

# **Appendix A**

## **Proposed Action/Proposed Project Modeling Template Output**

### **Environmental Assessment**

#### **Finding of No Significant Impact**

### **Initial Study**

#### **Mitigated Negative Declaration**

**Long-term Warren Act Contract  
Between the United States of America  
and the City of Roseville**



**January 2006**

Modeling template output and modeling output data is available electronically on request via compact disk (CD).

# **Appendix B**

## **Proposed Action/Proposed Project Modeling Output Data**

### **Environmental Assessment**

#### **Finding of No Significant Impact**

### **Initial Study**

#### **Mitigated Negative Declaration**

#### **Long-term Warren Act Contract Between the United States of America and the City of Roseville**



**January 2006**

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# **Appendix C**

## **Downstream Diversion Modeling Template Output**

### **Environmental Assessment**

#### **Finding of No Significant Impact**

### **Initial Study**

#### **Mitigated Negative Declaration**

**Long-term Warren Act Contract  
Between the United States of America  
and the City of Roseville**



**January 2006**

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# **Appendix D**

## **Downstream Diversion Modeling Output Data**

### **Environmental Assessment**

#### **Finding of No Significant Impact**

### **Initial Study**

#### **Mitigated Negative Declaration**

**Long-term Warren Act Contract  
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# **Appendix E**

## **Future Cumulative Modeling Template Output**

### **Environmental Assessment**

#### **Finding of No Significant Impact**

### **Initial Study**

#### **Mitigated Negative Declaration**

**Long-term Warren Act Contract  
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**January 2006**

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# **Appendix F**

## **Future Cumulative Modeling Output Data**

### **Environmental Assessment**

#### **Finding of No Significant Impact**

### **Initial Study**

#### **Mitigated Negative Declaration**

**Long-term Warren Act Contract  
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**January 2006**

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# **Appendix G**

## **Future No Action/No Project Modeling Template Output**

### **Environmental Assessment**

#### **Finding of No Significant Impact**

### **Initial Study**

#### **Mitigated Negative Declaration**

**Long-term Warren Act Contract  
Between the United States of America  
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**January 2006**

Modeling template output and modeling output data is available electronically on request via compact disk (CD).

# **Appendix H**

## **Future No Action/No Project Modeling Output Data**

### **Environmental Assessment**

#### **Finding of No Significant Impact**

### **Initial Study**

#### **Mitigated Negative Declaration**

**Long-term Warren Act Contract  
Between the United States of America  
and the City of Roseville**



**January 2006**

Modeling template output and modeling output data is available electronically on request via compact disk (CD).



# **Appendix I**

## **Modeling Technical Memorandum**

### **Environmental Assessment**

#### **Finding of No Significant Impact**

### **Initial Study**

#### **Mitigated Negative Declaration**

**Long-term Warren Act Contract  
Between the United States of America  
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**January 2006**

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## **Appendix I**

### **Modeling Technical Memorandum**

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#### **INTRODUCTION**

This memorandum summarizes the modeling assumptions used in simulations supporting the environmental documentation prepared for the City of Roseville's long-term Warren Act contract. The simulations were conducted using the most recent version of PROSIM 2000, one of the U.S. Bureau of Reclamation's (Reclamation) hydrologic models, as provided by Reclamation.

The proposed project is a diversion of up to 30,000 acre-feet per year of Placer County Water Agency (PCWA) Middle Fork Project (MFP) water at Folsom Dam. A joint NEPA/CEQA document will be prepared. The document will take the form of an Environmental Assessment/Finding of No Significant Impact (EA/FONSI) and Initial Study/Mitigated Negative Declaration (IS/MND) as one combined document.

#### **MODELS**

Computer simulation models of water systems provide a means for evaluating changes in system characteristics such as carryover storage, reservoir water elevation, river flow rate and power generation, as well as the effects of these changes on environmental parameters such as water temperature, early-life-stage Chinook salmon survival and recreational opportunities. The models used to evaluate operational alternatives and/or impacts of proposed projects are of three types:

1. Water flow and storage, including the Project Simulation (PROSIM) model of the Central Valley Project (CVP) and State Water Project (SWP) and the Upper American River Model (UARM) of the major reservoirs and river reaches above Folsom Reservoir;
2. Water temperature models; and
3. Early lifestage Chinook salmon mortality models for the Sacramento and American rivers.

PROSIM provides a monthly simulation of the CVP and SWP water and power operations. Output from PROSIM serves as input to the water temperature models that simulates monthly Sacramento River, American River, and Feather River water temperatures. Water temperature model output serves as input to the early lifestage Chinook salmon mortality models.

#### **PROSIM Model**

The Bureau of Reclamation's (Reclamation's) PROSIM model simulates CVP and SWP operations and the hydrologic effects of those operations on the major Central Valley

river and reservoir systems. The model simulates system operations within the geographical area affected by CVP and SWP facilities, including the Sacramento-San Joaquin Delta (Delta).

A network of 67 computation points, or nodes, represents river systems and project facilities. PROSIM uses a mass balance approach to simulate the occurrence, regulation, and movement of water from one node to another. At each node, various physical processes (e.g., surface water inflow or accretion, flow from another node, groundwater accretion or depletion, and diversion) can be simulated or assumed. Operational constraints, such as reservoir size and seasonal storage limits or minimum flow requirements, can be defined for each node. The model uses a monthly time step. Flows are specified as a mean flow for the month and reservoir storage volumes are specified as end-of-month content.

PROSIM simulates operations of the following water storage and conveyance facilities: Trinity, Whiskeytown, and Shasta/Keswick reservoirs (CVP); Spring Creek and Clear Creek tunnels (CVP); Oroville Reservoir (SWP); Folsom Reservoir and Natoma Reservoir (CVP); Tracy (CVP), Contra Costa (CVP), and Banks (SWP) pumping plants; San Luis Reservoir (shared by CVP and SWP); and East Branch and West Branch SWP reservoirs. To varying degrees, nodes also define conveyance facilities including the Tehama-Colusa, Corning, Folsom-South, Delta-Mendota, and California Aqueduct canals.

Other water systems tributary to the Delta are modeled separately from PROSIM and are incorporated as a known input at a PROSIM node. These tributaries are the San Joaquin River, the New Melones/Stanslaus River system and the East Side streams, consisting of the Cosumnes River, Mokelumne River, Calaveras River and several smaller creeks. These river systems are simulated by a combination of Reclamation models, SANJASM and STANMOD.

The model simulates one month of operation at a time, sequentially from one month to the next, and from one year to the next. Each decision that the model makes regarding stream flow regulation is the result of defined operational requirements and constraints (e.g., flood control storage limitations, minimum instream flow requirements, Delta outflow requirements, diversion requirements) or operational rules (e.g., preference among reservoirs for releasing water). Certain decisions, such as the definition of water year type, are triggered once a year, which leads to water delivery allocations and specific stream flow requirements. Other decisions, such as specific Delta outflow requirements, are dynamic from month-to-month.

PROSIM operates Shasta and Folsom reservoirs by releasing water to satisfy instream flow and downstream diversion requirements north of the Delta while observing requirements for minimum storage and flood control capacity. PROSIM then identifies demands for diversion and storage south of the Delta. Next, with preliminary estimates of Delta inflows and export demands, PROSIM calculates the flow required to satisfy all Delta water quality requirements. The obligation to satisfy Delta requirements is shared between the CVP and SWP based on the terms of the Coordinated Operating Agreement (COA). CVP reservoir releases for Delta requirements are balanced

between Trinity, Shasta and Folsom reservoirs. SWP reservoir releases for Delta requirements are solely from Oroville reservoir.

Technical Appendix Volume Seven of the Draft Programmatic Environmental Impact Statement (PEIS) for the Central Valley Project Improvement Act (CVPIA) provides documentation of PROSIM, SANJASM, and STANMOD as utilized in that study. Modifications have been incorporated by Reclamation in the PROSIM code and data sets subsequent to that effort. PROSIM Version 2000 was used in this study.

## **Hydrology**

A major portion of the input to PROSIM derives from use of the Department of Water Resources (DWR) consumptive use (CU) and depletion analysis (DA) models. These models are applied to drainage areas, identified by DWR as depletion study areas (DSA). The information thus developed is collectively referred to as "hydrology" and provides estimates of gains and diversions.

Surface Water Resources, Inc. (SWRI) has developed a spreadsheet that manipulates output from the DA model so that it can be used as input to PROSIM. This spreadsheet uses as input the following: (a) DWR hydrology, (b) CVP allocation rules, (c) demand assumptions, and (d) estimates of American River accretions and seepage. The spreadsheet model assumes operation of theoretical storage is performed in PROSIM. The spreadsheet outputs gains, non-project diversion requirements and project diversion requirements.

Water diversions calculated for each DSA are disaggregated into project and non-project demands. Project demand is set equal to the lesser of the CVP contracts in that DSA or the total diversion in the DSA. Non-project demand is calculated as the balance of total diversion minus project demand.

## **Upper American River Model**

The Upper American River Model (UARM) simulates the American River system upstream of Folsom Reservoir by combining use of the U.S. Army Corps of Engineers' (Corps) HEC-III program for hydrologic routing and storage accounting purposes with a spreadsheet model that simulates operations of the Middle Fork Project (MFP).

The Upper American River Model developed by DWR is described in the Central District Memorandum Report, American River Watershed Model, March 1984. Modifications to the model structure and input data were made in order to implement minimum storage requirements, minimum flow requirements, water rights related diversions and certain storage operations. These modifications involve the Middle Fork of the American River, the Rubicon River, and Placer County Water Agency's (PCWA) MFP facilities. Modifications to diversions involve PCWA and Georgetown Divide Public Utilities District (GDPUD) at the Auburn Dam site and at Pilot Creek. The spreadsheet model is documented in Upper American River Model: Analysis of Placer County Water Agency's Middle Fork Project, prepared for Reclamation and DWR by SWRI, March 31, 2000.

UARM produces a time series of monthly flows into Folsom Reservoir and a time series of storage data for calculating "creditable" upstream storage space which influences flood control storage requirements at Folsom Reservoir. This data is used as input to PROSIM. In turn, UARM requires input on conditions in the lower American River, specifically, Folsom storage content and CVP contract allocations. These lower American River conditions are modeled by PROSIM. Because of this dependency between models, iterative simulations of the UARM and PROSIM are necessary.

## **Temperature Models**

Reclamation has developed water temperature models for five reservoirs (Trinity, Whiskeytown, Shasta, Oroville, and Folsom) and three river systems (Sacramento, Feather, and American). The models for reservoirs are distinctly different than the models for rivers. Because of the monthly time step and relatively small volumes, regulating reservoirs (Lewiston, Keswick, Thermalito, and Natoma) are modeled similar to river reaches rather than as storage reservoirs.

These models estimate mean monthly water temperatures based on flow and storage quantities simulated by PROSIM. They are used to identify changes in water temperature caused by changes in CVP/SWP operations. Reclamation's water temperature models were documented in U.S. Bureau of Reclamation Monthly Temperature Model Sacramento River Basin, June 1990 and Technical Appendix Volume Nine of the CVPIA PEIS. Subsequent modifications have been incorporated by Reclamation; the reader is referred to Reclamation for documentation of those modifications.

## **RESERVOIR MODELS**

Reservoir inflow, outflow and end-of-month storage content as calculated by PROSIM is input to the reservoir water temperature models. Additional input data include meteorological information and monthly water temperature targets, which are used by the model to select the level from which reservoir releases are drawn.

A vertical, one-dimensional water temperature profile in the reservoir is simulated based on inflow and outflow water temperature and flow rate, monthly storage content, evaporation, precipitation, solar radiation, and monthly air temperature. Temperature control devices (TCD), such as the outlet control device in Shasta Reservoir, the temperature curtains in Whiskeytown Reservoir and the penstock shutters in Folsom Reservoir, are incorporated in the simulation. Model output includes water temperature at each level in the reservoir as well as temperature of the reservoir release. The reservoir release water temperature is then used in the downstream river water temperature model.

## **RIVER MODELS**

The river temperature models utilize the calculated temperatures of reservoir release, much of the same meteorological data used in the reservoir models, and PROSIM

output on river flow rates, gains and diversions. Mean monthly water temperatures are calculated at multiple locations on the Sacramento, Feather and American rivers.

### **Automated Temperature Selection Procedure**

The Folsom Reservoir and Lower American River water temperature models are utilized in an iterative manner referred to as the Automated Temperature Selection Procedure (ATSP). This procedure operates the reservoir and river models with the objective of achieving monthly target water temperatures in the lower American River at Watt Avenue. Water temperature targets are achieved through choice of reservoir level from which the release is drawn.

A schedule of 12 water temperatures, one for each month of the year, is specified as the preferred schedule of monthly water temperature targets. Each year of the simulation, the model attempts to meet the preferred schedule of water temperatures. If the preferred schedule cannot be met, the procedure cycles to a second, slightly less preferred schedule of water temperatures. If the second schedule cannot be met, the procedure continues through a series of schedules, arranged by declining preference, until a schedule of water temperature targets is met for that year. Specification of the schedules and prioritization of schedules enables the model user to regulate management of the Folsom Reservoir coldwater pool for a desired water temperature regime in the river.

The ATSP is documented in the “ATSP Users Guide” prepared for Reclamation by SWRI in May 2000.

### **Salmon Mortality Models**

Water temperatures calculated for specific reaches of the Sacramento and American rivers are used in Reclamation’s Chinook salmon mortality models to estimate annual percentage mortality of early-life-stage Chinook salmon. On the Sacramento River, a calculation is performed for each of the four Chinook salmon runs: fall, late-fall, winter, and spring. On the American River, estimates are made for the fall-run Chinook.

The models incorporate expected timing and spatial distribution of spawning in the respective river reaches. A daily time step is used for calculations. Mean monthly water temperatures are converted to daily water temperatures by interpolation. The onset of spawning and life stage development is influenced by water temperature. Most important, water temperature determines the mortality rate. Daily mortality is estimated for three separate early-life-stages: (1) pre-spawned eggs; (2) fertilized eggs; and (3) pre-emergent fry. Daily estimates of mortality for the three stages are summed to provide an annual estimate of percent mortality for each of the runs.

## **MODEL SIMULATIONS**

Five simulations are used to meet the NEPA and CEQA analysis requirements for the City of Roseville Warren Act contract, as described below.

1. No Action/No Project – no diversion of PCWA MFP water by Roseville. This simulation is identical to the Existing simulation developed by Surface Water Resources Inc., under the direction of the Bureau of Reclamation, for the *American River Basin Cumulative Study*. Roseville diverts 26,633 acre-feet per year (af/yr) under its existing 32,000 af/yr CVP contract. There are no dry year diversion reductions or need for replacement water because no water rights water is diverted to Roseville from the American River.
2. Proposed Action/Proposed Project – diversion of up to 30,000 af/yr of PCWA MFP water by Roseville at Folsom Dam, in the context of 2000 hydrology. Roseville's total demand is 54,900 af/yr. The MFP water is used, as necessary, after primary reliance on the 32,000 af/yr CVP contract. When the unimpaired inflow to Folsom Reservoir for March through November ( $FUI_{M-N}$ ) is projected to be less than 950 taf, Roseville reduces its diversion as agreed to in the Water Forum Proposal. Total diversion decreases from 54,900 af/yr at  $FUI_{M-N}$  of 950 taf to 39,800 af/yr at  $FUI_{M-N}$  of 400 taf. In addition, water is made available from the MFP to the American River at Folsom Reservoir as a replacement for a portion of the diversion made when  $FUI_{M-N}$  was less than 950 taf. The replacement water increases in volume from zero at  $FUI_{M-N}$  equals 950 taf, to 20,000 af when  $FUI$  equals 400 af or less.
3. Downstream Diversion Alternative – diversion of 30,000 af/yr of PCWA MFP water by Roseville at the mouth of the American River, in the context of 2000 hydrology. No dry-year reduction in diversion or replacement obligation is included in this alternative (other than CVP allocation deficiencies) because there is no water rights water diverted to Roseville from the American River at or above Folsom Dam. Roseville diverts up to 26,633 af/yr at Folsom Dam under its existing 32,000 af/yr CVP contract.
4. Future No Action/No Project – no diversion of PCWA MFP water by Roseville, in the context of 2020 hydrology. With the exception of no diversion of PCWA MFP water by Roseville, and an April to September pattern for purchase and release of all water made available from the MFP to the American River at Folsom Reservoir as a replacement for a portion of the diversions made when  $FUI_{M-N}$  is less than 950 taf, this simulation would be identical to the Future Cumulative Condition simulation developed by Surface Water Resources, Inc. under the direction and approval of the Bureau of Reclamation for the *American River Basin Cumulative Study*. The total Roseville demand is 32,000 af/yr under its existing 32,000 af/yr CVP contract.
5. Future Cumulative – diversion of 30,000 af/yr of PCWA MFP water by Roseville at Folsom Dam, in the context of 2020 hydrology. With the exception of an April to September pattern for purchase and release of all water made available from the MFP to the American River at Folsom Reservoir as a replacement for a portion of the diversions made when  $FUI_{M-N}$  was less than 950 taf, this simulation is identical to the Future Cumulative Condition simulation developed by Surface Water Resources Inc. under the direction and approval of the Bureau of Reclamation for the *American River Basin Cumulative Study*. As in the Proposed Action/Proposed Project, the total Roseville demand is 54,900 af/yr and the

30,000 af/yr of MFP water is used as necessary after primary reliance on the 32,000 af/yr CVP contract. When the unimpaired inflow to Folsom Reservoir for March through November ( $FUI_{M-N}$ ) is projected to be less than 950 taf, Roseville reduces its diversions as agreed to in the Water Forum Proposal. Total diversion decreases from 54,900 af/yr at  $FUI_{M-N}$  of 950 taf to 39,800 af/yr at  $FUI_{M-N}$  of 400 taf. In addition, water is made available from the MFP to the American River at Folsom Reservoir as a replacement for a portion of the diversions made when  $FUI_{M-N}$  is less than 950 taf. The replacement water increases in volume from zero at  $FUI_{M-N}$  equals 950 taf to 20,000 af when  $FUI_{M-N}$  equals 400 af or less.

The annual acre-foot volumes incorporated in the simulations are summarized as follows:

	Allocation (af/yr)				Demand (af/yr)
	CVP		PCWA MFP		
No Action/No Project	32,000	at Folsom Dam	0	-	26,633
Proposed Action/ Proposed Project	32,000	at Folsom Dam	30,000	at Folsom Dam	54,900 – 39,800
Downstream Diversion Alternative	32,000	at Folsom Dam	30,000	at American. River mouth	56,633
Future No Action/ No Project	32,000	at Folsom Dam	0	-	32,000
Future Cumulative	32,000	at Folsom Dam	30,000	at Folsom Dam	54,900 – 39,800

## IMPACT ASSESSMENT COMPARISONS

The following comparisons are performed:

- Proposed Action/Proposed Project vs. No Action/No Project
- Downstream Diversion Alternative vs. No Action/No Project
- Future Cumulative vs. No Action/No Project
- Future Cumulative vs. Future No Action/No Project

## PROSIM SIMULATION ASSUMPTIONS

Table I-1, City of Roseville Warren Act Contract Modeling Assumptions, summarizes the modeling assumptions utilized in PROSIM to represent the five simulations. The five simulations are organized by column. Important modeling assumptions are organized by row. The major categories of modeling assumptions are demands, facilities and operations, Central Valley Project (CVP) allocation, and regulatory standards. Expanded information on demands is included in Tables I-2 through I-5.

### Period of Record

A 70-year record, from October 1921 through September 1991, was used for the UARM and PROSIM simulations.



## Hydrology

The hydrology used is based on Department of Water Resources (DWR) Bulletin 160-98. The 2020 hydrology is consistent with 2020 land use projections (CO9C). The 2000 hydrology was developed from a linear interpolation of land use between 1995 land use (DO6E) and 2020 land use.

## Demands

CVP demands, except for the American River Basin and Contra Costa Water District (CCWD), are based on assumed future contract levels consistent with maximum historical use. CVP demands north of the Delta, excluding the American River Basin, are summarized for each purveyor in the attached Table I-2. CVP demands south of the Delta total approximately 3.4 MAF/year and are summarized for each purveyor in the attached Table I-3. CVP refuge demand corresponds to Firm Level 2. CCWD demand is defined by a time series that reflects operation of Los Vaqueros Reservoir. A contract of 140 TAF/year in the existing context simulations and 195 TAF/year in the future context simulations is assumed.

State Water Project (SWP) demand is modeled as variable depending on water supply and precipitation indices. The full demand approximates 3.6 MAF/year in the existing context simulations and 4.2 MAF/year in the future context simulations.

American River Basin demands are shown in detail in the attached Tables I-4 and I-5. Demands for the existing context simulations, shown in Table I-4, are the same as in the WFP EIR Base condition except for a few purveyors where water use information has been updated since 1998.

Demands in the American River Basin for the future context simulation (Table 5) also are consistent with the WFP. Reduced diversions or replacement for diversion is represented in the model when the Folsom Reservoir unimpaired inflow is less than 950 TAF for March through November.

Modeling of East Bay Municipal Utility District (EBMUD) diversions is handled as directed by Reclamation. Diversions are simulated as being from the Sacramento River near Freeport. Diversions are subject to contract terms of 133,000 AF/year, CVP M&I deficiencies, projected October 1<sup>st</sup> EBMUD Mokelumne River Total System Storage (TSS) not exceeding 500 TAF, and 165,000 AF total diversions in any three consecutive years. Diversions are restricted to 155 cfs and not restricted by Hodge Decision terms. Implementation of these constraints is based on the EBMUD Supplemental Water Supply study #6174 representation of Mokelumne River operations.

The monthly pattern of City of Roseville diversions is the same as that used in the WFP modeling and the *American River Basin Cumulative Study* modeling. The pattern is summarized as follows.

### City of Roseville Diversion Pattern

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total
Percent of Annual	5	5	6	7	9	12	13	13	12	7	6	5	100

## Facilities/Operations

Table 1 summarizes the pertinent assumptions in the modeling with respect to reservoir facilities and operations. In this regard, the simulations are identical except for the temperature control device for the El Dorado Irrigation District at Folsom Lake. This proposed facility is not included in the Existing simulation.

Coldwater pool management is an important part of Folsom Reservoir operations. These simulations all assume implementation of operations designed to balance the temperature objectives for steelhead and fall-run Chinook salmon.

