROAD MATHER CA 95655	0.09 SW	22
39	OTHER	MATHER GOLF COURSE FA0010597/NOT REPORTED	4103 EAGLES NEST RD MATHER AFB CA 95655	0.09 SW	23
39	OTHER	HAUL A WAY FA0010501/NOT REPORTED	11421 WHITE ROCK RD RANCHO CORDOVA CA 95742	0.10 SW	24
40	SWL	AUTO PARTS GROUP SWIS34-TI-1135/ACTIVE	3761 RECYCLE ROAD RANCHO CORDOVA CA 95742	0.10 SW	25
42	OTHER	TOWPRO FA0012197/NOT REPORTED	11417 WHITE ROCK RD RANCHO CORDOVA CA 95742	0.11 SW	26
42	OTHER	ALL HYUNDAI and IZUZU AUTO RECYCLI FA0010030/NOT REPORTED	3750 RECYCLE RD 2 RANCHO CORDOVA CA 95742	0.11 NE	27
42	OTHER	CHEVY SPORTS RECYCLING FA0011907/NOT REPORTED	3750 RECYCLE RD 1 RANCHO CORDOVA CA 95742	0.11 NE	27

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43	OTHER	MAGIC AUTO SALES and DISMANTLER IN FA0017509/NOT REPORTED	3689 RECYCLE RD 1 RANCHO CORDOVA CA 95742	0.12 SW	28
43	OTHER	A A AUTO BODY AND DISMANTLER FA0014135/NOT REPORTED	3689 RECYCLE RD 2 RANCHO CORDOVA CA 95742	0.12 SW	28
43	OTHER	SUNRISE AUTO REPAIR FA0017514/NOT REPORTED	3667 RECYCLE RD 1 RANCHO CORDOVA CA 95742	0.12 SW	29
44	OTHER	BandMandW AUTO RECYCLING FA0017558/NOT REPORTED	3697 RECYCLE RD 2 RANCHO CORDOVA CA 95742	0.12 SW	30
44	OTHER	IMPORT AUTO DISMANTLING INC FA0017559/NOT REPORTED	3697 RECYCLE RD 1 RANCHO CORDOVA CA 95742	0.12 SW	30
45	OTHER	O.K. MACHINE and MFG CO FA0010499/NOT REPORTED	11413 WHITE ROCK RD RANCHO CORDOVA CA 95742	0.12 SW	31
45	OTHER	OLYMPIC STONE FA0010500/NOT REPORTED	11415 WHITE ROCK RD RANCHO CORDOVA CA 95742	0.12 SW	32
46	PERMITS	AAA DODGE TRUCK and VAN CAL000283876/ACTIVE	3731 RECYCLE RD RANCHO CORDOVA CA 95742	0.13 NE	33
46	OTHER	RANCHO FORD TRUCK PARTS FA0011906/NOT REPORTED	3731 RECYCLE RD RANCHO CORDOVA CA 95742	0.13 NE	33
47	PERMITS	G0LD RIVER METAL FINISHING INC CAL000324969/ACTIVE	11411 WHITE ROCK RD RANCHO CORDOVA CA 95742	0.13 SW	34
47	OTHER	GOLD RIVER METAL FINISHING INC FA0010498/NOT REPORTED	11411 WHITE ROCK RD RANCHO CORDOVA CA 95742	0.13 SW	34
48	RCRAGN	GOLD RIVER METAL FINISHING CAL000137870/VGN	11411 WHITE ROCK RD RANCHO CORDOVA CA 95742	0.13 SW	34
49	PERMITS	RANCHO MARINE RECYCLING INC CAL000264536/ACTIVE	3761 RECYCLE RD STE C RANCHO CORDOVA CA 95742	0.13 SW	35
50	RCRAGN	CHEVY SPORTS RECYCLING INC CAD983620444/SGN	3750 RECYCLE RD 1 RANCHO CORDOVA CA 95742	0.13 NE	36
51	PERMITS	CAPITOL ONE AUTO DISMANTLER CAL000318722/ACTIVE	3781 RECYCLE RD STE 1 RANCHO CORDOVA CA 95742	0.14 NE	37
51	OTHER	WIREMAN FENCE PRODUCTS FA0010027/NOT REPORTED	3644 RECYCLE RD RANCHO CORDOVA CA 95742	0.14 SW	38
52	OTHER	BAJA LIMO FA0018570/NOT REPORTED	11405 WHITE ROCK RD RANCHO CORDOVA CA 95742	0.14 SW	39
52	RCRAGN	OVERHEAD DOOR CORP CAD071553051/SGN	11850 FOLSOM BLVD RANCHO CORDOVA CA 95742	0.15 NW	40
53	PERMITS	ALL HYUNDAI and ISUZU AUTO RECYCLI CAL000212705/ACTIVE	3750 RECYCLE RD UNIT 2 RANCHO CORDOVA CA 95742	0.15 SW	41
54	PERMITS	VALLEY MOTORWERKS INC CAL000305996/ACTIVE	11401 WHITE ROCK RD RANCHO CORDOVA CA 95742	0.15 SW	42

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54	OTHER	CPE USA RACING FA0014306/NOT REPORTED	11401 WHITE ROCK RD RANCHO CORDOVA CA 95742	0.15 SW	42
55	STATE	SCHNITZER STEEL CAL34340001/INACTIVE - NEEDS EVA	12000 FOLSOM BOULEVARD RANCHO CORDOVA CA 95670	0.16 NW	43
56	UST	SCHNITZER STEEL PRODUCTS CO AST1623/AST SWRCB REG.5S	12000 FOLSOM BLVD RANCHO CORDOVA CA 95742	0.16 NW	43
56	UST	SCHNITZER STEEL PRODUCTS CO. TISID-STATE38316/ACTIVE	12000 FOLSOM RANCHO CORDOVA CA 95742	0.16 NW	43
57	OTHER	SCHNITZER STEEL FA0009118/NOT REPORTED	12000 FOLSOM BLVD RANCHO CORDOVA CA 95742	0.16 NW	43
58	PERMITS	SCHNITZER STEEL CAL000061482/ACTIVE	12000 FOLSOM BLVD RANCHO CORDOVA CA 95742	0.16 NW	43
59	PERMITS	RECYCLE ROAD AUTO RECYCLING CAL000263433/ACTIVE	3723 RECYCLE RD RANCHO CORDOVA CA 95742	0.16 NE	44
59	OTHER	RECYCLE ROAD DISMANTLERS FA0011905/NOT REPORTED	3723 RECYCLE RD RANCHO CORDOVA CA 95742	0.16 NE	44
60	NFRAP	SCHNITZER STEEL CAD982357972/NFRAP-N	11920 FOLSOM BLVD RANCHO CORDOVA CA 95742	0.16 NW	45
60	OTHER	CINGULAR WIRELESS FA0009117/NOT REPORTED	11840 FOLSOM BLVD UNIT C RANCHO CORDOVA CA 95742	0.16 NW	46
61	OTHER	VERIZON WIRELESS FA0017969/NOT REPORTED	11840 FOLSOM BLVD RANCHO CORDOVA CA 95742	0.16 NW	46
61	OTHER	BECK S FURNITURE FA0009116/NOT REPORTED	11840 FOLSOM BLVD RANCHO CORDOVA CA 95742	0.16 NW	46
61	OTHER	FOLSOM LAKE FORD - STORAGE YARD FA0005258/NOT REPORTED	2300 MINE SHAFT LN RANCHO CORDOVA CA 95742	0.16 NW	47
62	OTHER	HALEY METAL FABRICATION FA0013113/NOT REPORTED	3343 LUYUNG DR RANCHO CORDOVA CA 95670	0.17 SW	48
62	OTHER	SACRAMENTO DRILLING INC FA0013834/NOT REPORTED	3299 LUYUNG DR RANCHO CORDOVA CA 95742	0.17 SW	49
62	OTHER	BOB KING FA0015325/NOT REPORTED	3730 RECYCLE RD 1 RANCHO CORDOVA CA 95742	0.17 NE	50
63	OTHER	SPECIALTY PRODUCTS DESIGN FA0010029/NOT REPORTED	3730 RECYCLE RD, 8 RANCHO CORDOVA CA 95742	0.17 NE	50
63	PERMITS	FULLER EXCAVATING and DEMOLITION I CAL000301234/ACTIVE	3283 LUYUNG DR RANCHO CORDOVA CA 95742	0.17 SW	51
64	OTHER	FULLER EXCAVATING and DEMOLITION I FA0015133/NOT REPORTED	3283 LUYUNG DR RANCHO CORDOVA CA 95742	0.17 SW	51
65	SWL	CADILLAC AUTO RECYCLING SWIS34-TI-1134/ACTIVE	3715 RECYCLE ROAD RANCHO CORDOVA CA 95742	0.17 SW	52