## CVP Water Allocation

In years when water supply is deficient, water allocation is reduced based on specific water indices or the sufficiency of water supply. The Sacramento River Water Settlement Contractors, Exchange Contractors, and the Wildlife Refuges receive a 75% allocation in years when the Shasta Index indicates a critical year and a 100% allocation in all other years. The other CVP contracts receive allocations based on a comparison of forecast supply and demand for the March through September period. CVP municipal and industrial (M&I) contracts receive allocations ranging from 100% to 50%. CVP agricultural contracts receive allocations ranging from 100% to 0%. Agricultural allocations are reduced first; reductions to the M&I allocations start after the agricultural allocations have been reduced to 75% of contract.

## Regulatory Standards

Various laws and regulatory decisions provide for protection of environmental conditions. These protections often take the form of a minimum instream flow requirement. Other protections include minimum reservoir storage content and protection of the Delta against excessive salinity.

## TRINITY RIVER

For existing condition simulations, instream flow requirements for the Trinity River are 340 TAF per year, in all year types, based on the May 8, 1991 decision of the Secretary of the Interior. Future level simulations use the instream flow requirements in the preferred alternative of the *Trinity River Mainstem Fishery Restoration EIS/EIR* (Trinity EIS/EIR), October 1999. In that alternative, the required flow regime varies from 369 TAF/year to 815 TAF/year, depending on the inflow to Trinity Reservoir. A minimum storage of 600 TAF for Trinity Reservoir at the end of the water year is also specified. Though the Record of Decision was issued in December 2000, this action is not included in the existing condition simulations.

## **CLEAR CREEK**

Minimum instream flows for Clear Creek below Whiskeytown Reservoir are simulated in accordance with the Anadromous Fish Recovery Program (AFRP) Actions specified in the Department of Interior's Final Administrative Proposal on the Management of Section 3406(b)(2) dated November 20, 1997 (Interior's November 1997 Proposal).

## **UPPER SACRAMENTO RIVER**

The February 12, 1993 U.S. Fish and Wildlife Service (USFWS) Biological Opinion for winter-run Chinook salmon in the Sacramento River specified a minimum storage of 1,900 TAF in Shasta Reservoir at the end of the water year (September 30). The Opinion recognized that this objective may not be attainable in the driest of years and directed Reclamation to consult with the USFWS if and when that appeared to be the case. The simulations do not explicitly model this constraint; rather it is incorporated as an objective in evaluating model results.

Flows in the Sacramento River below Keswick Dam are simulated in accordance with minimum instream flow requirements specified in Interior's November 1997 Proposal.

Flow in the Sacramento River above the City of Sacramento sufficient to support commercial navigation was a condition of CVP authorization. Commercial navigation in the river above Sacramento has not existed for many years but many diverters along the Sacramento River have become accustomed to the flow levels provided by the navigation flow requirement and have established pump intakes at elevations corresponding to that flow level. The navigation flow requirement has become a de facto requirement for pump operation. For that reason, the simulations maintain flow in the Sacramento River at Wilkins Slough, located approximately 65 miles upstream of the City of Sacramento and referred to as the Navigation Control Point (NCP), based on available storage in Shasta Reservoir and water supply availability. Minimum flows at the NCP range from 5,000 cfs in high delivery years to 3,250 cfs in years when large deficiencies are imposed on CVP contractors in the Sacramento River basin.

## **FEATHER RIVER**

Feather River instream flow requirements are: 1,700 cfs October through March of non-critical years; 1,200 cfs October through February and 1,000 cfs in March of critical years; and 1,000 cfs April through September in all year types. Critical years are defined as those years when the previous April through July unimpaired inflow to Oroville Reservoir was below the historical average of 1,964 TAF. These required flows may be reduced by 25% if Oroville Reservoir storage drops below 1,500 TAF. Per the August 26, 1983 agreement between DWR and California Department of Fish and Game (CDFG), the above minimum flow requirements may be modified further if releases exceed 2,500 cfs between October 15 and November 30.

## **AMERICAN RIVER**

Minimum instream flows for the American River passing Nimbus Dam are simulated based on requirements specified in Interior's November 1997 Proposal. In addition, the simulations incorporate State Water Resources Control Board (SWRCB) Decision 893 that specifies minimum flow requirements for the entire reach from Nimbus Dam to the mouth. Though less restrictive than Section 3406 (b)(2) at Nimbus Dam, Decision 893 comes into play at locations downstream.

## **LOWER SACRAMENTO RIVER**

Minimum instream flows on the Sacramento River at Freeport are simulated based on requirements specified in Interior's November 1997 Proposal. Instream flow requirements at Rio Vista on the Sacramento River are simulated based on SWRCB December 29, 1999 Decision 1641 (D1641), Implementation of Water Quality Objectives for the Delta, which reiterated requirements specified in the 1995 Bay-Delta Water Quality Control Plan.

## **MOKELUMNE RIVER**

This study relies on the SANJASM modeling performed for the 1999 Trinity EIS/EIR for representation of flows from the Mokelumne River to the Delta. That SANJASM modeling incorporated minimum release rates from Camanche Reservoir as included in the 1996 Lower Mokelumne River Joint Settlement Agreement between EBMUD, USFWS and CDFG. These rates were incorporated in the hydroelectric license for Camanche Reservoir in November 1998 and incorporated in the Water Quality Control Plan in December 1999.

## **STANISLAUS RIVER**

This study relies on the SANJASM/STANMOD modeling performed for the 1999 Trinity EIS/EIR for representation of flows on the Stanislaus River. That modeling provided for minimum instream flows on the Stanislaus River below Goodwin Dam as specified in the May 31, 1997 Interim Operations Plan for New Melones Reservoir. Interior's November 1997 Proposal indicated long-term operation criteria for New Melones would be developed as AFRP Upstream Action #4, however, this has not yet happened.

## **TUOLUMNE RIVER**

The 1995 Settlement Agreement for FERC Proceeding 2299-024 provided minimum instream flow requirements on the Tuolumne River at LaGrange bridge that range from 94 to 301 TAF/year based on the San Joaquin Basin 60-20-20 water year index. These flow rates were incorporated in the SANJASM modeling performed for the Trinity EIS/EIR and relied upon in this study.

## **SAN JOAQUIN RIVER**

This study relies on the SANJASM/STANMOD modeling of minimum instream flows for the San Joaquin River at Vernalis as performed for the 1999 Trinity EIS/EIR. That modeling was based on minimum instream flow requirements specified in D1641 and Interior's November 1997 Proposal. (D-1422, listed in Table 1, is the decision for New Melones Reservoir, which specifies 98 AF for fish and additional unspecified water for meeting water quality objectives at in the San Joaquin River at Vernalis.)

## **DELTA**

Regulatory standards for the Delta are simulated by PROSIM based on D1641 and Interior's November 1997 Proposal. These standards include maximum salinity, minimum dissolved oxygen, minimum outflow, and maximum export. The standards vary according to the year type, water availability, and antecedent flow condition. The salinity and dissolved oxygen standards do not have a specific relationship to flow. In PROSIM these standards are simulated indirectly through the minimum Delta outflow requirement. PROSIM treats all flow standards specified for the Delta as requirements that cannot be compromised. Delta Actions #6 and #8 of the AFRP primarily involve monitoring of species abundance and are not explicitly modeled by PROSIM.

## **COMPARISON OF PROSIM AND CALSIM II MODELING SIMULATIONS**

Simulation modeling of the Roseville Warren Act Contract Environmental Assessment/Initial Study (EA/IS) was initially completed in April 2001<sup>1</sup>. Using the tools and modeling assumptions<sup>2</sup> approved by Reclamation, a suite of baseline and alternative water operations were simulated and the resultant data analyzed to identify potential environmental effects. Subsequent to completion of the Roseville Warren Act Contract EA/IS modeling and analyses, but prior to issuance of the Draft EA/IS, Reclamation released new studies intended to represent Central Valley Project (CVP) operations under the revised, but not yet finalized, Operating Criteria and Plan (OCAP). These new studies incorporate a new modeling tool (CALSIMII) and changes in several operating assumptions, suggesting that consideration of the appropriateness of the Roseville Warren Act Contract EA/IS modeling be addressed.

The difference between the PROSIM and CALSIMII simulation tools can be assessed by comparing like simulations using the two models. Comparisons of Folsom Reservoir storage and Nimbus Dam release are most significant with respect to the Roseville Warren Act Contract. If results from studies produced by the two simulation tools are similar, or if the PROSIM results are demonstrably poorer than the CALSIMII results for

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<sup>1</sup> Additional PROSIM modeling simulations were completed in July 2003 to address changes in CEQA requirements regarding incremental contributions to the cumulative condition.

<sup>2</sup> Modeling assumptions are consistent with those used for the American River Cumulative Study prepared in 2002 and subsequently utilized in the American River Pump Station EIS/EIR for which Reclamation was the lead federal agency under NEPA. The PROSIM simulation model was selected as the simulation tool for the Roseville Warren Act Contract EA/IS to ensure consistent comparative results with the assumptions contained within these previously completed documents.

these parameters, the simulation differences can be excused as a fatal flaw issue and re-modeling of the project using CALSIMII would not necessary.

To address the above issue, the future cumulative PROSIM simulation used for the Roseville Warren Act Contract was compared to a PROSIM simulation that included the significant American River and Delta export assumptions included in the OCAP work (OCAP Study4) using CALSIMII. This comparison was performed for Folsom Reservoir storage, American River flows, and American River water temperatures. Statistical inferences were drawn from the application of descriptive and non-parametric tests of monthly data, arranged into seasonal periods, from the two simulations.

Experience has shown that the highest likelihood of adverse biological affects occurring in the American River is associated with low Folsom Reservoir storages, low Nimbus Dam releases, and high Watt Avenue water temperatures. Thus, if it can be shown that implementation of the Roseville Warren Act Contract in the PROSIM simulation occurred with generally lower storage conditions, lower releases, and higher water temperatures, it can be concluded that the potential impacts identified in the PROSIM study are likely greater than those which would be identified in the OCAP CALSIMII simulation. Areas beyond the confluence of the American and Sacramento rivers are not of concern because the major difference in the PROSIM and OCAP CALSIMII simulations is the location of diversions for certain American River water rights holders.

**Tables I-6** through I-8 contain summaries of the results of statistical tests comparing the PROSIM and OCAP CALSIMII simulations.

The statistical results exhibit the following trends:

- Statistically, Folsom Reservoir storage is lower in the PROSIM simulation during all examined periods of the year.
- Statistically, Nimbus Dam release is equivalent in the PROSIM and OCAP simulations during the October through November and July through September periods, and PROSIM releases are greater in the December through March and April through June periods.
  - The two periods in which PROSIM releases are greater are those in which average monthly flows are greatest for both simulations.
  - The frequency and magnitude of potential environmental impacts is typically relatively small during the December through June period.
- Statistically, Watt Avenue water temperature is higher in the PROSIM simulation during the April through June and July through September periods, equivalent to the OCAP simulation during the October through November period, and lower than the OCAP simulation during the December through March period.
  - Every month of the December through March period is less than 54°F in both simulations. Although specific thermal requirements of anadromous salmonids vary by species and life stage, water temperatures  $\leq 54^{\circ}\text{F}$  are protective of all the life stages of anadromous salmonids present in the lower American River during this time period (Rich 1987; McCullough et al. 2001; NOAA Fisheries 1993, 2000, 2001, 2002).

- During the hottest months of the year (i.e., April through September), water temperatures are higher in the PROSIM simulation than the OCAP simulation. Because anadromous salmonids are coldwater species, the warmer temperatures of the PROSIM simulation suggest an increased number of negative effects on anadromous salmonids than would be identified in the OPAP CALSIMII simulation, therefore providing a more conservative estimation of potential adverse impacts on these species.

In consideration of the above comparison, it is concluded that the PROSIM simulations prepared for the Roseville Warren Act Contract EA/IS, which are used for comparative analyses only, are likely greater than those which would be identified using OCAP CALSIMII modeling of this project, and can be confidently relied upon to support the conclusions presented in the EA/IS.

## **LITERATURE CITED**

- McCullough, D. A., S. Spalding, D. Sturdevant, and M. Hicks. 2001. Summary of Technical Literature Examining the Physiological Effects of Temperature on Salmonids - Issue Paper 5. Report No. EPA-910-D-01-005. United States Environmental Protection Agency.
- NOAA Fisheries. 1993. Biological Opinion for the Operation of the Federal Central Valley Project and the California State Water Project.
- NOAA Fisheries. 2000. Biological Opinion for the Proposed Operation of the Federal Central Valley Project and the State Water Project for December 1, 1999 Through March 31, 2000. NOAA Fisheries.
- NOAA Fisheries. 2001. Biological Opinion on Interim Operations of the Central Valley Projects and State Water Project Between January 1, 2001, and March 31, 2002. Report No. SWR-01-SA-5667:BFO. Long Beach: National Marine Fisheries Service, Southwest Region.
- NOAA Fisheries. 2002. Biological Opinion on Interim Operations of the Central Valley Project and State Water Project Between April 1, 2002 and March 31, 2004. Long Beach: National Marine Fisheries Service, Southwest Region.
- Rich, A. A. 1987. Report on Studies Conducted by Sacramento County to Determine the Temperatures Which Optimize Growth and Survival in Juvenile Chinook Salmon (*Oncorhynchus Tshawytscha*). Prepared for the County of Sacramento.

**Table I-1  
City of Roseville Warren Act Contract  
Modeling Assumptions**

	<b>No Action</b>	<b>Action</b>	<b>Downstream Diversion Alternative</b>	<b>Future No Project</b>	<b>Future Cumulative</b>
Period of Record	1922-1991	1922-1991	1922-1991	1922-1991	1922-1991
Hydrology/Level of Land Use	2000	2000	2000	2020	2020
Demands	2000	2000	2000	2025	2025
North of Delta (exc American R basin):	Maximum Historic Use	Maximum Historic Use	Maximum Historic Use	Maximum Historic Use	Maximum Historic Use
CVP Refuges	Firm Level 2	Firm Level 2	Firm Level 2	Firm Level 2	Firm Level 2
American River Basin:	2000 (note a)	2000 (note a)	2000 (note a)	2025 (note b)	2025 (note b)
Roseville PCWA MFP at Folsom Dam	None	30 TAF/YR (note h)	None	None	30 TAF/YR (note h)
Roseville PCWA MFP at mouth of American River	None	None	30 TAF/YR	None	None
Roseville CVP at Folsom Dam	32 TAF contract 26.633 TAF demand	32 TAF contract (see note h for demand)	32 TAF contract 26.633 TAF demand	32 TAF contract (see note h for demand)	32 TAF contract (see note h for demand)
EBMUD	None	None	None	(Note c)	(Note c)
<b>South of Delta:</b>					
CVP	3.4 MAF/YR	3.4 MAF/YR	3.4 MAF/YR	3.4 MAF/YR	3.4 MAF/YR
CCWD	140 TAF/YR (note d)	140 TAF/YR (note d)	140 TAF/YR (note d)	195 TAF/YR (note d)	195 TAF/YR (note d)
SWP (w/ North Bay Aqueduct)	2.6-3.6 MAF/YR	2.6-3.6 MAF/YR	2.6-3.6 MAF/YR	3.4-4.2 MAF/YR	3.4-4.2 MAF/YR
SWP Interruptible Demand	None	None	None	None	None
<b>Facilities/Operations</b>					
<b>Folsom Lake:</b>					
Flood Control Diagram	Variable 400/670 non-linear (without outlet modifications)	Variable 400/670 non-linear (without outlet modifications)	Variable 400/670 non-linear (without outlet modifications)	Variable 400/670 non-linear (without outlet modifications)	Variable 400/670 non-linear (without outlet modifications)
Temperature Control Shutters	3-2-4	3-2-4	3-2-4	3-2-4	3-2-4
Cold Water Pool Management	Multi-species Balance (note e)	Multi-species Balance (note e)	Multi-species Balance (note e)	Multi-species Balance (note e)	Multi-species Balance (note e)
M&I Temperature Control Device	Yes	Yes	Yes	Yes	Yes
EID Temperature Control Device	No	No	No	Yes	Yes



**Table I-1  
City of Roseville Warren Act Contract  
Modeling Assumptions**

	<b>No Action</b>	<b>Action</b>	<b>Downstream Diversion Alternative</b>	<b>Future No Project</b>	<b>Future Cumulative</b>
<b>Shasta Lake:</b>					
Temperature Control Device	Yes	Yes	Yes	Yes	Yes
<b>Whiskeytown Reservoir:</b>					
Temperature Control Curtain	Yes	Yes	Yes	Yes	Yes
<b>CVP Water Allocation</b>					
CVP Settlement/Exchange	100%, 75% based on Shasta Index	100%, 75% based on Shasta Index	100%, 75% based on Shasta Index	100%, 75% based on Shasta Index	100%, 75% based on Shasta Index
CVP Agriculture	100% - 0% based on supply	100% - 0% based on supply	100% - 0% based on supply	100% - 0% based on supply	100% - 0% based on supply
CVP Municipal & Industrial	100% - 50% based on supply	100% - 50% based on supply	100% - 50% based on supply	100% - 50% based on supply	100% - 50% based on supply
CVP Refuges	100%, 75% based on Shasta Index	100%, 75% based on Shasta Index	100%, 75% based on Shasta Index	100%, 75% based on Shasta Index	100%, 75% based on Shasta Index
<b>Regulatory Standards</b>					
<b>Trinity River:</b>					
Instream Flow Requirement	1991 DOI Secretarial Decision (340 TAF/YR)	1991 DOI Secretarial Decision (340 TAF/YR)	1991 DOI Secretarial Decision (340 TAF/YR)	Trinity EIS Preferred Alternative (369-815 TAF/YR variable)	Trinity EIS Preferred Alternative (369-815 TAF/YR variable)
Trinity Reservoir End-of-September Minimum Storage	(No requirement)	(No requirement)	(No requirement)	600 TAF as able	600 TAF as able
<b>Clear Creek:</b>					
Instream Flow Requirement	CVPIA Nov. 20, 1997 AFRP Upstream Action #1	CVPIA Nov. 20, 1997 AFRP Upstream Action #1	CVPIA Nov. 20, 1997 AFRP Upstream Action #1	CVPIA Nov. 20, 1997 AFRP Upstream Action #1	CVPIA Nov. 20, 1997 AFRP Upstream Action #1
<b>Upper Sacramento River:</b>					
Shasta Lake End-of-September Minimum Storage	1993 Winter-run Biological Opinion (1900 TAF)	1993 Winter-run Biological Opinion (1900 TAF)	1993 Winter-run Biological Opinion (1900 TAF)	1993 Winter-run Biological Opinion (1900 TAF)	1993 Winter-run Biological Opinion (1900 TAF)
Instream Flow Requirement @ Keswick	SWRCB WR 90-5; 1993 Winter-run Biological Opinion; and CVPIA Nov.	SWRCB WR 90-5; 1993 Winter-run Biological Opinion; and CVPIA Nov.	SWRCB WR 90-5; 1993 Winter-run Biological Opinion; and CVPIA Nov. 20, 1997	SWRCB WR 90-5; 1993 Winter-run Biological Opinion; and CVPIA Nov.	SWRCB WR 90-5; 1993 Winter-run Biological Opinion; and CVPIA Nov.

**Table I-1  
City of Roseville Warren Act Contract  
Modeling Assumptions**

	<b>No Action</b>	<b>Action</b>	<b>Downstream Diversion Alternative</b>	<b>Future No Project</b>	<b>Future Cumulative</b>
	20, 1997 AFRP Upstream Action #2	20, 1997 AFRP Upstream Action #2	AFRP Upstream Action #2	20, 1997 AFRP Upstream Action #2	20, 1997 AFRP Upstream Action #2
River Flow Objective for NCP	(3,250 – 5,000 cfs based on supply)	(3,250 – 5,000 cfs based on supply)	(3,250 – 5,000 cfs based on supply)	(3,250 – 5,000 cfs based on supply)	(3,250 – 5,000 cfs based on supply)
<b>American River:</b>					
Instream Flow Requirement @ Nimbus	CVPIA Nov. 20, 1997 AFRP Upstream Action #3	CVPIA Nov. 20, 1997 AFRP Upstream Action #3	CVPIA Nov. 20, 1997 AFRP Upstream Action #3	CVPIA Nov. 20, 1997 AFRP Upstream Action #3	CVPIA Nov. 20, 1997 AFRP Upstream Action #3
Instream Flow Requirement @ H St	SWRCB D-893	SWRCB D-893	SWRCB D-893	SWRCB D-893	SWRCB D-893
<b>Lower Sacramento River</b>					
Instream Flow Requirement @ Freeport	CVPIA Nov. 20, 1997 AFRP Delta Action #4	CVPIA Nov. 20, 1997 AFRP Delta Action #4	CVPIA Nov. 20, 1997 AFRP Delta Action #4	CVPIA Nov. 20, 1997 AFRP Delta Action #4	CVPIA Nov. 20, 1997 AFRP Delta Action #4
Instream Flow Requirement @ Rio Vista	SWRCB D-1641	SWRCB D-1641	SWRCB D-1641	SWRCB D-1641	SWRCB D-1641
<b>Mokelumne River</b>					
Instream Flow Requirement	1996 Joint Settlement Agreement (note f)	1996 Joint Settlement Agreement (note f)	1996 Joint Settlement Agreement (note f)	1996 Joint Settlement Agreement (note f)	1996 Joint Settlement Agreement (note f)
<b>Stanislaus River (STANMOD/SANJASM)</b>					
Instream Flow Requirement	New Melones Interim Operations Plan, 1997 (note g)	New Melones Interim Operations Plan, 1997 (note g)	New Melones Interim Operations Plan, 1997 (note g)	New Melones Interim Operations Plan, 1997 (note g)	New Melones Interim Operations Plan, 1997 (note g)
<b>Tuolumne River (SANJASM)</b>					
Instream Flow Requirement	1995 FERC 2299-024 (94 – 301 TAF/YR)	1995 FERC 2299-024 (94 – 301 TAF/YR)	1995 FERC 2299-024 (94 – 301 TAF/YR)	1995 FERC 2299-024 (94 – 301 TAF/YR)	1995 FERC 2299-024 (94 – 301 TAF/YR)
<b>San Joaquin River (SANJASM)</b>					
Instream Flow Requirement @ Vernalis	SWRCB D-1422, SWRCB D-1641 and CVPIA Nov. 20, 1997 AFRP Delta Action #1	SWRCB D-1422, SWRCB D-1641 and CVPIA Nov. 20, 1997 AFRP Delta Action #1	SWRCB D-1422, SWRCB D- 1641 and CVPIA Nov. 20, 1997 AFRP Delta Action #1	SWRCB D-1422, SWRCB D-1641 and CVPIA Nov. 20, 1997 AFRP Delta Action #1	SWRCB D-1422, SWRCB D-1641 and CVPIA Nov. 20, 1997 AFRP Delta Action #1