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67	OTHER	GEROLAMY COMPANY FA0009590/NOT REPORTED	3322 LUYUNG DR RANCHO CORDOVA CA 95742	0.18 SW	53
67	PERMITS	BC GEROLAMY CAL000257860/ACTIVE	3322 LUYUNG DR RANCHO CORDOVA CA 95742	0.18 SW	53
68	OTHER	ZUKE S LANDSCAPE INC FA0018290/NOT REPORTED	3373 LUYUNG DR RANCHO CORDOVA CA 95742	0.18 SW	54
68	PERMITS	ZUKES LANDSCAPE INC CAL000288184/ACTIVE	3373 LUYUNG DR RANCHO CORDOVA CA 95742	0.18 SW	54
69	PERMITS	EJ MASONRY CAL000270642/ACTIVE	3330 LUYUNG DR RANCHO CORDOVA CA 95742	0.18 SW	55
69	OTHER	EJ MASONRY INC FA0018421/NOT REPORTED	3330 LUYUNG DR RANCHO CORDOVA CA 95742	0.18 SW	55
70	PERMITS	NIMBUS LANDSCAPING MATERIALS INC CAL000073750/ACTIVE	12137 FOLSOM BLVD RANCHO CORDOVA CA 95742	0.18 NW	56
71	OTHER	NIMBUS LANDSCAPING FA0009119/NOT REPORTED	12137 FOLSOM BLVD RANCHO CORDOVA CA 95742	0.18 NW	56
71	PERMITS	FORD AUTO RECYCLING CAL000312513/ACTIVE	3624 RECYCLE RD RANCHO CORDOVA CA 95742	0.18 SW	57
72	OTHER	FORD AUTO RECYCLING FA0011904/NOT REPORTED	3624 RECYCLE RD RANCHO CORDOVA CA 95742	0.18 SW	57
72	OTHER	AMERICAN LANDSCAPE CO FA0016372/NOT REPORTED	3195 LUYUNG DR RANCHO CORDOVA CA 95742	0.18 SW	58
72	OTHER	EXTRA EQUIPMENT FA0014674/NOT REPORTED	3181 LUYUNG DR C RANCHO CORDOVA CA 95742	0.18 SW	59
73	OTHER	CIMA S LANDSCAPE/MAINTENANCE FA0013572/NOT REPORTED	3181 LUYUNG DR RANCHO CORDOVA CA 95742	0.18 SW	59
73	OTHER	SAC CYCLE FA0015134/NOT REPORTED	3271 LUYUNG DR RANCHO CORDOVA CA 95742	0.18 SW	60
74	PERMITS	MIDNIGHT PERFORMANCE CAL000280739/ACTIVE	3282 LUYUNG DR RANCHO CORDOVA CA 95742	0.18 SW	61
74	OTHER	MIDNIGHT PERFORMANCE FA0017986/NOT REPORTED	3282 LUYUNG DR RANCHO CORDOVA CA 95742	0.18 SW	61
75	OTHER	HORIZONS PAINTING FA0018291/NOT REPORTED	3191 LUYUNG DR RANCHO CORDOVA CA 95742	0.18 SW	62
75	OTHER	TOLIVER PLASTERING INC FA0015126/NOT REPORTED	3346 LUYUNG DR RANCHO CORDOVA CA 95742	0.18 SW	63
75	OTHER	UNITED BODY SHOP FA0018416/NOT REPORTED	3290 LUYUNG DR RANCHO CORDOVA CA 95742	0.18 SW	64
76	OTHER	YOUNGER GENERAL CONTRACTORS INC FA0018420/NOT REPORTED	3358 LUYUNG DR B RANCHO CORDOVA CA 95742	0.18 SW	65

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76	OTHER	J L HALEY ENTERPRISES FA0017061/NOT REPORTED	3510 LUYUNG DR RANCHO CORDOVA CA 95742	0.19 SW	66
77	PERMITS	CIMAS LANDSCAPE and MAINTENANCE CO CAL000261367/ACTIVE	3181 LUYUNG DR STE B RANCHO CORDOVA CA 95742	0.19 SW	67
77	OTHER	ACM MACHINING INC FA0015121/NOT REPORTED	3218 LUYUNG DR RANCHO CORDOVA CA 95742	0.19 SW	68
78	PERMITS	ACM MACHINING INC CAL000153329/ACTIVE	3218 LUYUNG DR RANCHO CORDOVA CA 95742	0.19 SW	68
79	PERMITS	MM PRECISION CAL000229721/ACTIVE	3174 LUYUNG DR UNIT 6 RANCHO CORDOVA CA 95742	0.19 SW	69
80	PERMITS	MOTION CONTROL ENGINEERING INC CAL000251146/INACTIVE	11380 WHITE ROCK RD RANCHO CORDOVA CA 95742	0.19 SW	70
81	OTHER	MOTION CONTROL ENGINEERING INC FA0015363/NOT REPORTED	11380 WHITE ROCK RD RANCHO CORDOVA CA 95742	0.19 SW	70
81	OTHER	WING WORX FA0018352/NOT REPORTED	3242 LUYUNG DR RANCHO CORDOVA CA 95742	0.19 SW	71
82	PERMITS	AUTO FIDELITY GROUP INC CAL000277781/INACTIVE	3242 LUYUNG DR RANCHO CORDOVA CA 95742	0.19 SW	71
83	UST	NIMBUS LANDSCAPING MATERIALS TISID-STATE37163/ACTIVE	12137 FOLSOM RANCHO CORDOVA CA 95742	0.19 NW	72
84	OTHER	SOLON FIRE CONTROL FA0015549/NOT REPORTED	3190 LUYUNG DR RANCHO CORDOVA CA 95742	0.19 SW	73
84	OTHER	A+ GREEN THUMB FA0015122/NOT REPORTED	3174 LUYUNG DR 4 RANCHO CORDOVA CA 95742	0.19 SW	74
84	OTHER	MARTIN BROTHERS CONSTRUCTION FA0009588/NOT REPORTED	3174 LUYUNG DR 3 RANCHO CORDOVA CA 95670	0.19 SW	74
85	OTHER	ELECTRIC LIGHTWAVE FA0015120/NOT REPORTED	3224 LUYUNG DR RANCHO CORDOVA CA 95742	0.19 SW	75
85	OTHER	CAR WASH TECHNOLOGY FA0009589/NOT REPORTED	3200 LUYUNG DR RANCHO CORDOVA CA 95742	0.19 SW	76
85	OTHER	CARPET WAREHOUSE FA0018940/NOT REPORTED	12181 FOLSOM BLVD D RANCHO CORDOVA CA 95742	0.19 NW	77
86	OTHER	CONCRETE SURFACING SYSTEMS IN FA0015706/NOT REPORTED	12161 FOLSOM BLVD D RANCHO CORDOVA CA 95742	0.19 NW	78
86	PERMITS	ENGLISH GARDEN CARE INC CAL000305445/ACTIVE	3294 LUYUNG DR RANCHO CORDOVA CA 95742	0.20 SW	79
87	OTHER	CADILLAC AUTO RECYCLING FA0010028/NOT REPORTED	3715 RECYCLE RD RANCHO CORDOVA CA 95742	0.20 NE	80
88	PERMITS	SandT RECYCLING DBA CADILLAC AUTO CAL000148645/ACTIVE	3715 RECYCLE RD RANCHO CORDOVA CA 95742	0.20 NE	80

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89	PERMITS	RANCHO MOTORCYCLE DISMANTL CAL000254892/ACTIVE	3701 RECYCLE RD RANCHO CORDOVA CA 95742	0.20 SW	81
90	OTHER	RANCHO MOTORCYCLE DISMANTLER FA0017078/NOT REPORTED	3701 RECYCLE RD RANCHO CORDOVA CA 95742	0.20 SW	81
91	PERMITS	CENTRAL STRIPING SERVICE INC CAL000196280/ACTIVE	3489 LUYUNG DR RANCHO CORDOVA CA 95742	0.20 SW	82
92	OTHER	CENTRAL STRIPING SERVICE FA0009591/NOT REPORTED	3489 LUYUNG DR RANCHO CORDOVA CA 95742	0.20 SW	82
92	OTHER	FOLSOM READY MIX - TRUCK YARD FA0012726/NOT REPORTED	3479 LUYUNG DR RANCHO CORDOVA CA 95742	0.21 SW	83
92	OTHER	PATCO TRUCKING FA0016793/NOT REPORTED	3395 LUYUNG DR RANCHO CORDOVA CA 95742	0.21 SW	84
93	OTHER	RANCHO CORDOVA INDEPENDENT DIESEL FA0018350/NOT REPORTED	3395 LUYUNG DR B RANCHO CORDOVA CA 95742	0.21 SW	84
94	PERMITS	PATCO TRUCKING INC CAL000225375/ACTIVE	3395 LUYUNG DR RANCHO CORDOVA CA 92572	0.21 SW	84
95	PERMITS	B and M and W AUTO DISMANTLING INC CAL000250590/ACTIVE	3697 RECYCLE RD UNIT 2 RANCHO CORDOVA CA 95742	0.22 SW	85
96	PERMITS	IMPORT AUTO DISMANTLING INC CAL000327564/ACTIVE	3697 RECYCLE RD STE 1 RANCHO CORDOVA CA 95742	0.22 SW	85
96	OTHER	WORLD AUTO BODY PARTS LLC FA0011903/NOT REPORTED	3606 RECYCLE RD RANCHO CORDOVA CA 95742	0.22 SW	86
97	SWL	WAREHOUSE CHEVEROLET DISMANTLER SWIS34-TI-1132/ACTIVE	3750 RECYCLE ROAD RANCHO CORDOVA CA 95742	0.22 SW	87
99	OTHER	URATA and SONS CEMENT CO INC FA0016753/NOT REPORTED	3430 LUYUNG DR RANCHO CORDOVA CA 95742	0.23 SW	88
100	PERMITS	URATA and SON S CEMENT INC CAL000238321/ACTIVE	3430 LUYUNG DR RANCHO CORDOVA CA 95742	0.23 SW	88
101	PERMITS	HAT AUTO RECYCLING CAL000325736/ACTIVE	3689 RECYCLE RD STE 2 RANCHO CORDOVA CA 95742	0.23 SW	89
101	OTHER	SACRAMENTO METRO FIRE STATION 63 FA0018470/NOT REPORTED	12395 FOLSOM BLVD RANCHO CORDOVA CA 95742	0.23 NW	90
102	OTHER	BUG WORLD FA0010026/NOT REPORTED	3600 RECYCLE RD RANCHO CORDOVA CA 95742	0.23 SW	91
102	PERMITS	SPECIALIZED GERMAN RECYCLING CAL000300540/ACTIVE	3600 RECYCLE RD RANCHO CORDOVA CA 95742	0.23 SW	91
103	UST	FOLSOM CORDOVA USD SACRAMENTO15282/NUMBER OF CERTIFIE	11458 ELKS CR RANCHO CORDOVA CA 95742	0.23 NE	92
103	PERMITS	INTERSTATE CONRETE PUMPING, INC CAL000268640/ACTIVE	3450 LUYUNG DR RANCHO CORDOVA CA 95742	0.23 SW	93