**Table I-1  
City of Roseville Warren Act Contract  
Modeling Assumptions**

	<b>No Action</b>	<b>Action</b>	<b>Downstream Diversion Alternative</b>	<b>Future No Project</b>	<b>Future Cumulative</b>
<b>Delta</b>					
Delta Outflow Index/Salinity Requirements	SWRCB D-1641 (MDO Implementation); CVPIA Nov. 20, 1997 AFRP Delta Action #3	SWRCB D-1641 (MDO Implementation); CVPIA Nov. 20, 1997 AFRP Delta Action #3	SWRCB D-1641 (MDO Implementation); CVPIA Nov. 20, 1997 AFRP Delta Action #3	SWRCB D-1641 (MDO Implementation); CVPIA Nov. 20, 1997 AFRP Delta Action #3	SWRCB D-1641 (MDO Implementation); CVPIA Nov. 20, 1997 AFRP Delta Action #3
Delta Cross Channel Gate Operation	SWRCB D-1641 and CVPIA Nov. 20, 1997 AFRP Delta Action #6	SWRCB D-1641 and CVPIA Nov. 20, 1997 AFRP Delta Action #6	SWRCB D-1641 and CVPIA Nov. 20, 1997 AFRP Delta Action #6	SWRCB D-1641 and CVPIA Nov. 20, 1997 AFRP Delta Action #6	SWRCB D-1641 and CVPIA Nov. 20, 1997 AFRP Delta Action #6
Delta Export Restrictions	SWRCB D-1641 (Export/Inflow Ratio); CVPIA Nov. 20, 1997 AFRP Delta Actions #1, #5 and #7  (Delta Action #8 not modeled)	SWRCB D-1641 (Export/Inflow Ratio); CVPIA Nov. 20, 1997 AFRP Delta Actions #1, #5 and #7  (Delta Action #8 not modeled)	SWRCB D-1641 (Export/Inflow Ratio); CVPIA Nov. 20, 1997 AFRP Delta Actions #1, #5 and #7 (Delta Action #8 not modeled)	SWRCB D-1641 (Export/Inflow Ratio); CVPIA Nov. 20, 1997 AFRP Delta Actions #1, #5 and #7 (Delta Action #8 not modeled)	SWRCB D-1641 (Export/Inflow Ratio); CVPIA Nov. 20, 1997 AFRP Delta Actions #1, #5 and #7 (Delta Action #8 not modeled)
<p>a American Basin 2000 demands same as Base condition in Water Forum EIR with a few updated entries. For demand associated with each purveyor, see table titled "American River Basin Demand Assumptions, Current Condition (2000)". At these levels of demand, there is no need for reduced or replaced diversions in dry years.</p> <p>b American Basin 2025 demands consistent with Water Forum Proposal. For demand associated with each purveyor, see table titled "American River Basin Demand Assumptions, Cumulative Condition (2025)".</p> <p>c Diversions from Sacramento River near Freeport as represented in EBMUD Supplemental Water Supply Project REIR/SEIS. Diversions subject to contract terms of 133,000 AF/year, CVP M&amp;I deficiencies, projected October 1st EBMUD Mokelumne River Total System Storage (TSS) not exceeding 500 TAF, and 165,000 AF total diversion in any three consecutive years. Diversion restricted to 155 cfs and not restricted by Hodge Decision terms. Implementation of these constraints based on EBMUD Supplemental Water Supply study #6174 representation of Mokelumne River operations.</p> <p>d CCWD demand is a time series that reflects operation of Los Vaqueros Reservoir.</p> <p>e Multi-species Balance refers to automated temperature selection procedure and schedule as utilized in modeling for SAFCA. This is slightly different than the schedule used for the Water Forum EIR.</p> <p>f As defined by Reclamation staff for PEIS Preferred Alternative.</p> <p>g Long-term operations plan envisioned in CVPIA November 20, 1997 AFRP Upstream Action #4 not yet determined.</p> <p>h The 30 TAF/YR would be used as necessary after primary reliance on an existing 32,000 af/yr CVP contract. When the unimpaired inflow to Folsom Reservoir for March through November (FUI-M-N) was projected to be less than 950 taf, Roseville would reduce its diversions as agreed to in the Water Forum Proposal. Total diversions would taper from 54,900 af/yr at FUI of 950 taf to 39,800 af/yr at FUI of 400 taf. In addition, water would be made available from the MFP to the American River at Folsom Reservoir as a replacement for some of the diversions made when FUI was less than 950 taf. The replacement water would ramp up from zero at FUI equals 950 taf to 20,000 af when FUI equals 400 af or less.</p>					

**Table I-2  
Sacramento Valley Demand Assumptions, Maximum Historic Use (2000/2025)**

ALLOCATION TYPE (AF MAXIMUM)								
Location / Purveyor	CVP AG	CVP MI	CVP Settlement/ Exchange	Water Rights / Non-CVP / No Cuts	CVP Refuge	Total	Maximum Historic Use Based Demand (AF)	Notes
<b>Node 61</b>								
Anderson Cottonwood ID	0	0	169,343	0	0	169,343	169,343	
<b>Total</b>	<b>0</b>	<b>0</b>	<b>169,343</b>	<b>0</b>	<b>0</b>	<b>169,343</b>	<b>169,343</b>	
<b>Node 62</b>								
Clear Creek CSD	15,300	0	0	0	0	15,300	15,300	
Bella Vista WD	24,000	0	0	0	0	24,000	24,000	
Shasta CSD	1,000	0	0	0	0	1,000	1,000	
Keswick CSD	500	0	0	0	0	500	500	
Sac R. Misc Users	0	0	0	1,961	0	1,961	1,961	
Redding, City of	0	0	21,000	0	0	21,000	21,000	
Shasta Dam PUD	2,750	0	0	0	0	2,750	2,750	
Mountain Gate CSD	350	0	0	0	0	350	350	
Shasta County Water Agency	5,000	0	0	0	0	5,000	5,000	
Redding, City of/Buckeye	0	6,140	0	0	0	6,140	6,140	
<b>Total</b>	<b>48,900</b>	<b>6,140</b>	<b>21,000</b>	<b>1,961</b>	<b>0</b>	<b>78,001</b>	<b>78,001</b>	
<b>Node 8 (Corning Canal)</b>								
Corning WD	25,300	0	0	0	0	25,300	25,300	
Elder Creek WD	0	0	0	0	0	0	0	
Proberta WD	5,500	0	0	0	0	5,500	5,500	
Thomes Creek WD	8,400	0	0	0	0	8,400	8,400	
Kirkwood WD	2,100	0	0	0	0	2,100	2,100	
Tehama WD	0	0	0	0	0	0	0	
<b>Total</b>	<b>41,300</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>41,300</b>	<b>41,300</b>	
<b>Node 9 (Tehama Colusa Canal)</b>								
Colusa, County of	59,999	0	0	0	0	59,999	59,999	
Colusa County WD	62,200	0	0	0	0	62,200	62,200	
Davis WD	4,000	0	0	0	0	4,000	4,000	
Dunnigan WD	19,000	0	0	0	0	19,000	19,000	
Glide WD	10,500	0	0	0	0	10,500	10,500	
Kanawha WD	45,000	0	0	0	0	45,000	45,000	
La Grande WD	5,000	0	0	0	0	5,000	5,000	
Orland-Artois WD	53,000	0	0	0	0	53,000	53,000	
Westside WD	25,000	0	0	0	0	25,000	25,000	
<b>Total</b>	<b>283,699</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>283,699</b>	<b>283,699</b>	
<b>Node 6</b>								
Sacramento River Misc. Users	0	0	0	5,590	0	5,590	5,590	
<b>Total</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>5,590</b>	<b>0</b>	<b>5,590</b>	<b>5,590</b>	
<b>Node 67 (GCID Canal)</b>								
Glenn Colusa ID	0	0	825,000	0	0	825,000	825,000	
Sacramento NWR	0	0	0	0	54,588	54,588	54,588	Firm Level 2 plus 15% loss
Delevan NWR	0	0	0	0	24,647	24,647	24,647	Firm Level 2 plus 15% loss
Colusa NWR	0	0	0	0	29,412	29,412	29,412	Firm Level 2 plus 15% loss
<b>Total</b>	<b>0</b>	<b>0</b>	<b>825,000</b>	<b>0</b>	<b>108,647</b>	<b>933,647</b>	<b>933,647</b>	
<b>Node 7</b>								
Colusa Irrigation Company	0	0	720	0	0	720	720	
Meridian Farms WC	0	0	29,212	0	0	29,212	29,212	
Pelger Mutual WC	0	0	6,635	0	0	6,635	6,635	
Reclamation District 1004	0	0	71,400	0	0	71,400	71,400	
Reclamation District 108	0	0	213,106	0	0	213,106	213,106	
Roberts Ditch IC	0	0	2,838	0	0	2,838	2,838	
Sartain MWD	0	0	4,554	0	0	4,554	4,554	
Sutter MWC	0	0	248,989	0	0	248,989	248,989	
Swinford Tract Irrigation Co.	0	0	225	0	0	225	225	
Tisdale Irrigation & Drainage Co.	0	0	9,163	0	0	9,163	9,163	
Sac R. Misc Users	0	0	0	128,223	0	128,223	128,223	
Feather River WD export	20,000	0	0	0	0	20,000	20,000	

Table I-2 Sacramento Valley Demand Assumptions, Maximum Historic Use (2000/2025)								
ALLOCATION TYPE (AF MAXIMUM)								
Location / Purveyor	CVP AG	CVP MI	CVP Settlement/ Exchange	Water Rights / Non-CVP / No Cuts	CVP Refuge	Total	Maximum Historic Use Based Demand (AF)	Notes
<b>Total</b>	<b>20,000</b>	<b>0</b>	<b>586,842</b>	<b>128,223</b>	<b>0</b>	<b>735,065</b>	<b>735,065</b>	
<b>Node 59</b>								
Maxwell ID	0	0	9,125	0	0	9,125	9,125	
Princeton-Codora-Glenn ID	0	0	67,810	0	0	67,810	67,810	
Provident ID	0	0	48,747	0	0	48,747	48,747	
<b>Total</b>	<b>0</b>	<b>0</b>	<b>125,682</b>	<b>0</b>	<b>0</b>	<b>125,682</b>	<b>125,682</b>	
<b>Node 11</b>								
Sutter NWR	0	0	0	0	26,111	26,111	26,111	Firm Level 2 plus 11% loss
Gray Lodge WMA	0	0	0	0	40,602	40,602	40,602	Firm Level 2 plus 15% loss
<b>Total</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>66,713</b>	<b>66,713</b>	<b>66,713</b>	
<b>Node 13</b>								
Sac R. Misc Users	0	0	0	9,803	0	9,803	9,803	
Natomas Central MWC	0	0	120,200	0	0	120,200	120,200	
Pleasant Grove-Verona MWC	0	0	19,110	0	0	19,110	19,110	
<b>Total</b>	<b>0</b>	<b>0</b>	<b>139,310</b>	<b>9,803</b>	<b>0</b>	<b>149,113</b>	<b>149,113</b>	
<b>Node 50</b>								
West Sacramento, City of	0	0	23,600	0	0	23,600	23,600	
Sac R. Misc Users	0	0	0	52,446	0	52,446	52,446	
<b>Total</b>	<b>0</b>	<b>0</b>	<b>23,600</b>	<b>52,446</b>	<b>0</b>	<b>76,046</b>	<b>76,046</b>	
<b>Node 28</b>								
City of Vallejo	0	0	0	16,000	0	16,000	16,000	
<b>Total</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>16,000</b>	<b>0</b>	<b>16,000</b>	<b>16,000</b>	
<b>Total</b>	<b>393,899</b>	<b>6,140</b>	<b>1,890,777</b>	<b>214,023</b>	<b>108,647</b>	<b>2,613,486</b>	<b>2,613,486</b>	

Table I-3 South of Delta Demand Assumptions, 3.4 MAF (2000/2025)									
ALLOCATION TYPE (AF MAXIMUM)									
Location / Purveyor	Demand Type AG=1 MI=2	CVP AG	CVP MI	CVP Settlement / Exchange	Water Rights / Non-CVP / No Cuts	CVP Refuge	Total	3.4 MAF Demand (AF)	Notes
<b>Node 29</b>									
Contra Costa Water District	2	0	195,000	0	0	0	195,000	195,000	140 TAF in Year 2000.
<b>Total</b>		<b>0</b>	<b>195,000</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>195,000</b>	<b>195,000</b>	
<b>Node 45</b>									
Plainview WD	1	20,600	0	0	0	0	20,600	20,600	
Tracy, City of	1	0	10,000	0	0	0	10,000	10,000	
Banta Carbona ID	1	25,000	0	0	0	0	25,000	25,000	
West Side ID	1	7,500	0	0	0	0	7,500	7,500	
Estimated Pro-rated Losses	2	0	0	0	5,500	0	5,500	5,500	
<b>Total</b>		<b>53,100</b>	<b>10,000</b>	<b>0</b>	<b>5,500</b>	<b>0</b>	<b>68,600</b>	<b>68,600</b>	
<b>Node 51</b>									
Davis WD	1	5,400	0	0	0	0	5,400	5,400	
Del Puerto WD	1	12,060	0	0	0	0	12,060	12,060	
Hospital WD	1	34,105	0	0	0	0	34,105	34,105	
Kern Canon WD	1	7,700	0	0	0	0	7,700	7,700	
Salado WD	1	9,130	0	0	0	0	9,130	9,130	
Sunflower WD	1	16,625	0	0	0	0	16,625	16,625	
West Stanislaus WD	1	50,000	0	0	0	0	50,000	50,000	
Mustang WD	1	14,680	0	0	0	0	14,680	14,680	
Orestimba WD	1	15,860	0	0	0	0	15,860	15,860	
Patterson WD	1	16,500	0	0	0	0	16,500	16,500	

**Table I-3  
South of Delta Demand Assumptions, 3.4 MAF (2000/2025)**

ALLOCATION TYPE (AF MAXIMUM)									
Location / Purveyor	Demand Type AG=1 MI=2	CVP AG	CVP MI	CVP Settlement / Exchange	Water Rights / Non-CVP / No Cuts	CVP Refuge	Total	3.4 MAF Demand (AF)	Notes
Patterson WD (Water Rights)	1	0	0	6,000	0	0	6,000	6,000	
Foothill WD	1	10,840	0	0	0	0	10,840	10,840	
Estimated Pro-rated Losses	2	0	0	0	10,100	0	10,100	10,100	
<b>Total</b>		<b>192,900</b>	<b>0</b>	<b>6,000</b>	<b>10,100</b>	<b>0</b>	<b>209,000</b>	<b>209,000</b>	
<b>Node 52</b>									
Quinto WD	1	8,620	0	0	0	0	8,620	8,620	
Romero WD	1	5,190	0	0	0	0	5,190	5,190	
Centinella WD	1	2,500	0	0	0	0	2,500	2,500	
Estimated Pro-rated Losses	2	0	0	0	2,900	0	2,900	2,900	
<b>Total</b>		<b>16,310</b>	<b>0</b>	<b>0</b>	<b>2,900</b>	<b>0</b>	<b>19,210</b>	<b>19,210</b>	
<b>Node 47</b>									
Central California ID	1	0	0	216,000	0	0	216,000	216,000	
Grasslands via CCID	2	0	0	0	0	83,824	83,824	83,824	Firm Level 2 plus 15% loss
Los Banos WMA	2	0	0	0	0	7,501	7,501	7,501	Firm Level 2 plus 21% loss
Kesterson NWR	2	0	0	0	0	11,147	11,147	11,147	Firm Level 2 plus 15% loss
Freitas - SJBAP	2	0	0	0	0	7,053	7,053	7,053	Firm Level 2 plus 25% loss
Salt Slough - SJBAP	2	0	0	0	0	7,859	7,859	7,859	Firm Level 2 plus 15% loss
China Island - SJBAP	2	0	0	0	0	8,196	8,196	8,196	Firm Level 2 plus 15% loss
Volta WMA	2	0	0	0	0	13,000	13,000	13,000	Firm Level 2 plus 0% loss
Grassland via Volta Wasteway	2	0	0	0	0	44,118	44,118	44,118	Firm Level 2 plus 15% loss
<b>Total</b>		<b>0</b>	<b>0</b>	<b>216,000</b>	<b>0</b>	<b>182,697</b>	<b>398,697</b>	<b>398,697</b>	
<b>Node 53</b>									
Panoche WD	1	27,000	0	0	0	0	27,000	27,000	
San Luis WD	1	65,000	0	0	0	0	65,000	65,000	
Broadview WD	1	27,000	0	0	0	0	27,000	27,000	
Laguna WD	1	800	0	0	0	0	800	800	
Eagle Field WD	1	4,550	0	0	0	0	4,550	4,550	
Mercy Springs WD	1	13,300	0	0	0	0	13,300	13,300	
Oro Loma WD	1	4,600	0	0	0	0	4,600	4,600	
Widren WD	1	2,990	0	0	0	0	2,990	2,990	
<b>Total</b>		<b>145,240</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>145,240</b>	<b>145,240</b>	
<b>Node 54</b>									
Westlands WD (incl. Barcellos)	1	50,000	0	0	0	0	50,000	50,000	
Fresno Slough WD	1	4,000	0	0	0	0	4,000	4,000	
James ID	1	35,300	0	0	0	0	35,300	35,300	
Traction Ranch/F&G	1	2,080	0	0	0	0	2,080	2,080	
Tranquillity ID	1	13,800	0	0	0	0	13,800	13,800	
Hughes, Melvin	1	70	0	0	0	0	70	70	
R.D. 1606	1	228	0	0	0	0	228	228	
<b>Total</b>		<b>105,478</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>105,478</b>	<b>105,478</b>	
<b>Node 55</b>									
Lower DMC Losses	2	0	0	0	101,500	0	101,500	101,500	
<b>Total</b>		<b>0</b>	<b>0</b>	<b>0</b>	<b>101,500</b>	<b>0</b>	<b>101,500</b>	<b>101,500</b>	
<b>Node 48</b>									
Exchange Contractors	1	0	0	624,000	0	0	624,000	624,000	
Sch. II W.R.	1	0	0	34,813	0	0	34,813	34,813	
Grasslands WD	2	0	0	0	0	19,118	19,118	19,118	Firm Level 2 plus 15%

**Table I-3  
South of Delta Demand Assumptions, 3.4 MAF (2000/2025)**

ALLOCATION TYPE (AF MAXIMUM)									
Location / Purveyor	Demand Type AG=1 MI=2	CVP AG	CVP MI	CVP Settlement / Exchange	Water Rights / Non-CVP / No Cuts	CVP Refuge	Total	3.4 MAF Demand (AF)	Notes
									loss
Los Banos WMA	2	0	0	0	0	7,952	7,952	7,952	Firm Level 2 plus 21% loss
San Luis NWR	2	0	0	0	0	25,333	25,333	25,333	Firm Level 2 plus 25% loss
Mendota WMA	2	0	0	0	0	27,594	27,594	27,594	Firm Level 2 plus 0% loss
West Gallo - SJBAP	2	0	0	0	0	14,413	14,413	14,413	Firm Level 2 plus 25% loss
East Gallo - SJBAP	2	0	0	0	0	0	0	0	
<b>Total</b>		<b>0</b>	<b>0</b>	<b>658,813</b>	<b>0</b>	<b>94,410</b>	<b>753,223</b>	<b>753,223</b>	
<b>Node 34</b>									
San Benito County WD	2	0	8,250	0	0	0	8,250	8,250	
Santa Clara Valley WD	2	0	119,400	0	0	0	119,400	119,400	
San Benito County WD	1	35,550	0	0	0	0	35,550	35,550	
Santa Clara Valley WD	1	33,100	0	0	0	0	33,100	33,100	
Pajaro Valley Wtr Mgmt Agency	1	19,900	0	0	0	0	19,900	19,900	
<b>Total</b>		<b>88,550</b>	<b>127,650</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>216,200</b>	<b>216,200</b>	
<b>Node 35</b>									
Westlands WD	1	1,100,000	0	0	0	0	1,100,000	1,100,000	
San Luis WD	1	59,560	440	0	0	0	60,000	60,000	
Panoche WD	1	66,937	63	0	0	0	67,000	67,000	
Pacheco WD	1	10,000	80	0	0	0	10,080	10,080	
Grasslands WD	1	0	0	0	3,500	0	3,500	3,500	
CA, State Parks and Rec	1	0	0	2,250	0	0	2,250	2,250	
Affonso/Los Banos Gravel Co.	1	0	0	250	0	0	250	250	
Avenal, City of	2	0	3,500	0	0	0	3,500	3,500	
Coalinga, City of	2	0	10,000	0	0	0	10,000	10,000	
Huron, City of	2	0	3,000	0	0	0	3,000	3,000	
<b>Total</b>		<b>1,236,497</b>	<b>17,083</b>	<b>2,500</b>	<b>3,500</b>	<b>0</b>	<b>1,259,580</b>	<b>1,259,580</b>	
<b>Node 37</b>									
CVC Users	1	127,995	0	0	0	0	127,995	127,995	
Kern NWR	2	0	0	0	0	11,437	11,437	11,437	Firm Level 2 plus 13% loss
Pixley NWR	2	0	0	0	0	0	0	0	
<b>Total</b>		<b>127,995</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>11,437</b>	<b>139,432</b>	<b>139,432</b>	
<b>Total (excluding Node 29)</b>		<b>1,966,070</b>	<b>154,733</b>	<b>883,313</b>	<b>123,500</b>	<b>288,545</b>	<b>3,416,161</b>	<b>3,416,161</b>	