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104	OTHER	INTERSTATE CONCRETE PUMPING FA0018319/NOT REPORTED	3450 LUYUNG DR RANCHO CORDOVA CA 95742	0.23 SW	93
104	PERMITS	JL HALEY ENTERPRISES CAL000258521/ACTIVE	3510 LUYUN DR RANCHO CORDOVA CA 95742	0.23 SW	94
105	RCRAGN	CLARK PEST CONTROL INC CAD981428725/SGN	11426 ELKS CIRCLE RANCHO CORDOVA CA 95742	0.23 SW	95
106	LUST	NIMBUS WINERY T0606791930/NO ACTION	12401 FOLSOM BLVD RANCHO CORDOVA CA 95670	0.24 NW	96
107	OTHER	NIMBUS WINERY RO0001440/NOT REPORTED	12401 FOLSOM BLVD RANCHO CORDOVA CA	0.24 NW	96
107	PERMITS	AZTEC MACHINE COMPANY CAL000261542/ACTIVE	11450 ELKS CIR RANCHO CORDOVA CA 95742	0.24 NE	97
108	OTHER	DHC SUPPLIES INC FA0009865/NOT REPORTED	3790 OMEC CIR RANCHO CORDOVA CA 95742	0.24 SW	98
108	OTHER	TREE CARE INCORPORATED FA0008916/NOT REPORTED	11530 ELKS CIR RANCHO CORDOVA CA 95742	0.24 SW	99
108	OTHER	WESTERN TREE/LANDSCAPE SUPPLY FA0008917/NOT REPORTED	11530 ELKS CIR B RANCHO CORDOVA CA 95742	0.24 SW	99
109	OTHER	TWILIGHT MOBILE PARK FA0009120/NOT REPORTED	12423 FOLSOM BLVD RANCHO CORDOVA CA 95742	0.24 NW	100
109	PERMITS	TOWN AND COUNTRY CONTRACTORS INC CAL000274056/ACTIVE	3181 LUYUNG DR A RANCHO CORDOVA CA 95742	0.24 SW	101
110	OTHER	FINISH LINE FA0011199/NOT REPORTED	11476 ELKS CIR RANCHO CORDOVA CA 95742	0.24 SW	102
110	PERMITS	SHEPARD MECHANICAL CAL000311710/ACTIVE	3784 OMEC CIR STE 4 RANCHO CORDOVA CA 95742	0.25 SW	103
111	OTHER	CINGULAR WIRELESS FA0008914/NOT REPORTED	11460 ELKS CIR RANCHO CORDOVA CA 95742	0.25 SW	104
111	OTHER	BMB CORPORATION FA0008915/NOT REPORTED	11460 ELKS CIR SACRAMENTO CA 95742	0.25 SW	104
111	OTHER	PETERS AUTO REPAIR FA0013303/NOT REPORTED	3784 OMEC CIR 6 RANCHO CORDOVA CA 95742	0.25 SW	105
112	OTHER	O and D TECH ON WHEELS FA0011818/NOT REPORTED	3784 OMEC CIR, 2 RANCHO CORDOVA CA 95742	0.25 SW	105
112	SWL	ENVIRONMENTAL STRUCTURES LLC SWIS34-TI-0678/ACTIVE	3286 FITZGERALD RANCHO CORDOVA CA 95742	0.25 SW	106
113	OTHER	FOLSOM CORDOVA UNIFSCHDIST FA0002766/NOT REPORTED	11458 ELKS CIR RANCHO CORDOVA CA 95742	0.25 SW	107
113	OTHER	MATSUDA OF SACTO FA0012810/NOT REPORTED	10600 FLORIN RD SACRAMENTO CA 95827	0.25 SE	108

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114	PERMITS	GEE-CODE PROGRAMMING AND DESIGN CAL000298892/ACTIVE	11466 ELKS CIR STE 5 RANCHO CORDOVA CA 95742	0.25 SW	109

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115	RCRACOR	USAF MATHER CA8570024143/CA	323 FTW EM MATHER AFB MATHERS AFB CA 95655	NON GC	
119	STATE	MATHER AIR FORCE BASE CAL34970003/ACTIVE	5485 ACRES 12 MI EA OF SACR SACRAMENTO CA 95655	NON GC	
139	RCRAGN	FOLSOM CORDOVA USD KITTY HAWK ELEM CA4570090247/SGN	DEAN TERRACE MATHER AFB CA 95655	NON GC	
140	ERNS	AERO JET 479498/FIXED FACILITY	HWY 50 AT AERO JET RD RANCHO CORDOVA CA	NON GC	
141	RCRAGN	MATHER HEIGHTS ELEMENTARY SCHOOL CA5570090246/SGN	SCHOOL ST MATHER AFB CA 95655	NON GC	
142	RCRAGN	USAF MATHER CA8570024143/LGN	323 FTW EM MATHER AFB MATHER AFB CA 95655	NON GC	
144	RCRAGN	USNG CA ARMY AVIATION SUPPORT FACI CAD983666439/SGN	MATHER AFB BUILDING 4850 MATHER AFB CA 95655	NON GC	
145	RCRAGN	PEP BOYS 112 CAD981991664/SGN	10899 FOLSOM BLVD SACRAMENTO CA 95827	NON GC	
146	STATE	SMUD PCB SUBSTATION SITE 10 CAL34490035/INACTIVE - NEEDS EVA	ELK GROVE-FLORIN ROAD SACRAMENTO CA 95829	NON GC	
147	STATE	SUNRISE RIVER INDUSTRIAL PARK CAL34490055/CERTIFIED	GOLD RIVER ROAD AND U.S. HI RANCHO CORDOVA CA 95827	NON GC	
151	STATE	LEIBEL S CLEANERS AND TAILORS CAL34720040/PROPERTY/SITE REFERR	10853 FOLSOM BOULEVARD SACRAMENTO CA 95827	NON GC	
153	RCRAGN	JB RADIATOR SPECIALTIES INC CAR000191486/LGN	8441 SPECIALTY CIRCLE SACRAMENTO CA 95829	NON GC	
154	RCRA	USAF MATHER CA8570024143/TSD	323 FTW EM MATHER AFB MATHER AFB CA 95655	NON GC	
157	ERNS	465959	EAST SIDE OF BUILDING SEWAR RANCHO CORDOVA CA	NON GC	
158	ERNS	AERO JET CORP 256874/FIXED FACILITY	INTERSECTION OF HY 50 and H RANCHO CORDOVA CA	NON GC	
160	ERNS	AMERICAN ENVIRONMENTAL 73638/UNKNOWN	AMERICAN ENVIRONMENTAL RANCHO CORDOVA CA	NON GC	
161	ERNS	AERO JET PROPULSION DIV 205246/FIXED FACILITY	AERO JET GENERAL HWY 50 AND RANCHO CORDOVA CA	NON GC	
163	ERNS	BRADSHAW KINDER MORGAN NRC-827155/MOBILE	RANCHO CORDOVA CA	NON GC	
166	ERNS	AEROJET 634988/FIXED FACILITY	HWY 50 AT HAZEL, BUILDING RANCHO CORDOVA CA	NON GC	
167	ERNS	AEROJET 634469/FIXED FACILITY	HWY 50 AT HAZEL, BUILDING RANCHO CORDOVA CA	NON GC	

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168	ERNS	513071/HIGHWAY RELATED	EXCELSIOR ROAD 1/2 MILE N O SACRAMENTO CA 95829	NON GC	
169	ERNS	AEROJET PROPULSION DIV. 467206/FIXED FACILITY	HWY 50 AND AEROJET RD RANCHO CORDOVA CA	NON GC	
171	STATE	ELEMENTARY SCHOOL NO. 42 CAL34010025/NO FURTHER ACTION FO	DOUGLAS ROAD/SUNRISE BOULEV RANCHO CORDOVA CA 95742	NON GC	
172	ERNS	71559/UNKNOWN	BUSINESS LOCATION RANCHO CORDOVA CA	NON GC	
173	ERNS	MATHER AFB 257315/PIPELINE RELATED	NEAR BASE SEWAGE TREATMENT SACRAMENTO CA 95655	NON GC	
175	ERNS	AERO JET CO 226418/FIXED FACILITY	AERO JET PROPERTY HWY 50 AN RANCHO CORDOVA CA	NON GC	
177	ERNS	PIPE CROSSING MACREADY AVE, EST SI NRC-795272/PIPELINE	RANCHO CORDOVA CA 95655	NON GC	
180	ERNS	AEROJET PROPOLSION DIV. 235051/FIXED FACILITY	HWY 50 AND AEROJET RD RANCHO CORDOVA CA	NON GC	
182	STATE	ELEMENTARY SCHOOL NO 42 CAL34010023/NO ACTION - FOR CALM	DOUGLAS ROAD/SUNRISE BOULEV RANCHO CORDOVA CA 95742	NON GC	
183	ERNS	AERO JET 471528/FIXED FACILITY	HWY 50 AT AERO JET RD RANCHO CORDOVA CA	NON GC	
184	RCRAGN	SACRAMENTO CO OF CAD983644493/SGN	12701 KIEFER BLVD SACRAMENTO CA 95827	NON GC	
185	UST	W N HUNT and SONS TISID-STATE37698/ACTIVE	0 CRNR S. WATT and OSAGE RD SACRAMENTO CA 95827	NON GC	
186	LUST	BUILDING 1218 T0606700351/CASE CLOSED	1218 MATHER FIELD BLVD MATHER AFB CA 95655	NON GC	
187	UST	MATHER AFB EXCHANGE HOUSING SE TISID-STATE38242/ACTIVE	0 SERVICE STA BLDG 210 MATHER AFB CA 95655	NON GC	
188	UST	MATHER AFB EXCHANGE SERVICE ST TISID-STATE38243/ACTIVE	0 BLDG 2410 5TH ST MATHER AFB CA 95655	NON GC	
189	UST	MATHER AFB METERING STATION TISID-STATE37982/ACTIVE	0 OLD PLACERVILLE MATHER AFB CA 95655	NON GC	
190	UST	MATHER AIR FORCE BASE TISID-STATE38153/ACTIVE	0 MATHER AFB C CA 95655	NON GC	
191	UST	SAC-ARSR TISID-STATE38193/ACTIVE	0 MATHER AFB CA 95655	NON GC	
192	UST	SACRAMENTO ARMY DEPOT EXCHANGE TISID-STATE38241/ACTIVE	0 BLDG 699 OKINAWA ST SACRAMENTO CA 95655	NON GC	
193	UST	N36 - SUMP 82 TISID-STATE37412/ACTIVE	0 N. OF W. P RR TRAK ON WE SACRAMENTO CA 95827	NON GC	