**Table I-4  
American River Basin Demand Assumptions, Current Condition (2000)**

		ALLOCATION TYPE (AF MAXIMUM)						
Location / Purveyor	Demand Type AG=1 MI=2	CVP AG	CVP MI	CVP Settlement / Exchange	Water Rights / Non-CVP / No Cuts	CVP Refuge	Total	2000 Level Demand (AF)
Pilot Creek (Modeled by Upper American River Model)								
Georgetown		0	0	0	10,000	0	10,000	10,000
Auburn Dam Site (Modeled by Upper American River Model)								
Placer County Water Agency		0	0	0	8,500	0	8,500	8,500
Georgetown		0	0	0	0	0	0	0
Total		0	0	0	8,500	0	8,500	8,500
South Fork American River (Modeled by Upper American River Model)								
El Dorado Irrigation District		0	0	0	16,350	0	16,350	16,350
Node 14 (Folsom Reservoir)								
Northridge Water District		0	0	0	0	0	0	0
City of Folsom	2	0	0	0	20,000	0	20,000	20,000
Folsom Prison	2	0	0	0	2,000	0	2,000	2,000
San Juan Water District (Placer County)	2	0	0	0	10,000	0	10,000	10,000
San Juan Water District (Sac County)	2	0	11,200	0	33,000	0	44,200	44,200
El Dorado Irrigation District	1	0	7,550	0	0	0	7,550	5,000
El Dorado Irrigation District		0	0	0	0	0	0	0
City of Roseville	2	0	32,000	0	0	0	32,000	26,633
Placer County Water Agency		0	0	0	0	0	0	0
Total		0	50,750	0	65,000	0	115,750	107,833
Node 15 (Folsom South Canal)								
So. Cal WC/ Arden Cordova WC	2	0	0	0	3,500	0	3,500	3,500
California Parks and Recreation		0	100	0	0	0	100	100
SMUD	2	0	0	0	15,000	0	15,000	15,000
South Sac. County Agriculture		0	0	0	0	0	0	0
EBMUD		0	0	0	0	0	0	0
Canal Losses	2	0	0	0	1,000	0	1,000	1,000
Total		0	100	0	19,500	0	19,600	19,600
Node 16 (Nimbus to Mouth)								
City of Sacramento	2	0	0	0	63,335	0	63,335	63,335
Arcade Water District	2	0	0	0	2,000	0	2,000	2,000
Carmichael Water District	2	0	0	0	8,000	0	8,000	8,000
EBMUD		0	0	0	0	0	0	0
Total		0	0	0	73,335	0	73,335	73,335
Node 13 (Sacramento River)								
Placer County Water Agency		0	0	0	0	0	0	0
Northridge Water District		0	0	0	0	0	0	0
Total		0	0	0	0	0	0	0
Node 17 (Sacramento River)								
City of Sacramento	2	0	0	0	38,665	0	38,665	38,665
Sacramento County Water Agency (SMUD Transfer)		0	0	0	0	0	0	0
Sacramento County Water Agency (P.L. 101-514)		0	15,000	0	0	0	15,000	3,200
Total		0	15,000	0	38,665	0	53,665	41,865
Replacement Water								
Placer County Water Agency		0	0	0	0	0	0	0
City of Roseville		0	0	0	0	0	0	0
Total		0	0	0	0	0	0	0
Total (excluding replacement water)		0	65,850	0	231,350	0	297,200	277,483



**Table I-5  
American River Basin Demand Assumptions, Cumulative Condition (2025)**

Location / Purveyor	Demand Type AG=1 MI=2	ALLOCATION TYPE (AF MAXIMUM)						2025 Level Demand (AF) <sup>a</sup>			Notes
		CVP AG	CVP MI	CVP Settlement / Exchange	Water Rights / Non-CVP / No Cuts	CVP Refuge	Total	FUI (Mar - Nov)			
								> 1600	> 950	< 400	
Pilot Creek (Modeled by Upper American River Model)											
Georgetown		0	0	0	11,200	0	11,200	11,200	11,200	11,200	b
Auburn Dam Site (Modeled by Upper American River Model)											
Placer County Water Agency		0	0	0	35,500	0	35,500	35,500	35,500	35,500	c
Georgetown (P.L. 101-514, 5000 AF)		0	5,000	0	0	0	5,000	5,000	5,000	1,300	
Total		0	5,000	0	35,500	0	40,500	40,500	40,500	36,800	
South Fork American River (Modeled by Upper American River Model)											
El Dorado Irrigation District		0	0	0	16,350	0	16,350	16,350	16,350	16,350	
Node 14 (Folsom Reservoir)											
Northridge Water District	2	0	0	0	29,000	0	29,000	29,000	0	0	d,e
City of Folsom (includes P.L. 101-514, 7000 AF)	2	0	7,000	0	27,000	0	34,000	34,000	34,000	20,000	
Folsom Prison	2	0	0	0	2,000	0	2,000	2,000	2,000	2,000	
San Juan Water District (Placer County)	2	0	0	0	25,000	0	25,000	25,000	25,000	10,000	d
San Juan Water District (Sac County) (includes P.L. 101-514, 13,000 AF)	2	0	24,200	0	33,000	0	57,200	57,200	57,200	44,200	
El Dorado Irrigation District	1	0	7,550	0	17,000	0	24,550	24,550	24,550	22,550	b
El Dorado Irrigation District (P.L. 101-514, 10,000 AF)	1	0	10,000	0	0	0	10,000	10,000	10,000	0	
City of Roseville	2	0	32,000	0	30,000	0	62,000	54,900	54,900	39,800	c, d
Placer County Water Agency	2	0	0	0	0	0	0	0	0	0	
Total		0	80,750	0	163,000	0	243,750	236,650	207,650	138,550	
Node 15 (Folsom South Canal)											
So. Cal WC/ Arden Cordova WC	2	0	0	0	5,000	0	5,000	5,000	5,000	5,000	
California Parks and Recreation	2	0	100	0	0	0	100	100	100	100	
SMUD	2	0	15,000	0	15,000	0	30,000	30,000	30,000	15,000	
South Sacramento County Agriculture (SMUD assignment)	1	15,000	0	0	0	0	15,000	15,000	0	0	e
EBMUD		0	0	0	0	0	0	0	0	0	
Canal Losses	2	0	0	0	1,000	0	1,000	1,000	1,000	1,000	
Total		15,000	15,100	0	21,000	0	51,100	51,100	36,100	21,100	
Node 16 (Nimbus to Mouth)											
City of Sacramento	2	0	0	0	96,300	0	96,300	96,300	96,300	50,000	f
Arcade Water District	2	0	0	0	11,200	0	11,200	11,200	11,200	3,500	g
Carmichael Water District	2	0	0	0	12,000	0	12,000	12,000	12,000	12,000	
Total		0	0	0	119,500	0	119,500	119,500	119,500	65,500	
Node 13 (Sacramento River)											
Placer County Water Agency		0	35,000	0	0	0	35,000	35,000	35,000	35,000	
Northridge Water District		0	0	0	0	0	0	0	0	0	
Total		0	35,000	0	0	0	35,000	35,000	35,000	35,000	
Node 17 (Sacramento River)											
City of Sacramento	2	0	0	0	34,300	0	34,300	34,300	34,300	80,600	f
Sacramento County Water Agency (SMUD assignment)	1	0	30,000	0	0	0	30,000	30,000	30,000	30,000	
Sacramento County Water Agency (P.L. 101-514)	1	0	15,000	0	0	0	15,000	15,000	15,000	15,000	
EBMUD	1	0	0	0	0	0	0	0	0	0	h
Total		0	45,000	0	34,300	0	79,300	79,300	79,300	125,600	
Replacement Water											
Placer County Water Agency		0	0	0	27,000	0	27,000	0	0	27,000	
City of Roseville		0	0	0	20,000	0	20,000	0	0	20,000	
Total		0	0	0	47,000	0	47,000	0	0	47,000	
Total (excluding replacement water)		15,000	180,850	0	400,850	0	596,700	589,600	545,600	450,100	

**Table I-5  
American River Basin Demand Assumptions, Cumulative Condition (2025)**

Location / Purveyor	Demand Type AG=1 MI=2	ALLOCATION TYPE (AF MAXIMUM)							2025 Level Demand (AF) <sup>a</sup>			Notes
		CVP AG	CVP MI	CVP Settlement / Exchange	Water Rights / Non-CVP / No Cuts	CVP Refuge	Total	FUI (Mar - Nov)				
								> 1600	> 950	< 400		
a 2025 Level demand varies according to Folsom Unimpaired Inflow, (in TAF, March - November), as shown. Also, when 950 > FUI > 400, demand is linearly interpolated between demand at 950 TAF and demand at 400 TAF.												
b Values have been updated slightly from Water Forum amounts.												
c When FUI < 950 TAF, these diversions require equivalent release of Replacement Water from Middle Fork Project (MFP) to lower American River.												
d Demand provided from PCWA MFP; consistent assumptions required in Upper American River model.												
e Demand only when FUI > 1600 TAF.												
f City of Sacramento diversions are modeled in accordance with the Water Forum Proposal wherein the City agreed to restrict diversions at the Fairbairn WTP when diversions would cause the river flow to drop below the Hodge Flow Criteria in EDF v. EBMUD and when FUI < 400 TAF. It is assumed that City of Sacramento demand not diverted from the American River would be diverted from the Sacramento River and that the combined diversions would be 130,600 AF/year.												
g Demand is not interpolated when 950 > FUI > 400 TAF; instead demand is a step function at FUI = 400 TAF.												
h The Hodge decision in EDF v. EBMUD set minimum instream flows which cannot be impacted by EBMUD diversions. Other constraints apply to EBMUD demand; it will be modeled by time series input												

<b>Table I-6</b> <b>Comparison of PROSIM and OCAP CALSIMII</b> <b>Simulations – Folsom Reservoir Storage<sup>1</sup></b>					
	Oct-Nov	Dec-Mar	Apr-Jun	Jul-Sep	All Months
Mean (TAF)					
PROSIM	400.29	445.57	692.41	507.96	515.33
OCAP	459.64	508.95	767.00	555.74	576.94
Sign Test	P < O	P < O	P < O	P < O	P < O
Signed-Rank Test	P < O	P < O	P < O	P < O	P < O
<sup>1</sup> P < O PROSIM distribution less than OCAP distribution P = O PROSIM distribution same as OCAP distribution					

<b>Table I-7</b> <b>Comparison of PROSIM and OCAP CALSIMII</b> <b>Simulations – Nimbus Dam Release<sup>1</sup></b>					
	Oct-Nov	Dec-Mar	Apr-Jun	Jul-Sep	All Months
Mean (cfs)					
PROSIM	2,109	4,018	3,749	2,497	3,252
OCAP	2,194	3,964	3,628	2,629	3,251
Sign Test	P = O	P = O	P > O	P = O	P > O
Signed-Rank Test	P = O	P > O	P > O	P = O	P > O
<sup>1</sup> P < O PROSIM distribution less than OCAP distribution P = O PROSIM distribution same as OCAP distribution					

<b>Table I-8</b> <b>Comparison of PROSIM and OCAP CALSIMII</b> <b>Simulations – Watt Avenue Water Temperature<sup>1</sup></b>					
	Oct-Nov	Dec-Mar	Apr-Jun	Jul-Sep	All Months
Mean (°F)					
PROSIM	57.9	45.8	57.3	69.5	58.5
OCAP	58.1	45.9	56.4	66.2	57.7
Sign Test	P = O	P < O	P > O	P > O	P > O
Signed-Rank Test	P = O	P < O	P > O	P > O	P > O
<sup>1</sup> P < O PROSIM distribution less than OCAP distribution P = O PROSIM distribution same as OCAP distribution					

**Appendix J**  
**Memorandum of Understanding Between the**  
**City of Roseville and the U.S. Fish and Wildlife**  
**Service**

**Environmental Assessment**  
**Finding of No Significant Impact**

**Initial Study**  
**Mitigated Negative Declaration**

**Long-term Warren Act Contract**  
**Between the United States of America**  
**and the City of Roseville**



**January 2006**

**MEMORANDUM OF UNDERSTANDING  
BETWEEN THE CITY OF ROSEVILLE AND  
THE UNITED STATES FISH AND WILDLIFE SERVICE**

**1. BACKGROUND**

1.1. On May 25, 1999, the United States Fish and Wildlife Service ("Service") issued a biological opinion under a formal consultation with the Army Corps of Engineers ("Corps") regarding the effects of construction of the Pleasant Grove Wastewater Treatment Plant ("PGWTP") on the federally listed endangered vernal pool tadpole shrimp and the threatened vernal pool fairy shrimp ("vernal pool species") in accordance with section 7 of the federal Endangered Species Act ("ESA"), 16 U.S.C. section 1531 *et seq.*

1.2. The Incidental Take Statement ("ITS") attached to the opinion authorized incidental take associated with the direct and indirect effects of the construction of the PGWTP. The ITS, however, did not authorize incidental take resulting from operation of the PGWTP. The PGWTP will have an initial ("Phase I") operating capacity of 12 million gallons per day; and will expand to a maximum daily operating capacity of 21 million gallons per day during Phase II operations.

1.3. To minimize incidental take of vernal pool species resulting from the effects of the PGWTP's operation, the City of Roseville ("City"), as part of the proposed action reviewed in the biological opinion, committed to develop and implement an interim conservation strategy and a long term habitat conservation program.

1.4. Through this Memorandum of Understanding ("MOU"), the City and the Service (collectively "Parties") seek to accomplish the following objectives consistent with the proposed action as described in the biological opinion and with the reasonable and prudent measures to minimize take contained in the ITS:

1.4.a. To set out a process to develop an interim conservation strategy to minimize the adverse effects on federally listed species of future development serviced by Phase I operations of the PGWTP and located on lands under the City's jurisdiction.

1.4.b. To work cooperatively to develop a long-term Habitat Conservation Plan ("HCP") or its equivalent to minimize the effects on federally listed species of future development serviced by Phase II of the PGWTP and located in the City or other participating jurisdictions who commit to participate in the HCP or its equivalent.

1.5. The City is undertaking these efforts with the expectation that a number of environmental, economic and quality of life benefits will accrue to the Roseville community and surrounding areas. Accordingly, the City and the Service intend for this process to be guided by the following goals:

1.5.a. Providing for the conservation of endangered and threatened species and open space while accommodating appropriate economic growth in the region.

1.5.b. Establishing a process that addresses conservation issues on a comprehensive basis, rather than through piecemeal, project-by-project review.

1.5.c. Achieving streamlined review and processing of state and federal permits for species and habitats through the integration of these requirements into local land use decision-making processes.

1.5.d. Providing appropriate regulatory assurances to the City and other participating jurisdictions to foster certainty and predictability in the planning process.

## 2. DESCRIPTION OF THE PLANNING AREA

2.1. The planning area for the interim conservation strategy and the HCP or its equivalent will encompass that portion of the PGWTP service area within the City's boundaries as of the date this MOU is signed. (See map attached as Exhibit 1.) The Parties recognize, however, that the City's boundaries may change in the foreseeable future to include lands annexed through agreement with Placer County ("County"), in which case those annexed areas of the County are intended to be incorporated into the planning area and receive coverage under the City's Incidental Take Permit ("ITP"). Where an ITP has already been issued to the City

that does not include the annexed areas, incidental take may be authorized in the annexed areas either through amendment of the City's ITP or through other authorization under the ESA.

- 2.2. The City further agrees to initiate discussions with other jurisdictions serviced by the PGWTP to encourage their participation in the development of a long-term conservation plan and concurrence in an interim conservation strategy. If surrounding jurisdictions to be serviced by the PGWTP commit to participate in the development of the HCP or its equivalent, the planning area will be modified and the additions to the planning area treated in accordance with section 2.1. Prior to any surrounding jurisdiction receiving wastewater treatment from PGWTP under Phase 2 operations, the Service shall confirm that such jurisdiction has addressed the indirect effects of wastewater treatment provided by the PGWTP within the jurisdiction through one of the following: (1) issuance of an ITP to the jurisdiction for the area to be served by Phase 2 operations; (2) participation by the jurisdiction in an approved regional HCP or its equivalent for areas to be served by Phase 2 operations; or (3) Service concurrence that the indirect effects of Phase 2 operations within the jurisdiction have otherwise been evaluated, minimized, and mitigated in accordance with the ESA.

### 3. COVERED ACTIVITIES

The City intends that future public works projects, private development and other activities identified in the HCP or its equivalent will be covered under the incidental take authorizations issued by the Service to the City and to any other participating jurisdictions.

- 3.1. The City will undertake a comprehensive conservation planning process that is intended to afford future public works projects, private development and other activities take authorizations under the state and federal endangered species laws for species and activities covered by the plan.
- 3.2. The plan developed by the City is intended to specify covered activities, which will include all development within the PGWTP service area that is under the jurisdiction of the City and/or other participating jurisdictions.
- 3.3. The plan developed by the City is also intended to provide a process by which future land use projects within the PGWTP's service area will be

afforded the use of this process to meet the requirements of federal endangered species laws.

#### 4. FUNDING

- 4.1. The City recognizes that the development and implementation of the interim strategy and the HCP or its equivalent will be funded primarily though locally derived sources.
- 4.2. The Service agrees to cooperate with the City in identifying and securing, where appropriate, federal and state funds earmarked for such purposes. Potential federal funding sources may include: the Service's Cooperative Endangered Species Conservation Fund, "smart growth" initiatives, and land acquisition grants or loans through other federal agencies such as the U.S. Environmental Protection Agency, the Corps, or the Departments of Agriculture or Transportation.
- 4.3. The obligation of the Service to carry out its commitments under this MOU is subject to the availability of appropriated funds.

#### 5. PUBLIC INVOLVEMENT

- 5.1. The City is committed to the development of a conservation strategy through an open and participatory process. The City anticipates that the final HCP or its equivalent will be informed and shaped by the input of the public. In devising an approach to these regulatory requirements, the concerns and interests of the Roseville community must be considered and, where appropriate, accommodated in the plan.
- 5.2. The City, therefore, intends to establish a process to ensure broad public participation in the development of the conservation plans.

#### 6. COMMITMENT OF RESOURCES

- 6.1. The City acknowledges that, as a prospective applicant for incidental take authorizations under federal law, it has the primary responsibility for developing a plan that meets all applicable legal requirements.
- 6.2. Subject to funding and staffing constraints, the Service agrees to provide technical and scientific advice, assistance and information, to assist the City with the timely and efficient development of the HCP or its equivalent.



- 6.3. Subject to funding and staffing constraints, the City and the Service commit to periodic staff level and policy level meetings as appropriate during development of the HCP or its equivalent. The Parties intend that informal discussions will occur on a regular and frequent basis to ensure that progress is being made.
- 6.4. Among other things, these meetings should provide a forum for free and open discussion about issues and approaches to plan development so as to ensure quick resolution or agreement.
- 6.5. By agreeing to assume the lead planning role and commit its financial and staff resources to this effort, the City intends for the conservation program to yield a number of benefits in addition to resource conservation, including greater regulatory efficiency, streamlining and certainty.

## 7. PROCESS TO DEVELOP AN INTERIM STRATEGY

- 7.1. The Parties agree to work cooperatively to establish an interim strategy to provide a basis upon which the impacts of future development on threatened, endangered, and other species of concern during Phase I operations within the City's boundaries will be addressed in an efficient, comprehensive manner, provided that take of listed federal species resulting from such development shall be authorized under ITPs or equivalent take authorizations issued by the Service.
- 7.2. The following tenets shall be incorporated into an interim conservation strategy:
  - 7.2.a. Future development in areas adjacent to preserves shall take measures to protect and, where practicable, improve the integrity of the preserve. Such measures may include providing adequate buffers, enlarging the preserve area when resources are contiguous, providing protection to the preserve through the maintenance of watershed integrity or topographical isolation, or providing connectivity between fragmented preserves.
  - 7.2.b. Development projects going forward prior to establishment of the HCP or its equivalent shall not preclude options for establishing a viable long-term preserve system. Special attention should be given to areas of high conservation value.

Some of these areas, however, may be developed in the context of the HCP or its equivalent if warranted by the overall preserve design and management strategy developed through the HCP or its equivalent. This approach will allow the City and the Service to develop an acceptable conservation strategy without any single project foreclosing critical conservation opportunities.

7.2.c. As provided in the ITS attached to the biological opinion, the City agrees to preserve all vernal pools located in preserves established by prior agreement between the City and the Service, or the City and third parties, and to establish and implement individual Operations and Maintenance plans for the management of the preserves. (A list of all such current preserves is attached as Exhibit 2.) The City further agrees to require that all projects subject to its approval, including infrastructure, avoid to the maximum extent practicable, direct and indirect effects to the preserves unless the Parties agree otherwise.

7.3. To accomplish the foregoing objectives, the Parties intend for the interim conservation strategy to be developed in a timely manner, consistent with the following process and milestones:

7.3.a. Identification of future planned development and infrastructure activities within the City that will be serviced by Phase I of the PGWTP (to be completed 30 days from the signing of this MOU).

7.3.b. Identification and mapping of existing, including City permitted, vernal pool resources within the plan area (to be completed 30 days from the signing of this MOU).

7.3.c. Establishment of species and habitat conservation goals and objectives (to be completed by September 2000).

7.3.d. Development of a framework under which take resulting from projects proposed prior to issuance of ITPs or their equivalent by the Service may be authorized in a streamlined and efficient manner consistent with the goals and objectives of the conservation strategy and with federal law, including the ESA and NEPA. Projects going forward prior to establishment of an HCP or its equivalent shall not preclude options for establishing

a viable long-term preserve system. Among the options to be considered by the Parties is the use of a programmatic section 7 consultation between the Service and the Corps (to be completed by September 2000). During development of the above interim framework, the Parties commit to ongoing discussions regarding projects proposed within the City.

7.3.e. Development of individual operations and maintenance plans for each vernal pool preserve established through the interim conservation strategy and for each existing vernal pool preserve established by prior agreement between the City and the Service, or the City and any third party, that is not currently subject to a management plan (intended to be completed by September 2000 subject to review and approval by the Corps).

7.3.f. Initiation of discussions by the Service and the City with other jurisdictions served by the PGWTP to ascertain opportunities for collaboration to jointly develop both an interim conservation strategy and an HCP or its equivalent. The City has already entered into discussions with Placer County to explore the feasibility of coordinating the Placer Legacy Program with the City's planning efforts.

## 8. PROCESS TO DEVELOP AN HCP OR ITS EQUIVALENT

8.1. The City agrees to develop an HCP or its equivalent to address the indirect effects of the operation of the PGWTP on federally listed species.

8.2. The Parties intend for this HCP or its equivalent to satisfy the requirements of the ESA, NEPA and other applicable federal laws. To the extent allowed under law, the parties intend that the mitigation and minimization measures required under the approved HCP and ITP be adopted by the Service and made consistent with and incorporated into future section 7 consultations between the Service and the Corps regarding impacts to species covered by the HCP or its equivalent.

8.3. The City intends to develop an HCP or its equivalent that addresses the needs of vernal pool species and other species listed under federal endangered species law, as well as proposed, candidate, sensitive or other species of concern occupying habitats within the plan area.

- 8.4. The City further intends that this HCP or its equivalent will satisfy requirements under the California Endangered Species Act (CESA), Fish and Game Code section 2050 et seq., the Natural Community Conservation Planning Act (NCCP Act), Fish and Game Code section 2800 et seq., the California Native Plant Protection Act, Fish and Game Code section 1900 et seq., and California Fish and Game Code section 1600 et seq.
- 8.5 The City will continue to explore the feasibility of developing its HCP, or its equivalent, in coordination and collaboration with the Placer County Legacy Program, which may produce a plan consistent with both the ESA and the NCCP Act. Should the City and County deem such relationship to be mutually beneficial, the City may seek to obtain NCCP authorizations from the Department of Fish and Game as well.
- 8.6. The Parties further intend to work with the Corps and the U.S. Environmental Protection Agency to optimize opportunities to streamline the process for issuance of permits under section 404 of the Clean Water Act for those projects that are in conformance with an approved HCP or its equivalent and the incidental take authorizations issued by the Service.
- 8.7. To accomplish the foregoing objectives, the Parties commit to establish a schedule and process to complete development of the HCP or its equivalent. The Parties intend for the schedule to be developed in a timely manner, with milestones established at the outset of the process.

## 9. REGULATORY ASSURANCES

The Parties intend that the Service will provide regulatory assurances consistent with its statutory authorities upon issuance of an ITP by the Service. For example, if the City develops an HCP that meets the criteria for issuance of an ITP under Section 10 of the ESA, the City will receive those assurances identified in the "no surprises" regulations of the U.S. Department of the Interior at 50 C.F.R. 17.22(b)(5) and 17.32(b)(5) for all species adequately covered under the HCP upon approval of the plan and issuance of an ITP by the Service.

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IN WITNESS WHEREOF, the Parties have executed this Memorandum of Understanding effective as of the last date set forth below.

UNITED STATES FISH AND WILDLIFE SERVICE, an agency of the Department of the Interior of the United States of America

By: Craig C. Mond

Title: Asst. Field Supervisor

Date: Aug 18, 2000

CITY OF ROSEVILLE, a political subdivision of the State of California

By: [Signature]

Title: City Manager

Date: May 17, 2000



**REGIONAL WASTEWATER TREATMENT SERVICE AREA**

SCALE = 1:5000  
1" = 1000'  
1" = 1000'

**CITY OF ROSEVILLE  
WASTEWATER TREATMENT  
SERVICE AREA**

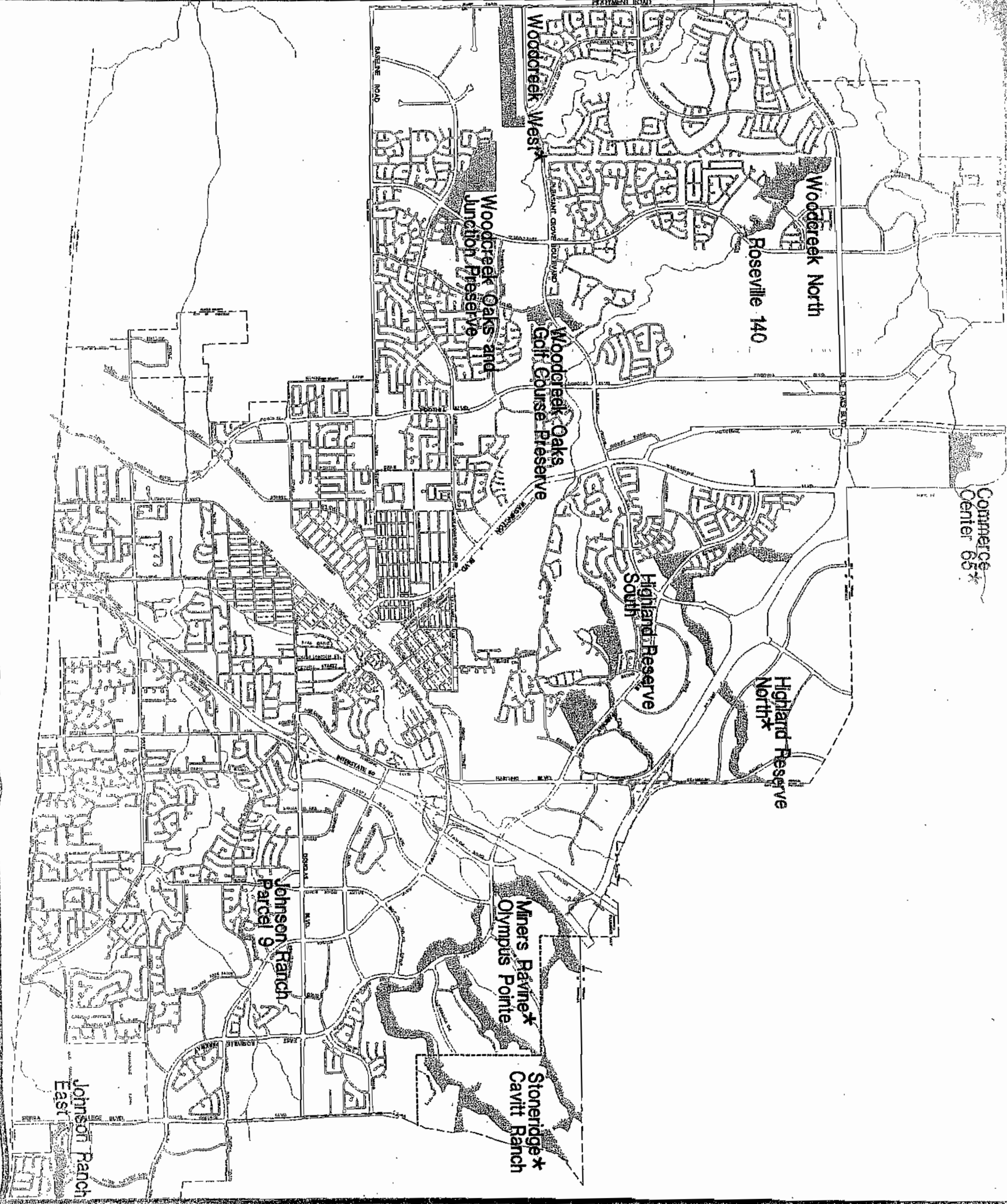
**City of Roseville Corporate Boundary**


Map prepared by City of Roseville Environmental Utilities Dept.  
Reviewed by City of Roseville Planning Dept. Dated June 7, 2000  
File Name: C:\P\1\Utilities\wastewater\0501\WWT.dwg 06/07/00

**APRIL 2000**

**EXHIBIT**





 City of Roseville


City

Vernal Pool

Preserves

April 5, 2000

\* Final Operation and Management Plan still pending. City has been designated as Preserve Manager.



SCALE: 1" = 3300'

City of Roseville Planning Department  
Map prepared by D Moss April 5, 2000  
arc\jelland\chapters\res\apr2000.dwg

City of Roseville Interim  
Conservation Strategy

Exhibit 2

RESOLUTION NO. 00-197

APPROVING A MEMORANDUM OF UNDERSTANDING  
BETWEEN CITY OF ROSEVILLE AND UNITED STATES FISH AND WILDLIFE  
SERVICE, AND AUTHORIZING THE CITY MANAGER TO EXECUTE IT ON BEHALF  
OF THE CITY OF ROSEVILLE

WHEREAS, a memorandum of understanding relating to the preparation of a habitat conservation plan, between the City of Roseville and U.S. Fish and Wildlife Service, has been reviewed by the City Council;

NOW, THEREFORE, BE IT RESOLVED by the Council of the City of Roseville that said memorandum of understanding is approved and that the City Manager is authorized to execute it on behalf of the City of Roseville.

PASSED AND ADOPTED by the Council of the City of Roseville this 17th day of May, 2000, by the following vote on roll call:

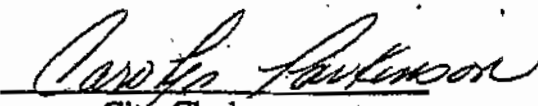
AYES COUNCILMEMBERS: Earl Rush, Dan Goodhall, Claudia Gamar, Randolph Graham, Harry Crabb

NOES COUNCILMEMBERS: None

ABSENT COUNCILMEMBERS: None

  
MAYOR

ATTEST:

  
City Clerk

The foregoing Instrument is a correct copy of the original on file in the City Clerk's Department.

ATTEST:

City Clerk of the City of Roseville, California

  
DEPUTY CLERK



# **Appendix K**

## **Vernal Pool Resources**

### **Environmental Assessment**

#### **Finding of No Significant Impact**

### **Initial Study**

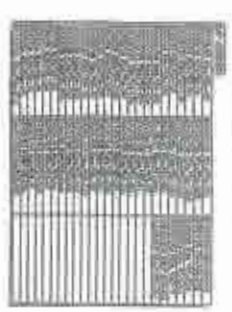
#### **Mitigated Negative Declaration**

**Long-term Warren Act Contract  
Between the United States of America  
and the City of Roseville**



**January 2006**

Autographa Hoversnapper, 1901  
 Identification: p. 62-624  
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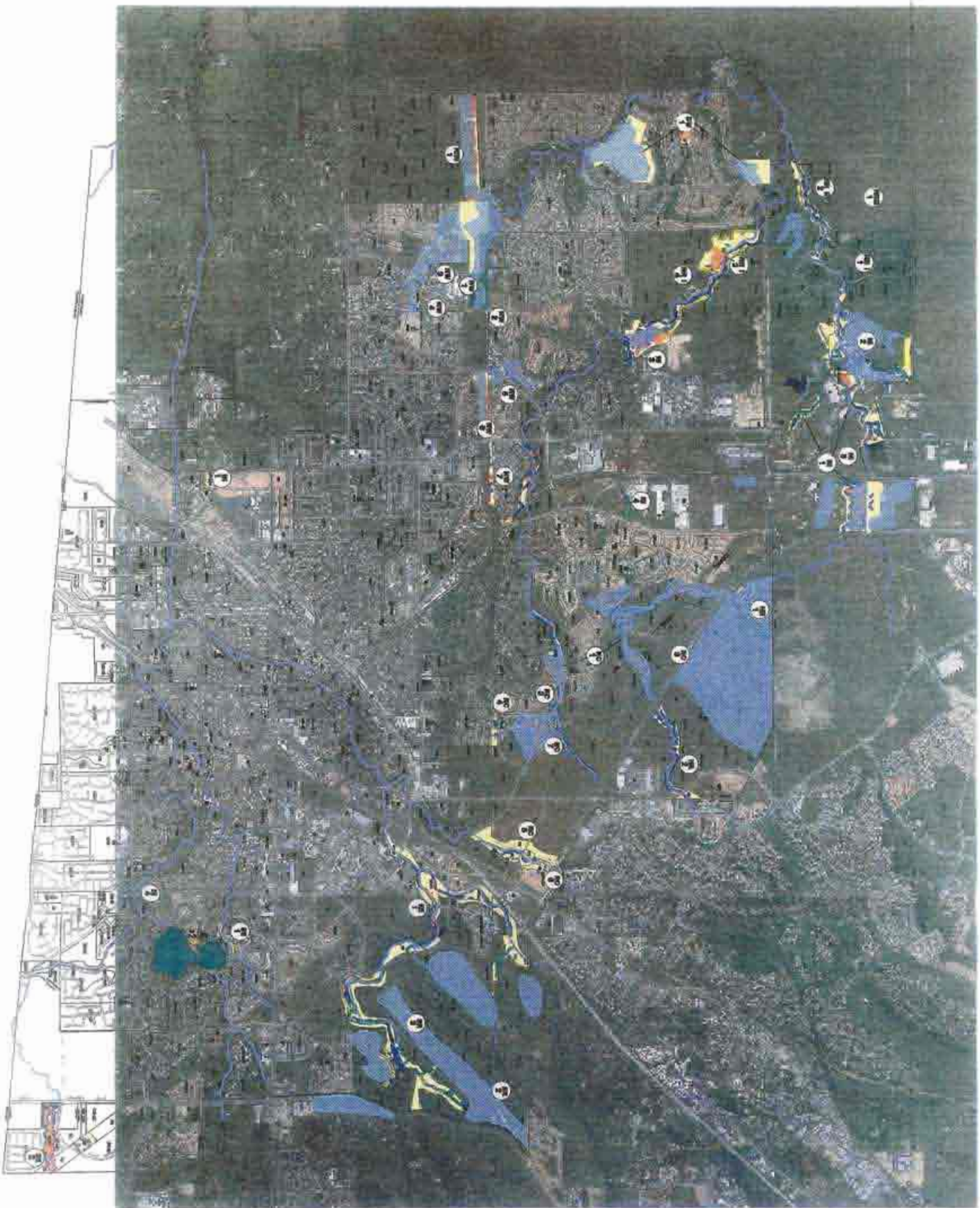


\*Notes: Locations shown are approximate. Site plans have not been initiated for some projects.



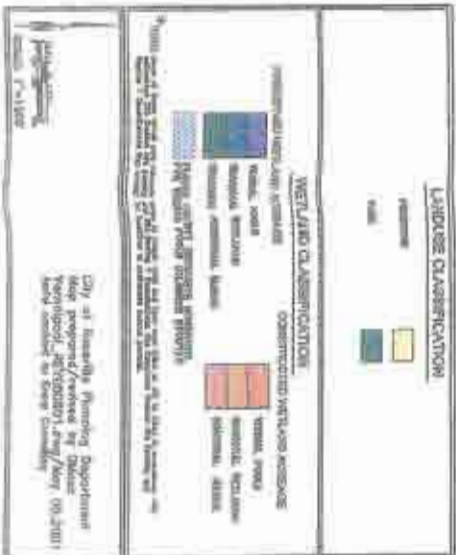


PERMITTED VERNAL POOLS  
CITY OF ROSEVILLE



Map#	Description	TOTAL WETLAND PRESERVED	TOTAL WETLAND CREATED
204	Old Water	17.07 ac	14.22 ac
205	Highland Preserve Wetland	0.73 ac	1.02 ac
206	Highland Preserve Wetland	2.87 ac	13.64 ac
207	Starrs Crossing	0.27 ac	0.40 ac
208	Pharmacia Farm	0.82 ac	0.18 ac
209	Highland Preserve Wetland	1.11 ac	1.16 ac
210	Highland Preserve Wetland	0.40 ac	1.89 ac
211	Highland Preserve Wetland	0.02 ac	0.43 ac
212	Highland Preserve Wetland	0.89 ac	0.89 ac
213	Highland Preserve Wetland	n/a	0.21 ac
214	Highland Preserve Wetland	n/a	0.04 ac
215	Highland Preserve Wetland	n/a	0.22 ac
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For a detailed map of the project area, please refer to the De Wille Swartz, Inc. Environmental Impact Report. The document is available at the City of Roseville Planning Department. The document is available at the City of Roseville Planning Department.

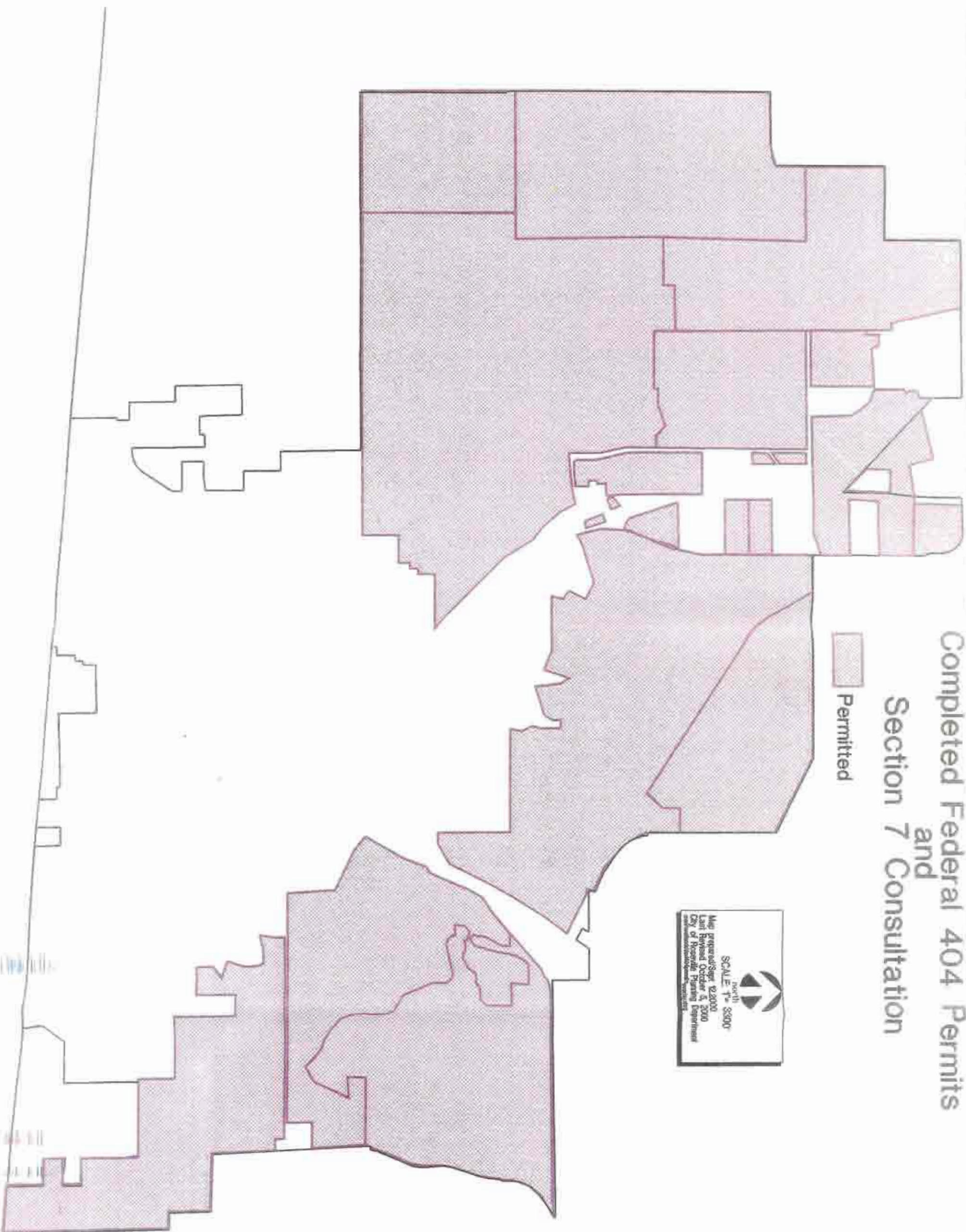


City of Roseville Planning Department  
Map prepared/revised by: [Name]  
[Date]  
[Scale]



# Completed Federal 404 Permits and Section 7 Consultation

 Permitted



# **Appendix L**

## **Service Area Analysis and Water Allocation Issues**

### **Environmental Assessment**

#### **Finding of No Significant Impact**

### **Initial Study**

#### **Mitigated Negative Declaration**

**Long-term Warren Act Contract  
Between the United States of America  
and the City of Roseville**



**January 2006**

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## **Appendix L**

### **Service Area Analysis and Water Allocation Issues**

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This appendix was developed at the request of the U.S. Fish and Wildlife Service (USFWS) and U.S. Bureau of Reclamation (Reclamation) to supplement analysis contained in the Environmental Assessment/Initial Study/Biological Assessment (EA/IS/BA) prepared for the Long-term Warren Act Contract between the United States of America and the City of Roseville. The purpose of this appendix is to twofold:

1. To verify that previous Roseville Regional Wastewater Treatment Service Area analyses performed by the City for the USFWS can be used to assess indirect operational effects within the City's water service area; and,
2. To clarify that water allocated by the proposed Long-term Warren Act is earmarked for demands calculated based on existing City buildout, not for potential growth that may occur as a result of City annexation.

#### **1. SERVICE AREA ANALYSIS**

##### **1.1 CITY OF ROSEVILLE WATER AND WASTEWATER SERVICE AREAS**

As part of a Joint Powers Authority, the City of Roseville operates wastewater treatment facilities that provide regional wastewater treatment within the service area identified in Figure L-1. The regional wastewater service area includes nearly all of the City of Roseville, the City of Rocklin, the Town of Loomis, a portion of the Town of Penryn, and parts of Placer County including the Sunset Industrial Area, Granite Bay and the Dry Creek Community Plan. What is notable for the purpose of this assessment is that the wastewater service area includes the entire City of Roseville with the exception of three small areas along the southern service area boundary (see Figure L-1).

In addition to wastewater service, the City of Roseville provides potable water within the water service area also identified in Figure L-1. The water service area boundary shown in Figure L-1 is coterminous with the City limit line except in the northeast and southeast corners of the City. In these areas water service is provided by the Placer County Water Agency and San Juan Water Agency, respectively.

Figure L-1 demonstrates that the only portion of the water service area not included in the wastewater service area occurs along the southern City boundary. This occurs because the wastewater service boundary follows an irregular alignment in this area in response to topographic conditions. As a result, Sacramento County provides wastewater collection and treatment for these areas. Although these areas are included within the water service area, they are already built out and would not be subject to indirect effects due to development accommodated by water delivered via the proposed long-term Warren Act contract.

This comparison demonstrates that City of Roseville water and wastewater service areas are largely the same for the purpose of this service area analysis. As such, analyses previously conducted for the wastewater service area can be applied to the water service area as discussed below.

## **1.2 CITY OF ROSEVILLE/USFWS MOU**

On May 25, 1999 the USFWS issued a Biological Opinion for the Pleasant Grove Regional Wastewater Treatment Plant. As an implementation measure of the Biological Opinion, an MOU was approved between the City of Roseville and USFWS on August 18, 2000. The MOU outlined a process to provide long-term protection to vernal pool species located within the City limits and to address indirect effects of providing additional wastewater treatment capacity capable of accommodating City buildout. Specifically, the MOU identified, at the time of its signing, the commitment by the City to address vernal pool species needs via development of an Interim Strategy and Habitat Conservation Plan (HCP) or equivalent (MOU section 1.3).

### **1.2.1 Service Area Analysis Completed for Wastewater**

As part of the process of developing an Interim Strategy and assessing the need for an HCP or equivalent, the MOU identified several milestones and deliverables to be completed by the City. This included Citywide mapping of remaining vernal pool resources, areas planned for development, and areas that had already received federal permitting. The mapping demonstrated that relatively few vernal pool resources not already federally permitted for development remained within the City. Based on this mapping exercise, the City and USFWS agreed not to pursue an HCP for remaining developing properties within the City. Rather, the agreement was to address species protections for remaining buildout on a project-by-project basis via development and implementation of a City of Roseville Vernal Pool Conservation Plan and Interim Strategy. The satisfactory completion and implementation of this Plan and Strategy ensures that indirect effects to listed and proposed species within Roseville's City limits (which is largely equal to the City's water service area as described above) will have otherwise been evaluated, minimized, and mitigated, in accordance with the provisions of the federal ESA. Furthermore, future growth outside the service area would need to comply with the City/USFWS MOU, Vernal Pool Conservation Plan and Interim Strategy. This approach was followed during the federal permitting process completed for the recently approved West Roseville Specific Plan and Sphere of Influence Amendment project.