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194	UST	PEP BOYS TISID-STATE37451/ACTIVE	10899 FOLSOM SACRAMENTO CA 95827	NON GC	
195	OTHER	PWA: EQUINE DR WELL SITE (W63) FA0008931/NOT REPORTED	EQUINE DR/POLO CROSSE AVE SACRAMENTO CA 95829	NON GC	
195	UST	TEXACO REF AND MARKETING INC TISID-STATE7338/INACTIVE	8775 LAKE KINGS BEACH CA 95827	NON GC	
196	OTHER	PWA: ANDALUSIAN DR WELL (W62) FA0008355/NOT REPORTED	ANDALUSIAN DR/DRESSAGE WAY SACRAMENTO CA 95829	NON GC	
197	LUST	BUILDING 10030 T0606700814/CASE CLOSED	10030 MATHER FIELD BLVD MATHER AFB CA 95655	NON GC	
198	LUST	BUILDING 10060 T0606700637/CASE CLOSED	10060 MATHER FIELD BLVD MATHER AFB CA 95655	NON GC	
199	LUST	BUILDING 10065 T0606700815/CASE CLOSED	10065 MATHER FIELD BLVD MATHER AFB CA 95655	NON GC	
200	LUST	BUILDING 10072 T0606700359/CASE CLOSED	10072 MATHER FIELD BLVD MATHER AFB CA 95655	NON GC	
201	LUST	BUILDING 10090 T0606700358/POLLUTION CHARACTERI	10090 MATHER FIELD BLVD MATHER AFB CA 95655	NON GC	
202	LUST	BUILDING 10100 T0606700357/CASE CLOSED	10100 MATHER FIELD BLVD MATHER AFB CA 95655	NON GC	
203	LUST	BUILDING 10120 T0606700744/CASE CLOSED	10120 MATHER FIELD BLVD MATHER AFB CA 95655	NON GC	
204	LUST	BUILDING 10300 T0606700356/CASE CLOSED	10300 MATHER FIELD BLVD MATHER AFB CA 95655	NON GC	
205	LUST	BUILDING 10400 T0606700454/CASE CLOSED	10400 MATHER FIELD BLVD MATHER AFB CA 95655	NON GC	
206	ERNS	AEROJET STRATEGIC PROPULSION 73174/UNKNOWN	F AREA (FD) RANCHO CORDOVA CA	NON GC	
207	UST	S59 - ARDEN GOLD PUMP STATION TISID-STATE37411/ACTIVE	0 E. SIDE OF MAIN AVE 1/8 ORANGEVALE CA 95827	NON GC	
209	OTHER	FIREHOUSE WELL (W-03) FA0018978/NOT REPORTED	SE LA SIERRA DR SACRAMENTO CA 95827	NON GC	
209	OTHER	MATHER AVIATION LLC FA0018222/NOT REPORTED	10360 MACREADY AVE A and B MATHER CA 95655	NON GC	
209	OTHER	MATHER HOUSING WTP (WF-4) FA0019161/NOT REPORTED	HADDEN WAY MATHER CA 95655	NON GC	
209	OTHER	PWA: RECYCLE WELL SITE (W18) FA0010301/NOT REPORTED	RECYCLE RD MATHER CA 95655	NON GC	
209	OTHER	SAC ARMY AVIATION SUPPORT FAC FA0010327/NOT REPORTED	10616 SUPERFORTRESS AVE MATHER AFB CA 95655	NON GC	

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210	OTHER	SAC REGIONAL DRIVERS TRAINING FA0017085/NOT REPORTED	3905 ALERT RD MATHER CA 95655	NON GC	
210	OTHER	SHOPPETTE FA0012695/NOT REPORTED	MATHER RD SACRAMENTO CA 95655	NON GC	
210	OTHER	CLARUS LIGHTING FA0016415/NOT REPORTED	10183 CROYDON WAY C SACRAMENTO CA 95827	NON GC	
212	OTHER	DOUGLAS RD METERING STATION (OWM01 FA0014495/NOT REPORTED	DOUGLAS/FOLSOM SO CANAL RD SACRAMENTO CA 95827	NON GC	
212	OTHER	EMSER TILE FA0018889/NOT REPORTED	9819 BUSINESS PARK DR B SACRAMENTO CA 95827	NON GC	
212	OTHER	PWA: SHELDON WATER WELL (W65) FA0010164/NOT REPORTED	SHELDON RD/SHORTLINE RD SACRAMENTO CA 95829	NON GC	
212	OTHER	ENGINE HOUSE 9 FA0018500/NOT REPORTED	8501 FLORIN PERKINS RD SACRAMENTO CA 95827	NON GC	
213	LUST	BUILDING 14517 T0606700817/CASE CLOSED	14517 MATHER FIELD BLVD MATHER AFB CA 95655	NON GC	
214	OTHER	HUNT and SONS INC FA0016355/NOT REPORTED	9687 GORE RD SACRAMENTO CA 95827	NON GC	
215	OTHER	LEIBEL S CLEANERS AND TAILORS CAL34720040/REFER: OTHER AGENCY	10853 FOLSOM BOULEVARD SACRAMENTO CA 95827	NON GC	
216	OTHER	PRECISION PLASTICS FA0008622/NOT REPORTED	9745 BUSINESS PARK DR A SACRAMENTO CA 95827	NON GC	
217	OTHER	ROSEMONT HIGH SCHOOL CAL34010010/NO FURTHER ACTION	KIEFER BOULEVARD/BRADSHAW A SACRAMENTO CA 95827	NON GC	
219	OTHER	SUNRISE RIVER INDUSTRIAL PARK DR_34490055/CERTIFIED	GOLD RIVER ROAD AND U.S. HI RANCHO CORDOVA CA 95827	NON GC	
223	OTHER	TILE OUTLET FA0017910/NOT REPORTED	9941 HORN RD E SACRAMENTO CA 95827	NON GC	
223	OTHER	VALLEY RUBBER and GASKET CO FA0008726/NOT REPORTED	10182 CROYDON WAY C SACRAMENTO CA 95827	NON GC	
223	OTHER	VERIZON WIRELESS FA0017932/NOT REPORTED	9305 OATES DR SACRAMENTO CA 95827	NON GC	
223	OTHER	WINCHESTER ELECTRONICS FA0015021/NOT REPORTED	9795 BUSINESS PARK DR K SACRAMENTO CA 95827	NON GC	
223	OTHER	HYDRA WAREHOUSING FA0010466/NOT REPORTED	6300 S WATT AVE SACRAMENTO CA 95829	NON GC	
224	OTHER	EMSER TILE FA0008624/NOT REPORTED	9828 BUSINESS PARK DR B SACRAMENTO CA 95827	NON GC	
225	LUST	BUILDING 8158 T0606700347/CASE CLOSED	8158 MATHER FIELD BLVD MATHER AFB CA 95655	NON GC	

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226	LUST	BUILDING 10410 T0606700816/NO ACTION	10410 MATHER FIELD BLVD MATHER AFB CA 95655	NON GC	
227	LUST	BUILDING 4844 T0606700352/CASE CLOSED	4844 MATHER FIELD BLVD MATHER AFB CA 95655	NON GC	
228	LUST	BUILDING 7010 T0606700808/CASE CLOSED	7010 MATHER FIELD BLVD MATHER AFB CA 95655	NON GC	
229	LUST	BUILDING 7022C T0606700345/CASE CLOSED	7022 MATHER FIELD BLVD MATHER AFB CA 95655	NON GC	
230	LUST	BUILDING 7033 T0606700809/LEAK BEING CONFIRMED	7033 MATHER FIELD BLVD MATHER AFB CA 95655	NON GC	
231	LUST	BUILDING 7039 T0606700810/LEAK BEING CONFIRMED	7039 MATHER FIELD BLVD MATHER AFB CA 95655	NON GC	
232	LUST	BUILDING 7080 T0606700346/REMEDIAL ACTION	7080 MATHER FIELD BLVD MATHER AFB CA 95655	NON GC	
233	LUST	BUILDING 7090 T0606700811/REMEDIAL ACTION	7090 MATHER FIELD BLVD MATHER AFB CA 95655	NON GC	
234	LUST	BUILDING 7100 T0606700812/CASE CLOSED	7100 MATHER FIELD BLVD MATHER AFB CA 95655	NON GC	
235	LUST	BUILDING 4150 T0606700638/CASE CLOSED	4150 MATHER FIELD BLVD MATHER AFB CA 95655	NON GC	
236	LUST	BUILDING 8152 T0606700635/LEAK BEING CONFIRMED	8152 MATHER FIELD BLVD MATHER AFB CA 95655	NON GC	
237	LUST	BUILDING 4145 T0606700639/CASE CLOSED	4145 MATHER FIELD BLVD MATHER AFB CA 95655	NON GC	
238	LUST	REFUELING STN 31 T0606700477/CASE CLOSED	31 MATHER FIELD BLVD MATHER AFB CA 95655	NON GC	
239	LUST	HUNT AND SONS T0606749910/PRELIM. SITE ASSES.	11341 WHITE ROCK ROAD RANHO CORDOVA CA 95827	NON GC	
240	LUST	SAC CO - HandB EQUIP YARD T0606700681/CASE CLOSED	9600 BRANCH CENTER RD SACRAMENTO CA 95827	NON GC	
241	LUST	UPRR YARD T0606701050/LEAK BEING CONFIRMED	3675 PACIFIC AVE SACRAMENTO CA 95827	NON GC	
242	TRIBALLAND	BUREAU OF INDIAN AFFAIRS CONTACT I BIA-95742	UNKNOWN CA 95742	NON GC	
242	TRIBALLAND	BUREAU OF INDIAN AFFAIRS CONTACT I BIA-95655	UNKNOWN CA 95655	NON GC	
243	TRIBALLAND	BUREAU OF INDIAN AFFAIRS CONTACT I BIA-95827	UNKNOWN CA 95827	NON GC	
243	TRIBALLAND	BUREAU OF INDIAN AFFAIRS CONTACT I BIA-95829	UNKNOWN CA 95829	NON GC	