## **2. ALLOCATION OF WARREN ACT WATER**

### **2.1 CITY OF ROSEVILLE BUILDOUT WATER DEMAND**

The City has existing contracts to obtain 32,000 acre-feet of water from the Bureau of Reclamation at Folsom Reservoir and 4,000 acre-feet of water from San Juan Water District. As described in the EA/IS/BA, the proposed project involves entering into a



long-term (25-year) Warren Act contract to wheel 30,000 acre-feet of Placer County Water Agency water to Roseville through Folsom Reservoir. Thus, with execution of the proposed Warren Act Contract, the City's total water entitlement will be 66,000 acre feet.

As part of the City's participation in the Water Forum and execution of the Water Forum Agreement (described in detail in the EA/IS/BA), Roseville has agreed to limit its surface water supplies to only that amount necessary to serve City buildout; approximately 54,900 acre feet. Consequently, the proposed Warren Act water is not allocated for development beyond buildout of the current City limit. Rather, water supply for potential annexation projects would need to be secured consistent with the City's General Plan Land Use Element, Growth Management policies which require that new development west of Roseville secure and provide a new source and supply of surface water as further discussed below.

## **2.2 GROWTH MANAGEMENT POLICIES FOR WEST ROSEVILLE DEVELOPMENT (ANNEXATION) PROPOSALS**

Recent proposals for annexation and development in the area west of the City (hereinafter, referred to as the "West Roseville Development Proposals") prompted the City to approve a set of *Guiding Principles*. These *Guiding Principles* were subsequently approved as an amendment to the City's General Plan (February 4, 2004) and are included as Attachment 1, General Plan Growth Management - Growth Area Policies 5-10. The intent of the *Guiding Principles* is to articulate the City's expectation relating to any potential annexation proposal west of Roseville. The *Guiding Principles* also serve as performance measures to be used in the evaluation of any West Roseville Development Proposals. With regard to water supply and service area indirect effects, the following *Guiding Principles* would apply.

- *Guiding Principle 7 - Any development proposal west of Roseville shall secure and provide a new source and supply of surface water and should include reduced water demand through use of recycled water and other off-sets.*

This *Guiding Principle* further clarifies that a new source of surface water supply would need to be identified for any West Roseville annexation project.

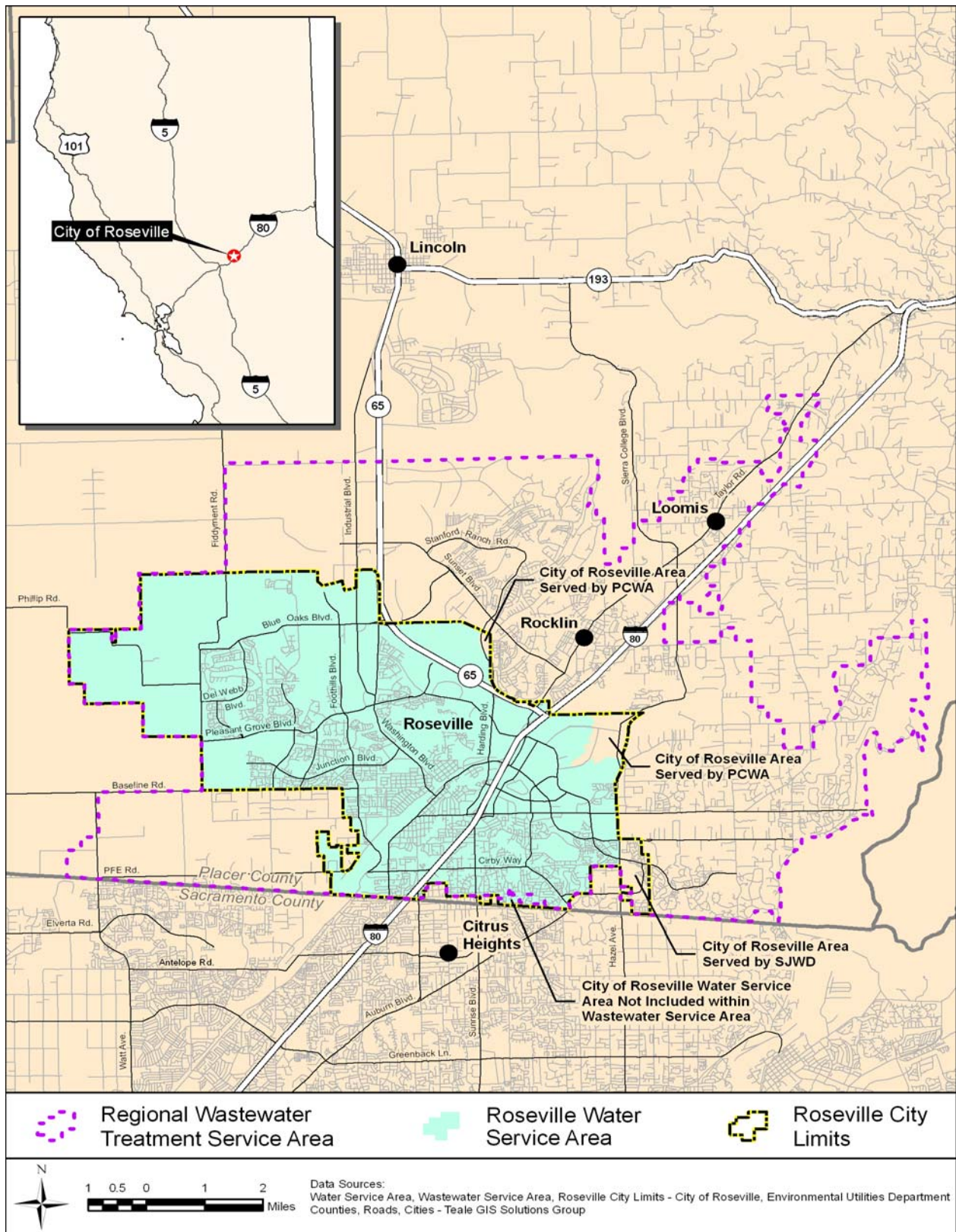
- *Guiding Principle 11 - Any development proposal west of Roseville shall include a significant interconnected public open space component/ conservation plan in coordination with the City of Roseville/USFWS Memorandum of Understanding.*

This *Guiding Principle* acknowledges the need to coordinate with regional conservation planning consistent with the City of Roseville/USFWS MOU. In general, the *Guiding Principles* require that any development west of Roseville provide full funding for all necessary City services and utilities and that expansion of these not diminish supply or reliability to existing City customers.

### 3. CONCLUSION

Based on the above discussions, the following conclusions can be made regarding the applicability of past citywide service area analyses and the current allocation of additional surface water supplies facilitated by the proposed long-term Warren Act contract.

The City's wastewater and water service areas are essentially the same (Figure L-1). The indirect effects of City buildout as facilitated by provision of additional wastewater treatment capacity has already been evaluated as part of work completed in accordance with the MOU between the City and USFWS. This work has resulted in agreement between the City and the USFWS that nearly all projects within the City limits containing vernal pools have received Clean Water Act 404 permits. As such, preparation of an HCP to address the few remaining projects is not necessary. Instead, potential impacts to remaining vernal pool resources within the City will be minimized and/or avoided via development and implementation of a City of Roseville Vernal Pool Conservation Plan and Interim Strategy. Because the service areas are essentially the same, the above agreement and strategy to protect vernal pool endangered species from indirect impacts within the wastewater service area are also applicable for water service. Furthermore, water provided by the proposed long-term Warren Act contract has been allocated to development associated with buildout of the City's existing boundaries at the time the City/USFWS MOU was agreed upon. As stipulated in the City's General Plan Growth Management, *Growth Area Guiding Principles* for West Roseville Development Proposals (Attachment 1), any development proposal west of Roseville is required to secure and provide a new source and supply of surface water and will be coordinated with the City/USFWS MOU requirements.



**Figure L-1: Service Area Map**

## **ATTACHMENT 1**

General Plan Growth Management - Growth Area Policies 5-10 (Guiding Principles for West Roseville Development Proposals)

**(February 4, 2004)**

5. Apply the City's adopted Guiding Principles to any new development proposed in and out of City's corporate boundaries, which is not already part of an adopted Specific Plan or within the infill area:
1. Any development proposal west of Roseville shall, on a stand-alone basis, have an overall neutral or positive fiscal impact on the City's General Fund Services.
  2. Any development proposal west of Roseville shall include logical growth/plan boundaries and an east to west growth pattern.
  3. Any development proposal west of Roseville shall not conflict with the Pleasant Grove Wastewater Treatment Plant and future Power Generation Facility.
  4. Any development proposal west of Roseville shall maintain the integrity of existing neighborhoods and create a sense of place in new neighborhoods.
  5. Any development proposal west of Roseville shall include a plan to ensure fully funding and maintenance of improvements and services at no cost to existing residents (including increased utility rates). A proposal shall not burden/increase the cost, or diminish the supply and reliability of services.
  6. Any development proposal west of Roseville shall aid in regional traffic solutions and in right of way preservation.
  7. Any development proposal west of Roseville shall secure and provide a new source and supply of surface water and should include reduced water demand through the use of recycled water and other off-sets.
  8. Any development proposal west of Roseville shall consider development potential within the entire City/County Memorandum of Understanding Transition Area in the design and sizing of infrastructure improvements.
  9. Any development proposal west of Roseville shall aid in resolution of regional storm water retention.
  10. Any development proposal west of Roseville shall incorporate mechanisms to ensure new schools are available to serve the residents and shall not impact existing schools.
  11. Any development proposal west of Roseville shall include a significant interconnected public open space component/conservation plan in coordination with the City of Roseville/ U.S. Fish and Wildlife Service Memorandum of Understanding.
  12. Any development proposal west of Roseville shall include a public participation component to keep the public informed and solicit feedback throughout the specific plan process.
  13. Any development proposal west of Roseville shall provide a "public benefit" to the City and residents.

6. As new development is proposed in City's Sphere of Influence to the west of Fiddymment Road, require project proponents to provide a transitional area between City and County lands, through a system of interconnecting Open Space land areas.
7. Monitor and participate in development proposals and/or General Plan updates in Placer County to ensure that potential impacts to City residents are minimized, with respect to traffic, service levels, and other quality of life matters.
8. New development proposals to the west of Fiddymment Road within the County/City Memorandum of Understanding Transition Area shall meet the objectives and terms of the Memorandum of Understanding between the City of Roseville and the County of Placer.
9. Development proposed on the western edge of the City shall provide a distinctive open space transition to create a physical and visual buffer between the City and County to assure that the identity and uniqueness of the City and County will be maintained.
10. Consistent with the County/City Memorandum of Understanding Transition Area, the City shall continue to support and endorse the maintenance of the one-mile buffer zone around landfill operations, as set forth in Policy No. 4.G.11 of the Placer County General Plan, adopted in August 1994.

**Policies: Growth Management -**

**Implementation Measures**

1. The City may determine, in accordance with the goals and policies of this element, that it is appropriate to amend its General Plan land use allocation and expand. Under such circumstances, a specific plan will be required to comprehensively plan each of the areas.
2. In addition to being consistent with the other goals and policies of the General Plan, specific plans shall comply with the following:
  - a. Provide a public focal point, community, and/or theme feature. These features shall be specific to each area and be designed to contribute to the promotion and enhancement of community

*Each of the following measures shall be utilized, as applicable, to implement the identified Growth Management - Growth Areas policies:*

- Specific Plans
- Public Participation
- Intergovernmental Coordination

# **Appendix M**

## **Long-term Warren Act Contract Between the United States of America and the City of Roseville**

### **Environmental Assessment**

#### **Finding of No Significant Impact**

### **Initial Study**

#### **Mitigated Negative Declaration**

**Long-term Warren Act Contract  
Between the United States of America  
and the City of Roseville**



**January 2006**

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

CONTRACT FOR CONVEYANCE OF NON-PROJECT WATER  
BETWEEN THE UNITED STATES  
AND  
CITY OF ROSEVILLE

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Exhibit A – Water Rates

Exhibit B – Sources of Non-Project Water

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

CONTRACT FOR CONVEYANCE OF NON-PROJECT WATER  
BETWEEN THE UNITED STATES OF AMERICA  
AND  
CITY OF ROSEVILLE

THIS CONTRACT, made this \_\_\_\_\_ day of \_\_\_\_\_, 2006,  
pursuant to the Act of June 17, 1902 (32 Stat. 388), as amended and supplemented; the Act of  
February 21, 1911 (36 Stat. 925); Section 305 of the Reclamation States Emergency Drought  
Relief Act of 1991 (106 Stat. 59); and Title 34 of the Act of October 30, 1992, the Central Valley  
Project Improvement Act (106 Stat. 4706), all collectively hereinafter referred to as the Federal  
Reclamation laws, between THE UNITED STATES OF AMERICA, hereinafter referred to as  
the United States, represented by the officer executing this Contract, hereinafter referred to as the  
Contracting Officer, and the CITY OF ROSEVILLE, hereinafter referred to as the Contractor;

WITNESSETH, That:

EXPLANATORY RECITALS

WHEREAS, the United States has constructed and is operating the Central Valley  
Project (Project), California, for diversion, storage, carriage, distribution and beneficial use, for  
flood control, irrigation, municipal, domestic, industrial, fish and wildlife mitigation, protection  
and restoration, generation and distribution of electric energy, salinity control, navigation and

other beneficial uses, of waters of the Sacramento River, the American River, the Trinity River, and the San Joaquin River and their tributaries; and

WHEREAS, the Contractor has entered into Water Service Contract No. 14-06-200-3474A dated September 9, 1967, with the United States, which provides for Project Water service from Folsom Reservoir; and

WHEREAS, the Contractor has or will acquire a supply of Non-Project Water which it has requested the United States convey through Excess Capacity in Project Facilities for municipal and industrial (M&I) purposes; and

WHEREAS, the United States is willing to convey said water to the Contractor through Excess Capacity in Project Facilities in accordance with the terms and conditions of this Contract; and

WHEREAS, the Contractor and Contracting Officer recognize that this Contract does not grant any permission or entitlement to the Contractor to extract or divert from its sources the Non-Project Water supply conveyed pursuant to this Contract;

NOW, THEREFORE, in consideration of the covenants herein contained, the parties agree as follows:

#### DEFINITIONS

1. When used herein, the term:

(a) “Calendar Year” shall mean the period January 1 through December 31, both dates inclusive;

(b) Payments becoming due hereunder is a condition precedent to receiving(b)  
“Contracting Officer” shall mean the Secretary of the Interior’s duly authorized

representative acting pursuant to this Contract or applicable Reclamation law or regulation;

(c) “Contractor’s Point of Delivery” shall mean the 84-inch-pipeline leading from the Folsom Pumping Plant to the Hinkle “Y;”

(d) “Contractor's Water Service Contract” shall mean Contract No. 14-06-200-3474A, dated September 9, 1967, between the Contractor and the United States, which provides for water service from the Project’s Folsom Reservoir, and any amendment, extension, or renewal thereof;

(e) “Excess Capacity” shall mean the capacity of the Project Facilities not needed to store and/or convey Project Water as determined by the Contracting Officer;

(f) “M&I Water” shall mean all uses of Non-Project Water for other than the commercial production of agricultural crops or livestock, including domestic use incidental thereto;

(g) “Non-Project Water” shall mean water acquired by or available to the Contractor from the source(s) identified in Exhibit B, a copy of which is attached hereto and incorporated herein by reference, which is not appropriated by the United States;

(h) “PCWA Water Contract” shall mean all applicable agreements and contracts, and any amendment, extension, or renewal, for an annual supply of up to

30,000 acre-feet (AF) of Non-Project Water between the Contractor and Placer County Water Agency (PCWA);

(i) “Project” shall mean the Central Valley Project owned by the United States and operated by the Department of Interior, Bureau of Reclamation;

(j) “Project Facilities” shall mean the Folsom Reservoir, Folsom Pumping Plant, and Folsom Pipeline;

(k) “Project Water” shall mean all water that is developed, diverted, stored, or delivered by the United States in accordance with the statutes authorizing the Project and in accordance with the terms and conditions of applicable water rights permits and licenses acquired by and/or issued to the United States pursuant to California law;

(l) “Rates” shall mean the payments determined annually by the Contracting Officer in accordance with the then-current applicable water ratesetting policies for the Project;

(m) “Secretary” shall mean the Secretary of the Interior, a duly appointed successor, or an authorized representative;

(n) “Year” shall mean the period March 1 of each Calendar Year through the last day of February of the following Calendar Year, both dates inclusive.

#### TERM OF CONTRACT

2. (a) This Contract shall become effective on March 01, 2006, and shall remain in effect through February 28, 2031, unless terminated by operation of law or by mutual agreement of the parties hereto; Provided, that upon 30-days’ advance written notice to the Contractor, this Contract may also be terminated by the Contracting Officer at an earlier date, if the Contracting Officer determines that the Contractor has not been complying with one or more

of the terms and conditions of this Contract; Provided further, that the Contracting Officer may make a determination not to terminate this Contract if the Contractor can show full compliance or a time schedule for compliance that is satisfactory to the Contracting Officer within the 30-day notice period.

(b) The Contractor shall promptly notify the Contracting Officer if and when the Contractor ceases to have any right to the use of the Non-Project Water being conveyed pursuant to this Contract.

CONVEYANCE, POINTS OF DELIVERY, AND MEASUREMENT OF  
NON-PROJECT WATER

3. (a) The Contractor may cause up to 30,000 AF annually of Non-Project Water to be introduced into Folsom Reservoir from the source(s) listed in Exhibit B. The United States shall convey said water to the Contractor's Point of Delivery through Excess Capacity in Project Facilities in accordance with a schedule, or any revision or revisions thereof, submitted by the Contractor and approved by the Contracting Officer during the term hereof. If at any time the Contracting Officer determines that there will not be Excess Capacity in Project Facilities sufficient to receive, transport, and convey the Non-Project Water in accordance with the approved schedule, the Contracting Officer shall so notify the Contractor in writing. Within 24 hours of said notice, the Contractor shall revise its schedule accordingly.

(b) The amount of Non-Project Water conveyed to the Contractor through Project Facilities in any 30-day period shall not exceed the quantity of Non-Project Water previously introduced into Folsom Reservoir by the Contractor. The Contractor will be responsible for requiring PCWA to make releases during the months of July, August, September, and October and any other month the California State Resources Control Board determines that

PCWA has no right to divert the natural flow of the American River, from PCWA's upstream reservoirs the quantity of water that equals the quantity of water that the Contractor has scheduled to introduce into Folsom Reservoir during each of those months, plus five percent for transportation losses.

(c) Exhibit B may be modified or replaced by agreement of the parties to reflect any changes made to the sources of the Non-Project Water identified on Exhibit B, without amending this Contract.

(d) The Non-Project Water shall be used for M&I purposes only.

(e) Non-Project Water that is introduced into Folsom Reservoir by the Contractor, and remains there for less than 30 days, shall not be deemed unused water available to the United States for Project purposes. Conversely, Non-Project Water that is introduced into Folsom Reservoir by the Contractor, and remains there for 30 days or more, shall be deemed to be unused water available to the United States for Project purposes. Non-Project Water delivered to Project Facilities shall be accounted for on a "first-in, first-out" basis. Similarly, Non-Project Water that is introduced into Folsom Reservoir but not conveyed prior to the expiration of this Contract shall also be deemed unused water available to the United States for Project purposes.

(f) The Contractor shall be responsible for the acquisition and payment of all electrical power and associated transmission service charges required to pump the Non-Project

Water through Project Facilities. Conveyance of Non-Project Water pursuant to this Contract will not be supported with Project-use power.

(g) Non-Project Water conveyed by the United States to the Contractor pursuant to this Contract will be conveyed to the Contractor's Point of Delivery.

(h) The Contractor shall utilize the Non-Project Water conveyed pursuant to this Contract in accordance with all requirements of any applicable Biological Opinion.

(i) All Non-Project Water conveyed to the Contractor pursuant to this Contract shall be measured and recorded with equipment furnished, installed, operated, and maintained by the Contractor. Upon the request of either party to this Contract, the Contractor shall investigate the accuracy of such measurements and shall take any necessary steps to adjust any errors appearing therein.

SCHEDULING AND REPORTING OBLIGATIONS OF THE CONTRACTOR

4. (a) On or before each March 1, or at such other times as the Contracting Officer determines to be necessary, the Contractor shall submit to the Contracting Officer a written schedule, satisfactory to the Contracting Officer, showing the dates, and estimated monthly quantities of Non-Project Water to be introduced into Folsom Reservoir and conveyed by the United States to the Contractor pursuant to this Contract for the upcoming Year. During each month, the Contractor will revise said schedule if necessary to reflect the actual amount of Non-Project Water introduced into Folsom Reservoir and conveyed by the United States to the Contractor pursuant to this Contract.

(b) For each month, before the 10th day of the succeeding month, the Contractor shall furnish a monthly report of daily operations that is satisfactory to the



Contracting Officer which tabulates PCWA's right to the natural flow in the American River, the quantity of releases from PCWA's upstream storage, and the quantity of Non-Project Water scheduled by the Contractor pursuant to this Contract.

(c) The Contractor shall advise the Contracting Officer on or before the 10th calendar day of each month of the actual daily quantities of Non-Project Water taken the previous month by the Contractor at the Contractor's Point of Delivery pursuant to this Contract.

PAYMENT FOR CONVEYANCE

5. (a) The Rates to be paid to the United States for conveyance of Non-Project Water pursuant to this Contract are set forth in Exhibit A and are subject to annual adjustment pursuant to the then-current M&I Ratesetting Policy for the Project to cover all costs incurred from the conveyance of said Non-Project Water.

(b) By December 31 of each Calendar 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 "A" without amending this Contract.

(c) The Contractor agrees to pay for conveyance of Non-Project Water pursuant to this Contract at the cost-of-service rate as calculated in accordance with the M&I Ratesetting Policy for the Project.

(d) At the time the Contractor submits an initial schedule for the conveyance of Non-Project Water pursuant to subdivision (a) of Article 4 of this Contract, the Contractor shall pay the Contracting Officer one-half of the total amount payable for the conveyance of Non-Project Water scheduled to be conveyed for the Year. The Contractor shall pay the remainder of the amount payable for conveying Non-Project Water scheduled to be conveyed for the Year on or

before September 1 of the respective Year. Non-Project Water will not be conveyed in advance of payment.

(e) All revenues received from the use of Project facilities, pursuant to subdivision (a) of this Article for conveyance of Non-Project Water, shall be deposited into the Reclamation fund as provided in Section 3 of the Act of February 21, 1911 (36 Stat.925); Provided, that if the Act of February 21, 1911, is amended, superseded, or replaced, any new provisions addressing the application of revenues will apply to this Contract at the earliest possible date under the law.

(f) No refund shall be made by the United States to the Contractor of the payments made for conveyance of Non-Project Water described in subdivision (c) of Article 3.

(g) If at any time the Contractor diverts more Non-Project Water from Project Facilities than the quantity that was scheduled pursuant to subdivision (a) of Article 4 of this Contract, that additional amount of water shall be deemed Project Water used for M&I purposes, and payment therefore, shall be made at the applicable rate identified in the Contractor's Water Service Contract or in any amendment, extension, or renewal thereof. Further, this Project Water will be deducted from the quantity of Project Water to which the Contractor is entitled under the Contractor's Water Service Contract or any amendment, extension, or renewal thereof.

(h) If the conditions identified in subdivision (g) of this Article arise, and it is determined by the Contracting Officer that the Contractor has utilized all of its Project Water available under the Contractor's Water Service Contract or any amendment, extension, or renewal thereof, then the Contractor shall require PCWA to introduce additional Non-Project

Water into Folsom Reservoir equal to the quantity of water actually used plus five percent for losses, and shall pay for the conveyance of this additional Non-Project Water at the Rates identified in Exhibit A.

UNITED STATES NOT RESPONSIBLE FOR CONVEYANCE OF  
NON-PROJECT WATER

6. The United States shall not be responsible for the control, care, or distribution of the Non-Project Water before it is introduced into Folsom Reservoir, or after it is conveyed to the Contractor's Point of Delivery.

ADJUSTMENTS

7. The amount of any overpayment by the Contractor by reason of the quantity of Non-Project Water conveyed for the Contractor pursuant to this Contract, as conclusively determined by the Contracting Officer, having been less than the quantity which the Contractor otherwise under the provisions of this Contract would have been required to pay for, shall be applied first to any accrued indebtedness arising out of this Contract then due and owing to the United States by the Contractor. Any amount of such overpayment then remaining shall be refunded or credited to the Contractor.

UNITED STATES NOT LIABLE

8. The Contractor hereby releases and agrees to defend and indemnify the United States and its officers, agents, and employees, from every claim for damage to persons or property, direct or indirect, resulting from the Contractor's performance of this Contract, including the introduction of Non-Project Water into Folsom Reservoir and diversion and/or extraction of Non-Project Water from Project Facilities. The Contractor further releases the United States and its officers, agents, or employees, from every claim for damage to persons or

property, direct or indirect, resulting from the Contracting Officer's determinations of the amount of Excess Capacity available in Project Facilities for the conveyance of Non-Project Water to the Contractor, and the elimination of the source of the Non-Project Water. Nothing contained in this Article shall be construed as an assumption of liability by the Contractor with respect to such matters.

#### OPINIONS AND DETERMINATIONS

9. (a) Where the terms of this Contract provide for actions to be based upon the opinion or determination of either party to this 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 Contract, expressly reserve the right to 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.

(b) The Contracting Officer shall have the right to make determinations necessary to administer this Contract that are consistent with the expressed and implied provisions of this Contract, the laws of the United States and 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

10. In addition to all other payments to be made by the Contractor pursuant to this 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 Contract plus indirect costs in accordance with applicable Bureau of Reclamation policy 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.

#### WATER CONSERVATION

11. (a) The Contractor hereby acknowledges and agrees that the Contractor is required to implement an effective water conservation program prior to delivery of Project Water under the Contractor's Water Service Contract pursuant to Section 210 of the Reclamation Reform Act of 1982, as amended.

(b) Prior to execution of this conveyance contract, the Contractor shall include in its water conservation program the amount(s) of Non-Project Water to be conveyed through Federal facilities to areas within the Contractor's service area. The Non-Project Water conveyed to the Contractor pursuant to this Contract will be subject to the same water conservation requirements as the Project Water provided to the Contractor under the Contractor's Water Service Contract as amended, extended, or renewed.

(c) The Contracting Officer reserves the right to suspend or terminate conveyance of Non-Project Water under this Contract based on noncompliance with the water conservation requirements.

#### MEDIUM FOR TRANSMITTING PAYMENTS

12. (a) All payments from the Contractor to the United States under this Contract shall be by the medium requested by the United States on or before the date payment is due. The

required method of payment may include checks, wire transfers, or other types of payment specified by the United States.

(b) Upon execution of the Contract, the Contractor shall furnish the Contracting Officer with the Contractor's taxpayer's identification number (TIN). The purpose for requiring the Contractor's TIN is for collecting and reporting any delinquent amounts arising out of the Contractor's relationship with the United States.

#### CHARGES FOR DELINQUENT PAYMENTS

13. (a) The Contractor shall be subject to interest, administrative, and penalty charges on delinquent payments. If a payment is not received by the due date, the Contractor shall pay an interest charge on the delinquent payment for each day the payment is delinquent beyond the due date. If a payment becomes 60 days delinquent, in addition to the interest charge, the Contractor shall pay an administrative charge to cover additional costs of billing and processing the delinquent payment. If a payment is delinquent 90 days or more, in addition to the interest and administrative charges, the Contractor shall pay a penalty charge for each day the payment is delinquent beyond the due date, based on the remaining balance of the payment due at the rate of 6 percent per year. The Contractor shall also 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 0.5 percent per month. The interest charge rate will 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 charges, second to the administrative charges, third to the accrued interest, and finally to the overdue payment.

#### PROTECTION OF WATER AND AIR QUALITY

14. (a) Project facilities used to make available and deliver water to the Contractor shall be operated and maintained in the most practical manner to maintain the quality of the water at the highest level possible as determined by the Contracting Officer: Provided, That the United States does not warrant the quality of the water delivered to the Contractor and is under no obligation to furnish or construct water treatment facilities to maintain or improve the quality of water delivered to the Contractor.

(b) The Contractor 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 necessary for the delivery of water by the Contractor; and shall be responsible for compliance with all Federal, State, and local water quality standards applicable to surface and subsurface drainage and/or

discharges generated through the use of Federal or Contractor's service area.

(c) This Article shall not affect or alter any legal obligations of the Secretary to provide drainage or other discharge services.

(d) If it is determined by the Contracting Officer that the quality of the source of the Non-Project Water identified in Exhibit B, conveyed pursuant to this Contract will significantly degrade the quality of Project Water in Folsom Reservoir, the Contractor shall, upon receipt of a written notice from the Contracting Officer, arrange for the immediate termination of the introduction of such source of Non-Project Water into Project Facilities.

GENERAL OBLIGATION--BENEFITS CONDITIONED UPON PAYMENT

15. (a) The obligation of the Contractor to pay the United States as provided in this 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) Payments becoming due hereunder is a condition precedent to receiving benefits under this Contract. The United States shall not make Non-Project 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 Non-Project Water made available pursuant to this 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.

RULES, REGULATIONS, AND DETERMINATIONS

16. (a) The parties agree that the delivery of Non-Project Water or the use of Federal facilities pursuant to this Contract is subject to Reclamation law, as amended and supplemented, and the rules and regulations promulgated by the Secretary of the Interior under Reclamation law.

(b) The Contracting Officer shall have the right to make determinations necessary to administer this Contract that are consistent with the expressed and implied provisions of this Contract, the laws of the United States and the State, and the rules and regulations promulgated by the Secretary of the Interior. Such determinations shall be made in consultation with the Contractor.

EQUAL EMPLOYMENT OPPORTUNITY

17. During the performance of this Contract, the Contractor agrees as follows:

(1) 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 pay 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.

(2) 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.

(3) 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 11246 of September 24, 1965, and shall post copies of the notice in conspicuous places available to employees and applicants for employment.

(4) 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.

(5) 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.

(6) In the event of the Contractor's noncompliance with the nondiscrimination clauses of this Contract or with any of the said rules, regulations, or orders, this 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.



(7) The Contractor will include the provisions of paragraphs (1) through (7) 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.

#### BOOKS, RECORDS, AND REPORTS

18. (a) The Contractor shall establish and maintain accounts and other books and records pertaining to administration of the terms and conditions of this Contract, including: the Contractor's financial transactions, water supply data, project operation, maintenance and replacement logs, and project land and right-of-way use agreements; the water users' land-use (crop census), landownership, 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 Contract shall have the right during office hours to examine and make copies of the other party's books and records relating to matters covered by this Contract.

(b) Notwithstanding the provisions of subdivision (a) of this Article, no books, records, or other information shall be requested from the Contractor by the Contracting Officer unless such books, records, or information are reasonably related to the administration or performance of this Contract. Any such request shall allow the Contractor a reasonable period of time within which to provide the requested books, records, or information.

#### CONTINGENT ON APPROPRIATION OR ALLOTMENT OF FUNDS

19. The expenditure or advance of any money or the performance of any obligation of the United States under this 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 Contract. No liability shall accrue to the United States in case funds are not appropriated or allotted.

ASSIGNMENT LIMITED--SUCCESSORS AND ASSIGNS OBLIGATED

20. The provisions of this Contract shall apply to and bind the successors and assigns of the parties hereto, but no assignment or transfer of this Contract or any right or interest therein shall be valid until approved in writing by the Contracting Officer.

OFFICIALS NOT TO BENEFIT

21. No Member of or Delegate to Congress, Resident Commissioner, or official of the Contractor shall benefit from this Contract other than as a water user or landowner in the same manner as other water users or landowners.

COMPLIANCE WITH CIVIL RIGHTS LAWS AND REGULATIONS

22. (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 1973 (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 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.

(d) Complaints of discrimination against the Contractor shall be investigated by the Contracting Officer's Office of Civil Rights.

CONFIRMATION OF CONTRACT

23. The Contractor, after the execution of this Contract, shall furnish to the Contracting Officer evidence that pursuant to the laws of the State of California, the Contractor is a legally constituted entity, and the Contract is lawful, valid, and binding on the Contractor. This Contract shall not be binding on the United States until such evidence has been provided to the Contracting Officer's satisfaction.

CONTRACT DRAFTING CONSIDERATIONS

24. Articles 1 through 25 of this Contract have been drafted, negotiated, and reviewed by the parties hereto, each of whom is sophisticated in the matters to which this Contract pertains, and no one party shall be considered to have drafted the stated articles.

NOTICES

25. Any notice, demand, or request authorized or required by this Contract shall be deemed to have been given, on behalf of the Contractor, when mailed, postage prepaid, or delivered to the United States Department of the Interior, Bureau of Reclamation, Area Manager, 7794 Folsom Dam Road, Folsom, California 95630-1799, and on behalf of the United States, when mailed, postage prepaid, or delivered to the City Manager of the City of Roseville, 311 Vernon Street, Roseville, California 95678. 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.

IN WITNESS WHEREOF, the parties hereto have executed this Contract as of the day and year first above written.

THE UNITED STATES OF AMERICA

By: \_\_\_\_\_  
Regional Director, Mid-Pacific Region  
Bureau of Reclamation

(SEAL)

CITY OF ROSEVILLE

451 By: \_\_\_\_\_  
452 City Manager

453 Attest:

454 By: \_\_\_\_\_  
455 City Clerk, City of Roseville

456 (H:\PUB440\Long-Term Warren Act Contracts\City of Roseville. LTWA. 01.06.2005.doc)

EXHIBIT A

2005 WATER RATES

Contract for Conveyance of Non-Project Water  
CVP Warren Act Contracts  
Municipal and Industrial  
Water per Acre-Foot

<u>Cost Component</u>	<u>Cost-of-Service Rate</u>
Water Marketing	\$ 3.89
Storage	
O&M	\$ 6.67
Capital	\$ 5.15
TOTAL COST-OF-SERVICE RATES	<u>\$15.71</u>

EXHIBIT B

SOURCE(S) OF NON-PROJECT WATER

Placer County Water Agency's Middle Fork American River Project under water right permits Nos. 12856 and 13858 granted by the California State Water Resources Control Board.

# **Appendix N**

## **Consultation Correspondence**

### **Environmental Assessment**

#### **Finding of No Significant Impact**

### **Initial Study**

#### **Mitigated Negative Declaration**

**Long-term Warren Act Contract  
Between the United States of America  
and the City of Roseville**



**January 2006**

Post-it® Fax Note	7671	Date	11/10/03	# of pages	5
To	Mark Morse	From	Carrie		
Co./Dept.	COO	Co.			
Phone #		Phone #	5770		
Fax #	5795	Fax #			

NOV 10 2003

CC-418  
ENV-7.00

Mr. Mike Accituno  
Supervisor  
National Oceanic and Atmospheric Administration, Fisheries  
650 Capital Mall, Suite 8-300  
Sacramento, CA 95814

Subject: Concurrence of the National Oceanic and Atmospheric Administration, Fisheries (NOAA) of  
Not Likely to Adversely Affect Threatened and Endangered Species With Execution of the  
Proposed City of Roseville's (City) Warren Act Contract With the Bureau of Reclamation

Dear Mr. Accituno:

The purpose of this letter is to inform you of our findings for the above referenced action and receive your concurrence. Reclamation's findings are based on the analyses contained within the draft environmental /biological assessment transmitted to you October 16, 2001, and subsequent discussions with NOAA staff.

The Emergency Drought Relief Act of 1991 (43 U.S.C. §2211 et. Seq.) authorized the Secretary of the Interior to enter in Warren Act contracts with water purveyors to carry non-project water through federal facilities. Under section 305, "Excess Storage and Carrying Capacity", the Secretary is authorized to execute contracts with municipalities, public water districts and agencies, other federal agencies, state agencies, and private entities pursuant to the Act of February 21, 1911 (43 U.S.C. § i.e., the Warren Act). These contracts provide for the impounding, storage, and conveyance of non-project water for domestic, municipal, fish and wildlife, industrial, and other beneficial uses using any Central Valley Project (CVP) facilities identified in the law, including Folsom Dam and Reservoir.

In the past, Placer County Water Agency (PCWA) has supplied the City with water in years of CVP shortages. In order to convey this water through the federal facilities at Folsom Dam, the City and Reclamation have entered into several one-year temporary "wheeling" contracts. The last of these one-year contracts expired on December 31, 2001. Since that time without the presence of CVP shortages, the City has not needed additional one-year temporary "wheeling" agreements and, has accordingly, not requested any from Reclamation. The City, however, has identified the need to secure a long-term "wheeling" agreement from Reclamation.

The proposed action is for Reclamation to enter into a long-term 25-year Warren Act contract with the City to convey up to 30,000 acre-feet of non-project water (i.e., water not part of the CVP) through the federal facilities at Folsom Dam (e.g., Folsom Pumping Plant). This long-term contract would permit the City use of these facilities, which are part of the CVP, to deliver purchased water rights water from PCWA to the City's Water Treatment Plant (WTP) for ultimate delivery to the City service area.

A Century of Water for the West  
1902 - 2002



Subject: Concurrence of NOAA Fisheries on City of Roseville's Warren Act Contract

Diversion of the City's non-project water supply as purchased from PCWA would occur at the urban water supply intake at Folsom Dam. Water delivered through the urban water supply intake would be conveyed to the Folsom Pumping Plant at the base of the dam. Of the two pipelines that convey water from the pumping plant to users both north and south of the river, the 84-inch North Fork Pipeline would deliver water to the City. The North Fork Pipeline, after leaving the Folsom Pumping Plant splits at a junction point approximately 700 feet south of the San Juan Water district's Hinkle Reservoir known as the Hinkle "Y". Of the two branches that split from the Hinkle "Y", the western branch continues in a northwesterly direction for about 9,000 feet to the City WTP. A new second 60-inch raw water transmission line between the Hinkle "Y" and the City's WTP combines these raw water transmission lines that are capable of conveying a peak flow of 97 mgd (150 cfs) for treatment at the City's WTP.

Through discussions with NOAA staff, two issues were identified. NOAA expressed interest that the City through their agreement with the PCWA maximize, to the extent practicable, releases from Middle Fork Project in order to take full advantage of the ability to gain coldwater in Folsom Reservoir. Additionally, NOAA has encouraged the City to examine the opportunity to change its point of diversion from Folsom Reservoir to the Sacramento River at such time that a new diversion point on the Sacramento River is completed and available. Reclamation, the City, and PCWA understand the importance of maintaining the coldwater pool and commit to the following:

- First, the City, PCWA and Reclamation will work together to investigate opportunities to make project deliveries under the City's Warren Act contract that can provide the maximum benefits to the Folsom Reservoir coldwater pool. This will be accomplished through working with the American River Operations Group, as appropriate.
- Second, the City will make every reasonable effort to investigate future opportunities for taking a portion of its purchased PCWA water under the proposed Warren Act contract from sources other than the American River. This effort will include potential future diversions from the Sacramento River, among others.

Based on Reclamations review of the best scientific and commercial information available and discussions with NOAA, we find that the proposed Warren Act Contract with the City is not likely to adversely affect the Sacramento River winter-run Chinook salmon, Central Valley spring-run Chinook salmon, Central Valley steelhead, or their critical habitat, because implementation of the reasonable and prudent measures as defined in the CVP and State Water Project Operations (OCAP) Biological Opinion for winter-run Chinook salmon and the Interim OCAP Biological Opinion for Central Valley spring-run Chinook salmon and Central Valley steelhead will continue.

Should you have questions or need more information you may contact Mr. Robert Schroeder at 916-989-7274 (TDD 989-7285).

Sincerely,

THOMAS J. AIKEN

Thomas J. Aiken  
Area Manager

cc: MP-150 (FMichny)

WBR:RSchroeder:bwalsworth:11/01/02:989-7274

H:\PUBLIC\TYPING\SCHROEDER\Roseville Warren Act NOAA coner.doc

A Century of Water for the West  
1902 - 2002



UNITED STATES DEPARTMENT OF COMMERCE  
National Oceanic and Atmospheric Administration  
NATIONAL MARINE FISHERIES SERVICE  
Southwest Region  
501 West Ocean Boulevard, Suite 4200  
Long Beach, California 90802-4213

December 13, 2002

In Reply Refer To:  
SWR-01-SA-6097:BSK

US BR-CCAO (F018) OFFICIAL FILE CO RECEIVED		
DEC 16 2002		
CODE	ACTION	LOG
10	✓	
400	✓	
413	✓	
418	✓	

Mr. Thomas J. Aiken  
Area Manager, Central California Area Office  
Bureau of Reclamation  
7794 Folsom Dam Road  
Folsom, California 95630-1799

Dear Mr. Aiken:

This is in response to your letter of November 6, 2002 (received November 7, 2002) requesting concurrence with the Bureau of Reclamation's (Reclamation) finding that the proposed Warren Act Contract with the City of Roseville (City) is not likely to adversely affect federally listed endangered Sacramento River winter-run Chinook salmon (*Oncorhynchus tshawytscha*), threatened Central Valley spring-run Chinook salmon (*O. tshawytscha*), and threatened Central Valley steelhead (*O. mykiss*), or their critical habitat.

The proposed action is for Reclamation to enter into a long-term 25-year Warren Act contract with the City to convey up to 30,000 acre-feet of non-Central Valley Project (CVP) water through the federal facilities at Folsom Dam. This long-term contract would permit City use of these federal facilities to deliver purchased water rights water from the Placer County Water Agency (PCWA) to the City's Water Treatment Plant for delivery to the City service area. Diversion of the City's purchased, non-CVP water would occur at the urban water supply intake at Folsom Dam. Water delivered through the intake would be conveyed to the Folsom Pumping Plant at the base of Folsom Dam and would be pumped through the North Fork Pipeline. While this water would be retained in Folsom Reservoir and contribute to the formation of a cold water pool until used by the City, the non CVP water would not enter the American River below Folsom Dam.

Reclamation, the City, and PCWA have committed to managing the cold water pool behind Folsom Dam to maximize the benefits to anadromous salmonid habitat downstream on the American River. This commitment is cited in your letter of November 6, 2002. Instream temperatures will be adjusted to improve rearing habitat for juvenile Central Valley steelhead in the American River below Nimbus Dam (a re-regulating dam downstream of Folsom Dam) by releasing cold water from the cold water pool in Folsom Reservoir. Reclamation has implemented similar cold water release adjustments in calendar years 2001 and 2002. This procedure has provided suitable spawning temperatures for adult Central Valley steelhead and Central Valley fall-run Chinook salmon in the American River below Nimbus Dam by reducing

Classification	EM-7.00
Project	CVP
Control No.	
Folder I.D.	



instream temperatures during the same period. Temperature and flow adjustments in the American River will be coordinated through the American River Operations Group.

The City has also agreed to investigate opportunities to divert its purchased PCWA water from sources other than the American River, including the Sacramento River. Diverting from the Sacramento River below the convergence of the American River allows an equivalent amount of water to flow down the American River, retaining or enhancing fish habitat between Nimbus Dam and the Sacramento River.

#### ESA Section 7 Consultation

The National Marine Fisheries Service (NOAA Fisheries) has reviewed the scientific data provided through Reclamation, the City, and their consultants. Based on this review and Reclamation's implementation of the temperature and instream flow requirements as defined in the September 20, 2002 Biological Opinion for the Interim CVP and State Water Project Operations, Criteria, and Plan (OCAP) for Central Valley Spring-run Chinook salmon and Central Valley steelhead, we concur with Reclamation's determination that the proposed Warren Act Contract with the City of Roseville is not likely to adversely affect Sacramento River winter-run Chinook salmon, Central Valley spring-run Chinook salmon, or Central Valley steelhead, or designated critical habitat.

#### Essential Fish Habitat

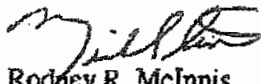
The proposed project area has been identified as Essential Fish Habitat (EFH) for Pacific salmon in Amendment 14 of the Pacific Salmon Fishery Management Plan, pursuant to the Magnuson-Stevens Fishery Conservation and Management Act (MSA). Federal action agencies are mandated by the MSA (Section 305[b][2]) to consult with NOAA Fisheries on all actions that may adversely affect EFH, and NOAA Fisheries must provide EFH Conservation Recommendations (Section 305[b][4][A]). NOAA Fisheries has determined that the ESA consultation will also serve as the EFH Consultation for this project. NOAA Fisheries believes that the proposed project is not likely to adversely affect EFH for Pacific salmon.