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244	FED IC / EC	MATHER AIR FORCE BASE (ACandW DISP CA8570024143-EC/EPA ENG CONTROL	MATHER AIR FORCE BASE MATHER CA 95655	NON GC	
254	FED IC / EC	MATHER AIR FORCE BASE (ACandW DISP CA8570024143-IC/EPA INST CONTROL	MATHER AIR FORCE BASE MATHER CA 95655	NON GC	
256	LUST	BUILDING 8150 T0606700813/CASE CLOSED	8150 MATHER FIELD BLVD MATHER AFB CA 95655	NON GC	
257	LUST	BUILDING 3226 T0606700376/POLLUTION CHARACTERI	3226 MATHER FIELD BLVD MATHER AFB CA 95655	NON GC	
258	LUST	BUILDING 14995 T0606700818/LEAK BEING CONFIRMED	14995 MATHER FIELD BLVD MATHER AFB CA 95655	NON GC	
259	LUST	BUILDING 16100 T0606700355/CASE CLOSED	16100 MATHER FIELD BLVD MATHER AFB CA 95655	NON GC	
260	LUST	BUILDING 18010 T0606700350/CASE CLOSED	18010 MATHER FIELD BLVD MATHER AFB CA 95655	NON GC	
261	LUST	BUILDING 18015 T0606700354/REMEDIAL ACTION	18015 MATHER FIELD BLVD MATHER AFB CA 95655	NON GC	
262	LUST	BUILDING 18020 T0606700819/POLLUTION CHARACTERI	18020 MATHER FIELD BLVD MATHER AFB CA 95655	NON GC	
263	LUST	BUILDING 18051 T0606700349/CASE CLOSED	18051 MATHER FIELD BLVD MATHER AFB CA 95655	NON GC	
264	LUST	BUILDING 21030 T0606700344/CASE CLOSED	21030 MATHER FIELD BLVD MATHER AFB CA 95655	NON GC	
265	LUST	BUILDING 2410 T0606700353/CASE CLOSED	2410 MATHER FIELD BLVD MATHER AFB CA 95655	NON GC	
266	LUST	BUILDING 2595 T0606700803/LEAK BEING CONFIRMED	2595 MATHER FIELD BLVD MATHER AFB CA 95655	NON GC	
267	LUST	BUILDING 4587 T0606700807/CASE CLOSED	4587 MATHER FIELD BLVD MATHER AFB CA 95655	NON GC	
268	LUST	BUILDING 3171 T0606700636/LEAK BEING CONFIRMED	3171 MATHER FIELD BLVD MATHER AFB CA 95655	NON GC	
269	OTHER	FAA NORTHERN CALIFORNIA TERMINAL FA0014726/NOT REPORTED	11375 DOUGLAS RD MATHER CA 95655	NON GC	
270	LUST	BUILDING 3272 T0606700348/CASE CLOSED	3272 MATHER FIELD BLVD MATHER AFB CA 95655	NON GC	
271	LUST	BUILDING 3286 T0606700375/REMEDIAL ACTION	3286 MATHER FIELD BLVD MATHER AFB CA 95655	NON GC	
272	LUST	BUILDING 3308 T0606700374/CASE CLOSED	3308 MATHER FIELD BLVD MATHER AFB CA 95655	NON GC	
273	LUST	BUILDING 33206 T0606700820/CASE CLOSED	33206 MATHER FIELD BLVD MATHER AFB CA 95655	NON GC	

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274	LUST	BUILDING 3385 T0606700872/LEAK BEING CONFIRMED	3385 MATHER FIELD BLVD MATHER AFB CA 95655	NON GC	
275	LUST	BUILDING 3388 T0606700373/CASE CLOSED	3388 MATHER FIELD BLVD MATHER AFB CA 95655	NON GC	
276	LUST	BUILDING 3389 T0606700372	3389 MATHER FIELD BLVD MATHER AFB CA 95655	NON GC	
277	LUST	BUILDING 3398 T0606700871/LEAK BEING CONFIRMED	3398 MATHER FIELD BLVD MATHER AFB CA 95655	NON GC	
278	LUST	BUILDING 3965 T0606700805/CASE CLOSED	3965 MATHER FIELD BLVD MATHER AFB CA 95655	NON GC	
279	LUST	BUILDING 4015 T0606700806/REMEDIAL ACTION	4015 MATHER FIELD BLVD MATHER AFB CA 95655	NON GC	
280	LUST	BUILDING 3169 T0606700804/LEAK BEING CONFIRMED	3169 MATHER FIELD BLVD MATHER AFB CA 95655	NON GC	
281	OTHER	AEROJET BLDG 01037 RO0000143/NOT REPORTED	AEROJET RD RANCHO CORDOVA CA	NON GC	
282	OTHER	MATHER AIR FORCE BASE DR_34970003/ACTIVE	5,485 ACRES; 12 MI EA OF SA SACRAMENTO CA 95655	NON GC	
283	PERMITS	TJH2B ANALYTICAL SRVS INC CAL000143622/ACTIVE	3123 FITE CR 105 SACRAMENTO CA 95827	NON GC	
284	PERMITS	LOPEZ AG SERVICE INC CAL000248640/ACTIVE	6925 EAGLES NEST RD SACRAMENTO CA 95829	NON GC	
285	OTHER	AAA DRIVE SHAFT OF SACRAMENTO FA0012062/NOT REPORTED	11336 SUNCO DR D RANCHO CORDOVA CA 95742	NON GC	
285	OTHER	ADVANCED TRANSMISSIONS FA0009756/NOT REPORTED	2660 MERCANTILE DR E RANCHO CORDOVA CA 95742	NON GC	
286	OTHER	AEROJET - 20025 RO0000159/NOT REPORTED	AEROJET RD RANCHO CORDOVA CA	NON GC	
286	OTHER	AEROJET BLDG 00002 RO0000138/CLOSED	AEROJET RD RANCHO CORDOVA CA	NON GC	
287	OTHER	AEROJET BLDG 01001 RO0000139/CLOSED	AEROJET RD RANCHO CORDOVA CA	NON GC	
287	OTHER	AEROJET BLDG 01022 RO0000140/CLOSED	AEROJET RD RANCHO CORDOVA CA	NON GC	
288	PERMITS	HUNT and SONS CAL000258788/ACTIVE	9687 GORE RD SACRAMENTO CA 95827	NON GC	
288	OTHER	AEROJET BLDG 01034 RO0000142/CLOSED	AEROJET RD RANCHO CORDOVA CA	NON GC	
289	PERMITS	CINGULAR CAL000305236/ACTIVE	1000 GOETHE RD SACRAMENTO CA 95827	NON GC	

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289	OTHER	AEROJET BLDG 01056 RO0000144/CLOSED	AEROJET RD RANCHO CORDOVA CA	NON GC	
290	OTHER	AEROJET BLDG 01058 RO0000145/CLOSED	AEROJET RD RANCHO CORDOVA CA	NON GC	
290	OTHER	AEROJET BLDG 01062 RO0000146/CLOSED	AEROJET RD RANCHO CORDOVA CA	NON GC	
291	OTHER	AEROJET BLDG 01086 RO0000147/CLOSED	AEROJET RD RANCHO CORDOVA CA	NON GC	
291	OTHER	AEROJET BLDG 01096 RO0000148/CLOSED	AEROJET RD RANCHO CORDOVA CA	NON GC	
292	OTHER	AEROJET BLDG 04045 RO0000149/CLOSED	AEROJET RD RANCHO CORDOVA CA	NON GC	
292	OTHER	AEROJET BLDG 04068 RO0000150/CLOSED	AEROJET RD RANCHO CORDOVA CA	NON GC	
293	OTHER	AEROJET BLDG 04090 RO0000151/CLOSED	AEROJET RD RANCHO CORDOVA CA	NON GC	
293	OTHER	AEROJET BLDG 05026 RO0000152/CLOSED	AEROJET RD RANCHO CORDOVA CA	NON GC	
294	OTHER	AEROJET BLDG 05068 RO0000153/CLOSED	AEROJET RD RANCHO CORDOVA CA	NON GC	
294	OTHER	AEROJET BLDG 01028 RO0000141/CLOSED	AEROJET RD RANCHO CORDOVA CA	NON GC	
295	SPILLS	HOME DEPOT - RANCHO CORDOVA G_SLT5S1593198/CASE OPEN	7820 FOLSOM BLVD. RANCHO CORDOVA CA	NON GC	
296	ERNS	CLC INVESTMENT CORP 262223/FIXED FACILITY	NW CORNER OF GRANT LINE WHI RANCHO CORDOVA CA 95742	NON GC	
298	ERNS	COOK CO 72869/UNKNOWN	COOK CO RANCHO CORDOVA CA	NON GC	
298	ERNS	FOUR PAWS PETS 73637/UNKNOWN	FOUR PAWS PETS RANCHO CORDOVA CA	NON GC	
299	ERNS	JACKSON ROAD AND BRADSHAW ROAD NRC-811667/PIPELINE	 RANCHO CORDOVA CA	NON GC	
302	ERNS	MINI-LUBE 74096/UNKNOWN	MINI-LUBE RANCHO CORDOVA CA	NON GC	
302	ERNS	UNK 108208/UNKNOWN	NR OLSON DR AND ZINFANDEL S RANCHO CORDOVA CA	NON GC	
303	ERNS	UNK 109777/UNKNOWN	GOULD and SACRAMENTO RANCHO CORDOVA CA	NON GC	
303	ERNS	UNKNOWN 21673/UNKNOWN	LINCOLN VILLAGE CENTER RANCHO CORDOVA CA	NON GC	

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304	ERNS		CUSTOMER- AMERICAN ENVIRONM		
		60430/UNKNOWN	RANCHO CORDOVA CA	NON GC	
305	PERMITS	JACK IN THE BOX INC CAL000146298/ACTIVE	9680 BUSINESS PKWY RANCHO CORDOVA CA 95827	NON GC	
306	SPILLS	AEROJET GENERAL CORPORATION - RANC G_SL185992958/NOT REPORTED	AEROJET RD and FOLSOM BLVD RANCHO CORDOVA CA	NON GC	
307	OTHER	AEROJET BLDG 48021 RO0000157/CLOSED	AEROJET RD RANCHO CORDOVA CA	NON GC	
307	SPILLS	J and G AGROW-TEK G_SLT5S3573731/CASE OPEN	3841-F FITZGERALD RD RANCHO CORDOVA CA 95742	NON GC	
308	SPILLS	MCDONNELL DOUGLAS/AEROJET INACTIVE			
		G_SL205493018/NOT REPORTED	4000 ACRES BOUNDED BY DOUGL RANCHO CORDOVA CA	NON GC	
309	SPILLS	SACRAMENTO SAVINGS BANK, SUNRISE I G_SLT5S2493288/CASE OPEN	SITE BOUNDED BY- HWY 50 and RANCHO CORDOVA CA	NON GC	
310	SWL	AEROJET (LANDFILL) WMUD5A342000003/ACTIVE	DEPT 5784/BLDG 20019 RANCHO CORDOVA CA	NON GC	
312	SWL	AEROJET LRC WASTE WATER LAGOON SWIS34-AA-0009/CLOSED	1.5 MI SE NIMBUS DAM RANCHO CORDOVA CA	NON GC	
314	SWL	WHITE ROCK ROAD DISPOSAL SITE - NO SWIS34-AA-0012/CLOSED	WHITE ROCK RD and GRANT LIN RANCHO CORDOVA CA	NON GC	
315	SWL	WHITE ROCK ROAD LANDFILL - SOUTH SWIS34-CR-5046/CLOSED	S SIDE WHITE ROCK RD 1M W G RANCHO CORDOVA CA	NON GC	
316	SWL	MATHER AFB LANDFILL SWIS34-AA-0031/CLOSED	HDQTRS 323 D FLYING TRAININ RANCHO CORDOVA CA 95655	NON GC	
317	PERMITS	WETLAND and EROSION TECHNOLOGIES I CAL000303126/ACTIVE	10201 SKYMASTER WAY MATHER CA 95655	NON GC	
317	PERMITS	CA STRAIGHT LINE MASONRY INC CAL000314668/ACTIVE	APN 063-0020-050 SACRAMENTO CA 95827	NON GC	
318	ERNS		LEVEL ONE COMMUNICATIONS, 9	NON GC	
		513127/FIXED FACILITY	RANCHO CORDOVA CA		
319	PERMITS	FOLSOM LAKE ASPHALT INC CAL000145242/ACTIVE	2951 A MERCANTILE DRIVE RANCHO CORDOVA CA 95742	NON GC	
320	OTHER	SMEDING PERFORMANCE FA0012068/NOT REPORTED	3340 SUNRISE BLVD E RANCHO CORDOVA CA 95742	NON GC	
320	OTHER	STONEPLUS FA0018649/NOT REPORTED	2431 MERCANTILE DR D RANCHO CORDOVA CA 95742	NON GC	
320	OTHER	SUNRISE TRACTOR FA0008913/NOT REPORTED	11428 ELKS CIR C RANCHO CORDOVA CA 95742	NON GC	
321	OTHER	TRUEGREEN CHEMLAWN FA0010309/NOT REPORTED	11335 SUNRISE GOLD CIR C RANCHO CORDOVA CA 95742	NON GC	

Environmental FirstSearch
Sites Summary Report

Target Property: RANCHO CORDOVA CA 95742 **JOB:** 0165-002

TOTAL: 386 **GEOCODED:** 162 **NON GEOCODED:** 224 **SELECTED:** 0

Page No.	DB Type	Site Name/ID/Status	Address	Dist/Dir	Map ID
321	OTHER	ULTIMATE WATER SPORTS FA0018646/NOT REPORTED	2421 MERCANTILE DR D RANCHO CORDOVA CA 95742	NON GC	
321	OTHER	NCLRCA544/NOT REPORTED	10855 SEGOVIA WAY RANCHO CORDOVA CA	NON GC	
322	SWL	MATHER AFB, ENVIRONMENTAL MGMT WMUD5A340700001/ACTIVE	MATHER AFB SACRAMENTO CA 95655	NON GC	
324	SWL	DELTA TRANSFER STATION (CLOSED) SWIS34-AA-0011/INACTIVE	GRAND ISLAND ROAD ISLETON CA 95827	NON GC	
325	SWL	ELK GROVE DISPOSAL SITE SWIS34-AA-0004/CLOSED	CORNER OF WATERMAN and BOND ELK GROVE CA 95827	NON GC	
327	OTHER	AEROJET BLDG 20001 RO0000154/NOT REPORTED	AEROJET RD RANCHO CORDOVA CA	NON GC	
328	SWL	WDR S GEN ORDER-REUSE OF WASTE DIS SWIS34-AA-0187/PLANNED	SACRAMENTO, SAN JOAQUIN CO SACRAMENTO CA 95827	NON GC	
329	OTHER	SBC (UC70R) FA0009751/NOT REPORTED	2590 MERCANTILE DR M RANCHO CORDOVA CA 95742	NON GC	
329	PERMITS	INTERMOUNTAIN SLURRY CAL000324723/ACTIVE	3811 RECYCLE RD STE 1 RANCHO CORDOVA CA 95742	NON GC	
330	PERMITS	FAA CAL000215010/ACTIVE	4199 CONVAIR LINER RD MATHER CA 95655	NON GC	
331	PERMITS	FEDERAL AVIATION ADMINISTRATION CAL000215009/ACTIVE	11375 DOUGLAS RD MATHER CA 95655	NON GC	
332	PERMITS	GOLDEN INTERSTATE SWEEPING CAL000326281/ACTIVE	10201 SKYMASTER WAY MATHER CA 95655	NON GC	
333	PERMITS	TRAJEN FLIGHT SUPPORT, LP CAL000181481/INACTIVE	MATHER AFB RANCHO CORDOVA CA 95655	NON GC	
334	INSTCONTROL	SUNRISE RIVER INDUSTRIAL PARK DR_34490055/CERTIFIED	GOLD RIVER ROAD AND U.S. HI RANCHO CORDOVA CA 95827	NON GC	
337	OTHER	NCLRCA251/NOT REPORTED	10418 S WHITE ROCK RD APT A RANCHO CORDOVA CA	NON GC	
337	OTHER	CINGULAR WIRELESS FA0008802/NOT REPORTED	6925 EAGLES NEST RD MATHER AFB CA 95655	NON GC	
337	OTHER	FAA MHR/ARSR FA0008714/NOT REPORTED	4175 CONVAIR LINER RD MATHER AFB CA 95655	NON GC	
338	INSTCONTROL	MATHER AIR FORCE BASE DR_34970003/ACTIVE	5485 ACRES 12 MI EA OF SACR SACRAMENTO CA 95655	NON GC	
339	SWL	GRAND ISLAND DISPOSAL SITE SWIS34-AA-0005/CLOSED	WESTERN TIP OF GRAND ISLAND ISLETON CA 95827	NON GC	
341	OTHER	DYNA-CYCLE FA0018265/NOT REPORTED	11525 AEROTEC CT RANCHO CORDOVA CA 95742	NON GC	

Environmental FirstSearch
Sites Summary Report

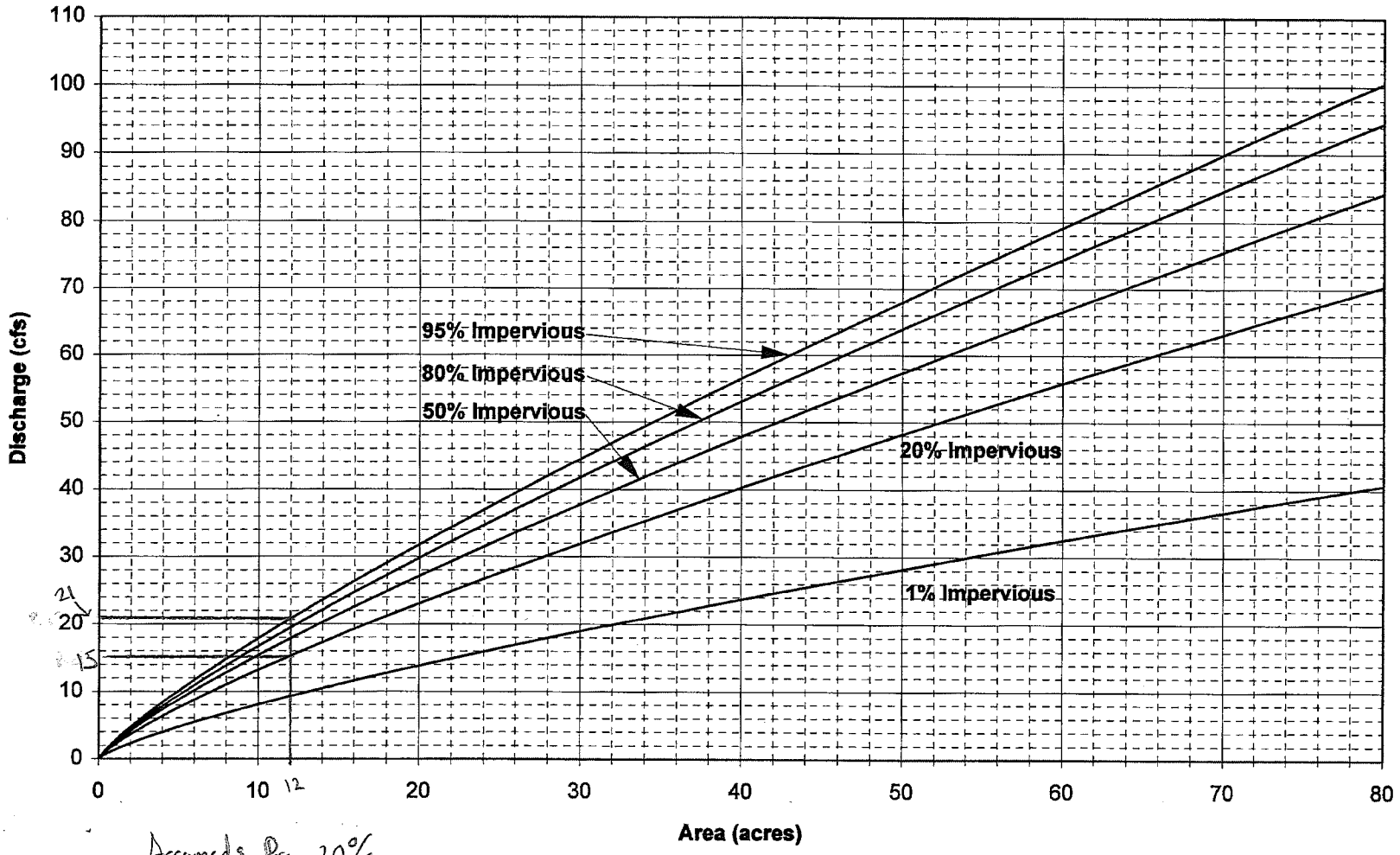
Target Property: RANCHO CORDOVA CA 95742 **JOB:** 0165-002

TOTAL: 386 **GEOCODED:** 162 **NON GEOCODED:** 224 **SELECTED:** 0

Page No.	DB Type	Site Name/ID/Status	Address	Dist/Dir	Map ID
341	OTHER	FRANKLIN BOOSTER STATION (WB02) FA0015480/NOT REPORTED	FRANKLIN/BIG HORN BLVD SACRAMENTO CA 95655	NON GC	
342	OTHER	AEROJET FINE CHEMICALS FA0014181/NOT REPORTED	HWY 50/AEROJET RD RANCHO CORDOVA CA 95742	NON GC	
343	OTHER	AEROJET MISSILE AND SPACE PROP PLN FA0009425/NOT REPORTED	HWY 50/AEROJET RD RANCHO CORDOVA CA 95742	NON GC	
344	OTHER	AEROJET TANK 20019 RO0000158/CLOSED	AEROJET RD RANCHO CORDOVA CA	NON GC	
344	OTHER	ALLEN IMPORTS FA0018723/NOT REPORTED	11300 SUNRISE GOLD CIR C RANCHO CORDOVA CA 95742	NON GC	
345	OTHER	ARDEN CORDOVA WATER SVCE (SCIBS) FA0015228/NOT REPORTED	11200 COLOMA RD RANCHO CORDOVA CA 95742	NON GC	
345	OTHER	ASH MARBLE and GRANITE-TOPS INC FA0018801/NOT REPORTED	11300 TRADE CENTER DR E RANCHO CORDOVA CA 95742	NON GC	
345	OTHER	AURA HARDWOOD LUMBER FA0013614/NOT REPORTED	2477 MERCANTILE DR E RANCHO CORDOVA CA 95742	NON GC	
347	OTHER	BARRY PAULSEN BOAT FA0009741/NOT REPORTED	2419 MERCANTILE DR E RANCHO CORDOVA CA 95742	NON GC	
347	OTHER	BEST BUY POOL SUPPLY LLC FA0018795/NOT REPORTED	11285 SUNRISE GOLD CIR E RANCHO CORDOVA CA 95742	NON GC	
347	OTHER	SISLER and SISLER CONSTRUCTION FA0018573/NOT REPORTED	11385 SUNRISE BLVD 100 RANCHO CORDOVA CA 95742	NON GC	
347	OTHER	CORDOVA RENTALS RO0000495/CLOSED	10077 FOLSOM BLVD RANCHO CORDOVA CA	NON GC	
348	OTHER	SIERRA PACIFIC HOME and COMFORT FA0014872/NOT REPORTED	2550 MERCANTILE DR D RANCHO CORDOVA CA 95742	NON GC	
348	OTHER	FIRE STATION 62 RO0001369/NOT REPORTED	3646 BRADSHAW RD RANCHO CORDOVA CA	NON GC	
349	OTHER	G.S.V. DISMANTLER FA0018118/NOT REPORTED	3383 FITZGERALD ST E RANCHO CORDOVA CA 95742	NON GC	
349	OTHER	HI TECH FABRICATION FA0014937/NOT REPORTED	2530 MERCANTILE DR E RANCHO CORDOVA CA 95742	NON GC	
349	OTHER	INTEGRATED PLASTICS FA0018943/NOT REPORTED	12167 FOLSOM BLVD B RANCHO CORDOVA CA 95742	NON GC	
351	OTHER	IRCTS WNN GROUNDWATER REMEDIATION FA0017375/NOT REPORTED	SUNRISE BLVD RANCHO CORDOVA CA 95742	NON GC	
351	OTHER	KELLY-MOORE PAINT CO INC FA0018135/NOT REPORTED	3068 SUNRISE BLVD B RANCHO CORDOVA CA 95742	NON GC	
351	OTHER	KIEWIT PACIFIC FA0016529/NOT REPORTED	SUNRISE/DOUGLAS RANCHO CORDOVA CA 95742	NON GC	

APPENDIX M8

Sacramento Method Rainfall Zone



Assumed: Pre- 20%
Post- 95%

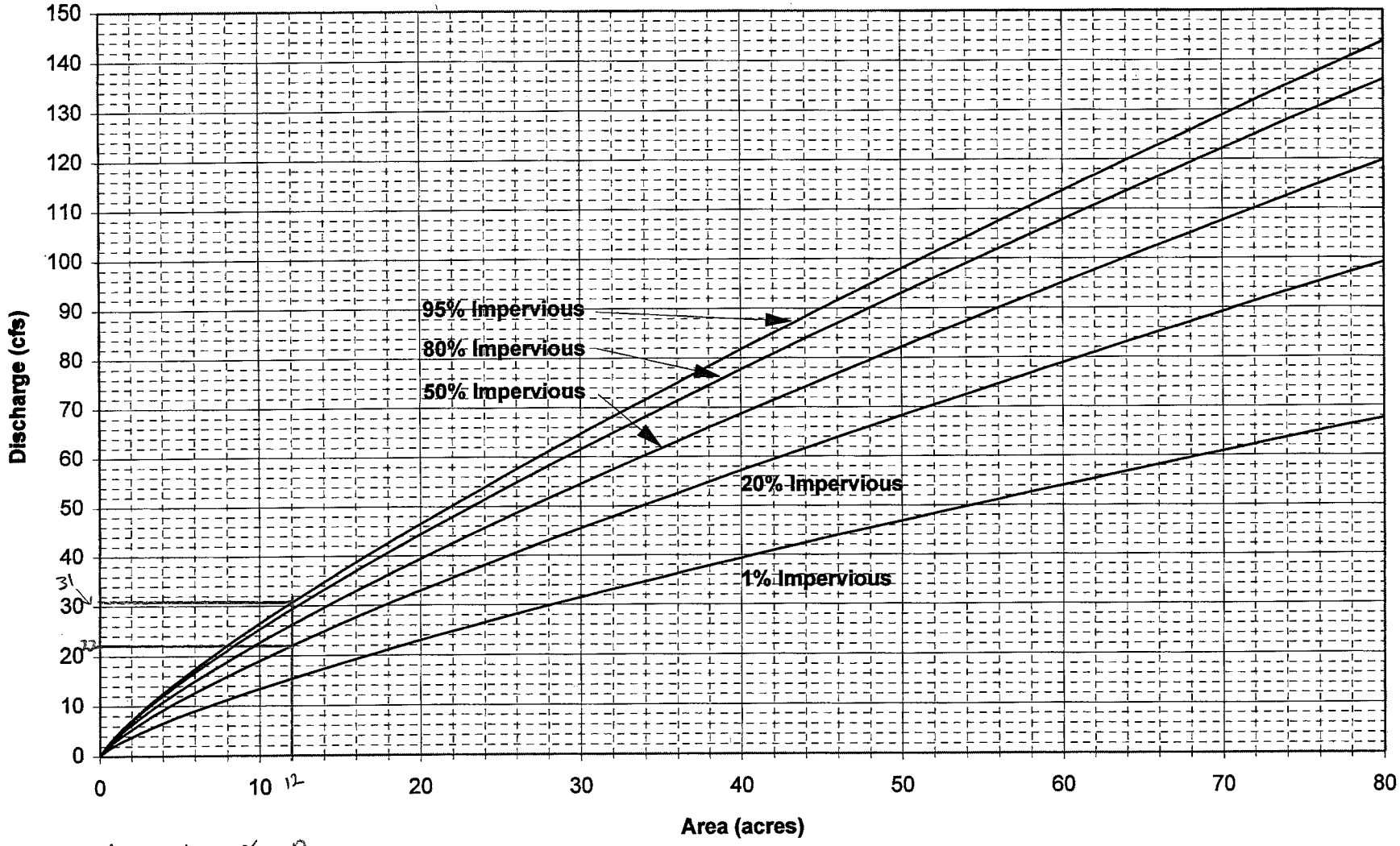
Note: Refer to accompanying disk for assumptions made in deriving this figure.

2 - acres - Storage
10 - acres - WTP
= 12 Total

10–Year Peak Flow Sacramento Method Rainfall Zone 3, <80 Acres

Date: December 1996

Figure: 2–16



Assumed 20% - Pre
95% - Post

Note: Refer to accompanying disk for assumptions made in deriving this figure.

2 acres - Storage
16 acres - UTP = 12 acres

100–Year Peak Flow Sacramento Method Rainfall Zone 3, <80 Acres

Date December 1996

Figure 2–22

APPENDIX M9

SWRI Modeling Results Return Flow Conditions

Natomas Transfer - Return Flow Considerations

Run 3D3 - Folsom Eff = 80%; 8,000 AF Transfer; 100% Contract Water Use; 7,200/7,800 AF Jul/Aug Project Water Use

		Total	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb
CVP Supplies														
NCMWC CVP Base Supply	*AF*	98,200	-	14,000	27,700	23,000	11,500	3,900	16,100	2,000	-	-	-	-
NCMWC CVP Project Water	*AF*	22,000	-	-	-	-	7,200	14,800	-	-	-	-	-	-
NCMWC CVP Contract Total	*AF*	120,200	-	14,000	27,700	23,000	18,700	18,700	16,100	2,000	-	-	-	-
ASSUMPTIONS														
Transfer Water	*AF*	8,000												
NCMWC Deliveries	*AF*	120,200												
In-River Mitigation Water	*AF*	-												
NO ACTION														
NCMWC Demand Pattern	*%*	100.0%	-	11.6%	23.0%	19.1%	15.6%	15.6%	13.4%	1.7%	-	-	-	-
NCMWC Deliveries	*AF*	120,200	-	14,000	27,700	23,000	18,700	18,700	16,100	2,000	-	-	-	-
NCMWC Return Water	*AF*	37,863	-	4,410	8,726	7,245	5,891	5,891	5,072	630	-	-	-	-
ACTION														
Transfer Demand Pattern	*%*	100.0%	6.5%	7.0%	9.5%	11.5%	12.0%	12.0%	10.0%	8.5%	6.5%	5.5%	5.5%	5.5%
Transfer Deliveries	*AF*	8,000	520	560	760	920	960	960	800	680	520	440	440	440
Transfer Return Water	*AF*	1,440	94	101	137	166	173	173	144	122	94	79	79	79
NCMWC Demand Pattern Post transfer	*%*	100.0%	-	12.5%	24.7%	20.5%	13.1%	13.1%	14.3%	1.8%	-	-	-	-
NCMWC Deliveries Post Transfer	*AF*	112,200	-	14,000	27,700	23,000	14,700	14,700	16,100	2,000	-	-	-	-
NCMWC Return Water Post Transfer	*AF*	35,343	-	4,410	8,726	7,245	4,631	4,631	5,072	630	-	-	-	-
Mitigation Water Demand Pattern Post transfer	*%*	0.0%	-	-	-	-	-	-	-	-	-	-	-	-
Mitigation Water Deliveries Post Transfer	*AF*	-	-	-	-	-	-	-	-	-	-	-	-	-
Mitigation Water Return Water Post Transfer	*AF*	-	-	-	-	-	-	-	-	-	-	-	-	-
EFFECTS														
Change In CVP Water Use	*AF*	0	520	560	760	920	(3,040)	(3,040)	800	680	520	440	440	440
Change In Lower Sacramento River Flow	*AF*	(1,080)	94	101	137	166	(1,087)	(1,087)	144	122	94	79	79	79
Change In Lower Sacramento River Flow	*CFS*	N/A	2	2	2	3	(18)	(18)	2	2	2	1	1	1
Potential Change As A Percent of Min Freeport Flow	*%*	N/A	0.02%	0.02%	0.04%	0.03%	-0.19%	-0.23%	0.04%	0.03%	0.02%	0.02%	0.02%	0.02%
Acreage Reduction @ 5AF/Acre	*ACRES*	1,600												
	NCMWC Efficiency =		65%	65%	65%	65%	65%	65%	65%	65%	65%	65%	65%	65%
	Transfer Efficiency =		80%	80%	80%	80%	80%	80%	80%	80%	80%	80%	80%	80%
	Mitigation Efficiency =		100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
	Non-Recoverable Loss =		10%	10%	10%	10%	10%	10%	10%	10%	10%	10%	10%	10%

Natomas Transfer - Return Flow Considerations

Run 3D2 - Folsom Eff = 80%; ~~15,000~~ AF Transfer; 100% Contract Water Use; 7,200/7,800 AF Jul/Aug Project Water Use

		Total	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb
CVP Supplies														
NCMWC CVP Base Supply	*AF*	98,200	-	14,000	27,700	23,000	11,500	3,900	16,100	2,000	-	-	-	-
NCMWC CVP Project Water	*AF*	22,000	-	-	-	-	7,200	14,800	-	-	-	-	-	-
NCMWC CVP Contract Total	*AF*	120,200	-	14,000	27,700	23,000	18,700	18,700	16,100	2,000	-	-	-	-
ASSUMPTIONS														
Transfer Water	*AF*	10,000												
NCMWC Deliveries	*AF*	120,200												
In-River Mitigation Water	*AF*	-												
NO ACTION														
NCMWC Demand Pattern	*%*	100.0%	-	11.6%	23.0%	19.1%	15.6%	15.6%	13.4%	1.7%	-	-	-	-
NCMWC Deliveries	*AF*	120,200	-	14,000	27,700	23,000	18,700	18,700	16,100	2,000	-	-	-	-
NCMWC Return Water	*AF*	37,863	-	4,410	8,726	7,245	5,891	5,891	5,072	630	-	-	-	-
ACTION														
Transfer Demand Pattern	*%*	100.0%	6.5%	7.0%	9.5%	11.5%	12.0%	12.0%	10.0%	8.5%	6.5%	5.5%	5.5%	5.5%
Transfer Deliveries	*AF*	10,000	650	700	950	1,150	1,200	1,200	1,000	850	650	550	550	550
Transfer Return Water	*AF*	1,800	117	126	171	207	216	216	180	153	117	99	99	99
NCMWC Demand Pattern Post transfer	*%*	100.0%	-	12.7%	25.1%	20.9%	12.4%	12.4%	14.6%	1.8%	-	-	-	-
NCMWC Deliveries Post Transfer	*AF*	110,200	-	14,000	27,700	23,000	13,700	13,700	16,100	2,000	-	-	-	-
NCMWC Return Water Post Transfer	*AF*	34,713	-	4,410	8,726	7,245	4,316	4,316	5,072	630	-	-	-	-
Mitigation Water Demand Pattern Post transfer	*%*	0.0%	-	-	-	-	-	-	-	-	-	-	-	-
Mitigation Water Deliveries Post Transfer	*AF*	-	-	-	-	-	-	-	-	-	-	-	-	-
Mitigation Water Return Water Post Transfer	*AF*	-	-	-	-	-	-	-	-	-	-	-	-	-
EFFECTS														
Change In CVP Water Use	*AF*	0	650	700	950	1,150	(3,800)	(3,800)	1,000	850	650	550	550	550
Change In Lower Sacramento River Flow	*AF*	(1,350)	117	126	171	207	(1,359)	(1,359)	180	153	117	99	99	99
Change In Lower Sacramento River Flow	*CFS*	N/A	2	2	3	3	(22)	(22)	3	2	2	2	2	2
Potential Change As A Percent of Min Freeport Flow	*%*	N/A	0.03%	0.03%	0.05%	0.04%	-0.23%	-0.28%	0.05%	0.03%	0.03%	0.02%	0.03%	0.02%
Acreage Reduction @ 5AF/Acre	*ACRES*	2,000												
	NCMWC Efficiency =		65%	65%	65%	65%	65%	65%	65%	65%	65%	65%	65%	65%
	Transfer Efficiency =		80%	80%	80%	80%	80%	80%	80%	80%	80%	80%	80%	80%
	Mitigation Efficiency =		100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
	Non-Recoverable Loss =		10%	10%	10%	10%	10%	10%	10%	10%	10%	10%	10%	10%

Steve,
Attached are two files prepared by Buzz Link of HDR that analyze the impacts to the Sacramento River as a result of the transfer of Natomas project water to Folsom (diverted at Freeport). The following notes apply:

1. The difference between the spreadsheets is that one represents 10,000 ac-ft (though is mislabeled as 15) and one is 8,000 ac-ft
2. The analysis depicted is a "worst-case" for Natomas. It represents only project water (not base supply) being re-allocated into an urban demand pattern for the transfer. This has a big hit on available Natomas supplies during July/Aug, but other months match their base supplies.
3. The analysis assumes an "efficiency" of 80%, which means that only 20% of the water diverted makes it back to the river (via the regional treatment plant). This is a conservative estimate, but maybe appropriate given plans for regional recycling. This also results in a greater impact to the river with less return flow.
4. Based on the analysis, there is very little (probably undetectable) impact to the river. This can be seen in the values at the bottom of each spreadsheet under "effects." That said, though, Reclamation has in the past noted a concern about "death by 1000 cuts" if every project contractor started to change their patterns. Not sure whether that type of assessment would need to be looked at in a cumulative impacts scenario. I believe we had Buzz look at something like 250 taf of transfers to try to get a handle on the magnitude of several 10 taf transfers. This was many months ago, though.