The ESA and EFH determinations above are contingent on Reclamation and the City implementing all measures intended to avoid and minimize impacts to fish and fish habitat identified in this letter and all other supporting documents. Should additional information reveal that the project may affect federally listed endangered or threatened species, their critical habitat, or EFH for Pacific salmon in a way not previously considered or should the action be modified in such a way that may cause additional affects to listed species, critical habitat, or EFH, this determination may be reconsidered. This response is in accordance with Section 7 of the Endangered Species Act of 1973, as amended (16 U.S.C. 1531 et seq.), and Section 305[b][4][a] of the Magnuson-Stevens Fishery Conservation and Management Act.

TOTAL P.06

If you have any questions or concerns about this concurrence please contact Mr. Brian Kinnear in our Sacramento Area Office, 650 Capitol Mall, Suite 8-300, Sacramento, CA 95814. Mr. Kinnear may be reached by telephone at (916) 930-3609 or by fax at (916) 930-3629.

Sincerely,

  
for Rodney R. McInnis  
Acting Regional Administrator

Cc: NMFS-PRD, Long Beach, CA  
Stephen A. Meyer, ASAC, NMFS, Sacramento, CA.



IN REPLY REFER TO:

CC-419  
ENV-7.00

# United States Department of the Interior

## BUREAU OF RECLAMATION

Central California Area Office  
7794 Folsom Dam Road  
Folsom, California 95630-1799

SEP 29 2005

### MEMORANDUM

To: U.S. Fish and Wildlife Service  
Attn: Mr. Wayne White

From: Michael R. Finnegan  
**ACTING FOR** Area Manager

Subject: Long-Term Warren Act and Central Valley Project (CVP) Modification of the CVP Water Service Area for the City of Roseville

The Bureau of Reclamation Central California Area Office requests concurrence from the Fish and Wildlife Service (FWS), that the federal action of entering into a Long-term Warren Act Contract with the City of Roseville (City) and modifying the City's Central Valley Project water service area map included in their long-term CVP water service contract, is "not likely to adversely affect" any federally listed species or designated critical habitat. Reclamation proposes to enter into a long-term (25-year) Warren Act contract with the City to facilitate conveyance of up to 30,000 acre-feet annually of Placer County Water Agency Middle Fork Project water through Folsom Reservoir and the federal facilities at Folsom Reservoir to the City's Water Treatment Plant for ultimate use in the City's service area.

The analysis completed by Reclamation and the City suggests that this project is "not likely to adversely affect" any federally listed species or designated critical habitat downstream of Folsom Reservoir or within the project service area, the City's Central Valley Project water service area. Reclamation also intends to rely upon this finding to use the geographic boundaries of the service area included in this analysis to define the City's Central Valley Project water service area map in the forthcoming renewal of their long-term CVP water service contract. The conclusion that this federal action is "not likely to adversely affect" is based on the following: (1) the analysis described in the print check Long-term Warren Act Contract Between the United States of America and the City Environmental Assessment/Initial Study produced by the City in 2005, (2) that nearly all the vernal pools in the service area have either been protected as part of a preserve system and/or contain construction projects that required that vernal pools be filled and graded, and that (3) these construction projects were permitted based on the analysis completed for the following documents:

- City of Roseville. 2004. West Roseville Specific Plan and Sphere of Influence Amendment Area Final Environmental Impact Report. January 9, 2004.

- City of Roseville. 2005. Draft Memorandum of Understanding between the City and the FWS (See Appendix J of the accompanying print check of the draft Long-term Warren Act Contract between the United State of America and the City of Roseville Environmental Assessment/Initial Study produced by the City in 2005).
- Biological Opinions issued evaluating the effects of development on the listed species in the West Roseville in 2003 as part of a consultation (FWS 1-1-03-F-0013) conducted for a Section 404 issued by the Corps of Engineers for the Westpark/Fiddymment Ranch Project and in 2005 during the reinitiation of the formal consultation (FWS 1-1-05-F-0061) for the West Roseville Specific Plan's Westpark/Fiddymment Ranch Project.

Thank you for your assistance. If you have any further questions please contact Ms. Elizabeth Ayres, of my staff, at 916-989-7192 (TDD 989-7285).

Attachment



## United States Department of the Interior

## FISH AND WILDLIFE SERVICE

Sacramento Fish and Wildlife Office  
2800 Cottage Way, Room W-2605  
Sacramento, California 95825-1846



In reply refer to:  
1-1-04-I-1820

JAN 19 2006

## Memorandum

To: Chief, Resource Management Division, U.S. Bureau of Reclamation, Central California Area Office, Folsom, California (Attn: Mike Finnegan)

From: Acting Field Supervisor, Sacramento Fish and Wildlife Office, Sacramento, California *Ken Samsky*

Subject: Conclusion of Informal Consultation on Renewal of a Long Term Water Service Contract, and an Approval of a Warren Act Contract for the City of Roseville in the American River Division, Placer County, California

This responds to your memorandum dated September 30, 2004, requesting consultation on renewal of the Central Valley Project (CVP) long term water service contract for the City of Roseville (Roseville) for a 40-year period. The request for consultation was modified in your letter dated September 29, 2005 to enter into a long-term (25-year) Warren Act contract with Roseville to facilitate conveyance of up to 30,000 acre-feet annually of Placer County Water Agency Middle Fork water and to expand the CVP service area to include the area within the 3,142 acres in the West Roseville Specific Plan - Fiddymont Ranch Project (West Roseville) into the CVP contract service area for Roseville. The Bureau of Reclamation (Reclamation) proposes this change in the CVP contract service area as part of the federal action subject to environmental review and consultation in accordance with section 7 of the Endangered Species Act (Act). The inclusion of these lands into the City of Roseville's district boundary is subject to local planning guidance and approvals by the Local Area Formation Committee (LAFCo), the Board of Directors for the City of Roseville, and other permitting agencies. Reclamation relies on documentation from these efforts to conduct an independent environmental review and section 7 consultation prior to modifying the district's CVP service area. This action is in accordance with section 3404(c) of the Central Valley Project Improvement Act (CVPIA) and our November 2000 Programmatic Biological Opinion on Implementation of the CVPIA and Continued Operation and Maintenance of the CVP (Service File No. 1-1-98-F-0124).

This consultation addresses the renewal of the existing contract amount and the continued delivery of water under the existing operating parameters to the City of Roseville water-service areas and to the West Roseville area being proposed for inclusion into the service area. This



## Chief, Resource Management Division

2

consultation does not exempt incidental take that may result from the use or application of CVP water by private parties from the prohibitions of section 9 of the Act.

This document represents our review of the proposed CVP long-term contract renewals on the species identified and evaluated in the September 2004 Biological Assessment (BA). These species include the federally listed as threatened vernal pool fairy shrimp (*Branchinecta lynchi*), vernal pool tadpole shrimp (*Lepidurus packardii*), and valley elderberry longhorn beetle (*Desmocerus californicus dimorphus*). At the time consultation was requested, designated critical habitat for the vernal pool fairy shrimp (unit 12) extended along the western boundary of Roseville and included the area being proposed for inclusion into the City of Roseville service area. Subsequently, the area designated for critical habitat has been modified and no longer includes any portion of the action area.

After reviewing the information provided to us in the September 2004, Final Biological Assessment for the Central Valley Project, Long-Term Water Service Contract Renewals (BA), (U. S. Bureau of Reclamation 2004) the June 2005, Central Valley Project Long-Term Service Contract Renewals, American River Division, Environmental Impact Statement (EIS) (U. S. Bureau of Reclamation 2005 a), the September 2005 Environmental Assessment, Long-term Warren Act Contract Between the United States of America and the City of Roseville (EA) (U. S. Bureau of Reclamation 2005 b), and discussions with Area Office and Regional Office staff in July, August, and September 2005 it is our determination that renewal of the CVP long term water service contract for the City of Roseville is not likely to adversely affect the federally listed vernal pool fairy shrimp, vernal pool tadpole shrimp, and valley elderberry longhorn beetle. There is no suitable habitat for the vernal pool fairy shrimp or the vernal pool tadpole shrimp inside Roseville with the exception of the vernal pool preserves which are owned and managed by Roseville to protect vernal pool crustaceans and their habitat. In addition, there are no known elderberry shrubs, the host plant for valley elderberry longhorn beetle with in the action area that are not associated with natural lands owned or managed by either Roseville or Placer County.

The direct and indirect effects of development on the listed species and their critical habitat (Unit 12) in the West Roseville footprint were fully evaluated in 2003 as part of consultations (FWS 1-1-03-F-0013) conducted for a Section 404 permit issued by the Corps of Engineers for the Westpark/Fiddymont Ranch Project, and in 2005 during the reinitiation of the formal consultation (FWS 1-1-05-F-0061) for the West Roseville Specific Plan's Westpark/Fiddymont Ranch Project, and the following mitigation has been provided to compensate for the effects of the development: 1) Preservation of the Hofman Ranch property (approximately 420-acres); 2) Preservation of the JBL property (approximately 454-acres) located on the north side of Lincoln; 3) Preservation of a 210-acre portion of the 1335± acre Reason Farms; and 4) Acquisition and protection by Placer Land Trust of approximately 3,835 additional acres of fairy shrimp critical habitat (provided such habitat is feasibly available for acquisition) through the terms of a Settlement Agreement between the developers and the Sierra Club, City of Roseville and Sierra Foothills Audubon Society and the terms of a Settlement Agreement between Applicants and Defenders of Wildlife (Defenders) and Butte Environmental Council; and 5) establishing a series of financial commitments in accordance with the Defenders Agreement the applicants will (a) establish a funding mechanism for the acquisition and maintenance of critical habitat in Placer



Chief, Resource Management Division

3

County, (b) contribute \$661,380 to Placer Land Trust, (c) contribute \$250,000 to Placer Land Trust for the purpose of funding a study of the cumulative impacts of the destruction of vernal pool wetlands and their associated grassland watersheds within the Central Valley, and (d) contribute to \$100,000 Placer Land Trust for the purpose of funding a study on the long-term viability of "postage stamp" vernal pool preserves.

#### **Description of the Proposed Action**

This consultation addresses the following actions: 1) the renewal of the Roseville CVP water service contract with Reclamation for municipal and industrial (M&I) purposes during each year in the 40-year contract life to obtain up to 32,000 acre-feet (af) of CVP water annually from Folsom Dam and any additional point or points of delivery either on CVP facilities or another location or locations mutually agreed to in writing by the Contracting Officer and the Contractor; 2) Roseville also will be receiving up to 30,000 af of water annually from Placer County Water Agency's Middle Fork Project under a long-term (25 year) Warren Act water transfer; and 3) the inclusion of the 3,142 acre development that make up the West Roseville Specific Plan area into the CVP water service area. The CVP contract water and the water secured through the Warren Act transfer will be used in the expanded CVP service area that includes both the Roseville and West Roseville Specific Plan areas.

#### *Historic Water Use and Future Water Needs*

As part of the contract renewal process, Reclamation has performed water needs assessments for each long term CVP contractor. The water needs assessment for Roseville (summarized in Table 1) identifies the sources and quantities of water available for use in the service area over the 40-year life of the contract. At our request, Reclamation also provided historic water use information for Roseville so that we could better evaluate their history of water use and projected future water needs as the area continues to develop and the population increases. As indicated in Table 2, Roseville anticipates a fairly rapid increase in the demand for water over the next 10 years, with buildout occurring after the year 2030.

Table 1 –Water Needs Assessment for Existing and Future Conditions for the City of Roseville		
	1995	2029
Total CVP Contract Deliveries	19,800 af	32,000 af
Surface Water Supply		
Groundwater		6,500 af
Transfers/Exchanges - In		13,000 af
Transfers/Exchanges - Out		
Total Supply	19,800 af	51,500 af
Ag Demand		
M&I Demand	19,800 af	54,900 af
Total Demand	19,800 af	54,900 af
Unmet Demand		

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Table 2 – City of Roseville past and anticipated water use through buildout									
	1995	2000	2005	2010	2015	2020	2025	2030	Buildout
Total af	18,839	25,644	39,900	46,145	51,300	52,900	53,859	54,426	58,890
Source: City of Roseville 1999, 2002, and 2004									

### *Consultation Parameters*

If supported by their water needs analysis, the City of Roseville has the ability to receive additional CVP water beyond the contract amount through the use of temporary water transfers, and the ability to permanently increase the amount of their contractual amount by obtaining a permanent water assignment. These are separate Federal actions, and are not proposed or addressed in this consultation. Any future action that either permanently or temporarily increases total CVP contract amount beyond 32,000 af is also not covered in this long-term contract renewal consultation (e.g. permanent water assignment actions, or the delivery of surplus CVP water during wet-year scenarios [Section 215]); and will require separate environmental review.

### *Action Area*

The action area for the City of Roseville in this consultation is 21,816 acres in size and is defined as the incorporated city north of the Placer County line and includes the area covered by the West Roseville Specific Plan – Fiddymont Project and the local portion of the area served the CVP Operations Criteria and Plan (OCAP). The section of Roseville east of Sierra College Boulevard that is served by San Juan Water District, and the northeastern area of Roseville that was annexed as the Stoneridge Specific Plan Project which is served by Placer County Water Agency are not included in this consultation. The Roseville service area includes the lands within the city limits and the incorporated area west of the city. The portion of southeastern Roseville that is served by San Juan Water District will be dealt with as part of a separate consultation because it is served by different CVP contractor. A copy of the revised CVP water service contract Exhibit A map showing the expanded service area is attached as Figure 1. Listed species occurrences in the Action Area are overlaid in Figure 2.

### *Consultation History*

*September 30, 2004.* Memorandum from Bureau of Reclamation to Fish and Wildlife Service, Request for Initiation of Formal Section 7 Consultation on the Long Term Contract Renewal between Reclamation and Roseville

*January 20, 2005.* The SFWO received the draft EIS from Reclamation.

*March 2005 to August 2005* - SFWO and CCAO work to confirm the correct CVP water contract service area and historic water deliveries.

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*September 2005.* A series of meetings were held with Roseville, Reclamation (MP and CCAO) and SFWO to discuss relationships between the Roseville and PCWA long-term water contracts and the Sacramento River Water Reliability Study consultation and participation the Placer County Habitat Conservation Plan (HCP).

*September 29, 2005.* A Memorandum was received from Reclamation confirming the expansion of the CVP water contract service area to include the West Roseville Specific Plan footprint and to increase the amount of water available by a 25-year Warren Act Contract for up to 30,000 af annually.

*October 6, 2005.* Meeting with Reclamation, Roseville, PCWA, Placer County, City of Lincoln, City of Sacramento, Sacramento Suburban Water District, and SFWO to discuss relationships between Roseville and PCWA long-term water contracts and Sacramento River Water Reliability Study consultation and participation the Placer County Habitat Conservation Plan (HCP).

### **Contemporaneous Consultations**

#### ***CVP Long-term Water Contracts***

The SFWO is currently engaged in on-going consultation with Reclamation on actions related to the renewal of the long-term water contract for the City of Roseville, and the effects that contract renewal would have on protected species and their habitat for six additional water districts in the American River Division for a 40-year period. Included in this analysis are the City of Roseville, Sacramento County Water Agency (SCWA), San Juan Water District (SJWD), Sacramento Municipal Utility District (SMUD), El Dorado Irrigation District (EID), and East Bay Municipal Utility District (East Bay MUD). The SFWO is working with Reclamation's South Central California Area Office to accumulate the information necessary to evaluate the effects of renewing the long-term water contracts for the San Felipe Division which includes the San Benito County WC and FCD; the Santa Clara Valley Water District; and for the San Luis Unit that includes California Department of Fish and Game, City of Avenal, City of Coalinga, City of Huron, Pacheco Water District, Panoche Water District, San Luis Water District, Westlands Water District, and the effects of water assignments to the Westland Water District from DMC contractors. The SFWO is also working with Reclamation's Western Regional Office in Denver to evaluate the San Luis Drainage Features Re-evaluation project effects on protected species in Fresno and Kings Counties.

#### **Informal Consultation on Sacramento River Water Reliability Study**

The SFWO is also currently engaged in informal consultation on the Sacramento River Water Reliability Study (SRWRS) which has the goal of developing a water supply plan that is consistent with the Sacramento Water Forum objectives of developing a Sacramento River diversion point for PCWA and supporting water delivery infrastructure to Roseville and western Placer County. As noted above, until this project is fully implemented, PCWA lacks the diversion facilities and delivery infrastructure to access their CVP water supply from the American River at Folsom Dam. The area that is being evaluated in the SRWRS includes the

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action area for the City of Roseville, and a significant portion of the action area for the PCWA contract, in addition to Sacramento Suburban Water District and the City of Sacramento. The diversion point for this project is on the Sacramento River, and the CVP contract water for PCWA will be delivered through new pipelines to northern Sacramento County; and to treatment plants in western Placer County. Water from the Sacramento River will be delivered to the PCWA service area as part of an Exchange Agreement that delivers American River water to the Delta in lieu of the diverted Sacramento River water.

These consultations are not considered part of the Environmental Baseline because final biological opinions have not yet been issued for them.

### **Environmental Baseline**

The environmental baseline is an analysis of past and ongoing human and natural factors leading to the current status of the species, habitats (including critical habitat), and ecosystems within the action area. The baseline includes State, tribal, local, and private actions already affecting the species or that will occur at the same time as this consultation. The baseline also includes the consultations completed for the renewal of other long-term water contracts, and consultations related to the operation and maintenance activities of the CVP. Other unrelated Federal actions affecting the species or their critical habitat that have completed consultation are also included as part of the baseline.

The population in Roseville was 85,800 in 2002, and is projected to increase to around 120,000 by the year 2025, and the current Placer County general plan assumes that all residential land uses (within both infill and specific plan areas) would be fully built out around the year 2010 and also assumes that non-residential land uses within the specific plan areas would be fully built out.

### **Completed Consultation on Related Actions**

#### *Central Valley Project Improvement Act Programmatic Biological Opinion Commitments*

This long-term water service contract renewal consultation tiers from the November 2000 Programmatic Biological Opinion on Implementation of the CVPIA and Continued Operation and Maintenance of the CVP (CVPIA PBO) (U.S. Fish and Wildlife Service 2000a) to address incremental and cumulative effects of the proposed renewal action. This tiering automatically carries forward all conservation measures and other components of the Project Description of the CVPIA PBO into the environmental baseline for this consultation on the long term renewal of the Roseville Contract. Reclamation's program to implement the CVPIA included the renewal of all existing CVP contracts as a core program (CVPIA PBO page 2-29 to 2-36).

The CVPIA Project Description listed eight significant areas of commitment that provided the basis of the PBO no jeopardy finding (Page 2-50 to 2-71). These eight areas of commitment are listed below:

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- Commitments Associated with Implementation of the CVPIA.
  - Anadromous Fisheries Restoration Activities (§3406(b)(1)).
  - Habitat Restoration Program (§3406(b)(1) other).
- Commitments Associated with Long term Renewal of CVP Water Contracts.
- Commitments for Activities Associated with CVP Water and/or Facilities.
- Commitments Associated with CVP Conveyance and Storage.
- Commitments Associated with Operations and Management Planning.
- Commitments Associated with Conservation Programs.
  - Wildlife Habitat Augmentation Program (Wetland Development Program).
  - CVP Conservation Program.
  - Comprehensive Mapping Program.
- Commitments Associated with Drainage.
- Commitments Associated General Consultation Process.
- Commitments and Strategy to Ensure Compliance with the Endangered Species Act.

Commitment 8 on Page 2-70 of the CVPIA PBO requires Reclamation to "provide necessary information to the Service's SFWO Endangered Species Division" on CVP actions "where a determination of *no effect* has been made, sufficiently in advance, to enable the Service's review". This commitment applies to all future Central California Area Office's CVP or CVPIA actions, including those specifically listed above under "Related Actions Not Part of the Proposed Action Project Description".

Under "Commitments Associated with Long-term Contract Renewal of CVP Contracts (page 2-54 to 2-56), the CVPIA PBO lists these fourteen contract-renewal commitments which may appropriately be considered part of the action of these contract renewals.

1. Long-term contracts will be renewed, and Reclamation will complete tiered site specific consultations with the Service. No CVP water will be delivered or applied outside current contract service areas until either formal or informal consultation, as appropriate, is complete. Once formal site specific consultation has occurred that is in compliance with this opinion, it is assumed that changes in land-use practices and impacts to listed and proposed specie, in the districts have been addressed.
2. During the contract renewal process, a needs-analysis to determine beneficial use of CVP water will be completed, and all contract renewals will be subject to Section 7 consultation procedures and the NEPA process. A site specific biological assessment, to determine potential impacts of using CVP water on Federal and State listed and proposed species, will be completed for individual water districts or for groups of districts in close proximity to one another. The Service's SFWO Endangered Species Division will provide recommendations to Reclamation on the appropriate level of ESA consultation and *conservation measures* needed.

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3. Reclamation also will continue to consult with the Service on a drainage-basin basis or ecosystem-level strategy for addressing new and amended water contracts outside and/or inside the American River watershed, including execution of diversion agreements associated with American River Water Forum.

4. Reclamation and the Service will write a joint letter to the water districts, any member agencies, Planning Departments of cities or counties within the districts using CVP water, and other responsible parties regarding requirements under the ESA. The letter will include: (1) a discussion of Reclamation's need to ensure that CVP water is not used in a manner which could jeopardize the continued existence of any listed species or result in the destruction or adverse modification of designated critical habitat, and (2) an explanation of the prohibitions described under Section 9 of the ESA in regard to take. The letter will discuss the appropriate protection measures as described here and in subsequent contract renewal consultation and will be completed within 60 days of execution of long-term contracts.

5. Conservation strategies will be in place for the districts or areas receiving CVP water. The types of strategies that could be accepted are: Habitat Conservation Planning as described in section 10(a) of the ESA; programmatic land management actions that include protection of listed and proposed species; requirements resulting from site specific Section 7 consultation; or an expansion of the existing CVP Conservation Program that adequately compensates for the direct and indirect effects of water delivery to an area.

6. Reclamation will, subsequent to a determination of may affect to listed species and/or adverse modification to designated critical habitat in consultation with the Service's SFWO Endangered Species Division, consult on all Federal actions that result in changes in purpose of use for CVP water contracts, including changes from Agriculture to Agriculture/Municipal and Industrial purposes.

7. The Service and Reclamation will work together to convey information to the water districts, and individual water users (as appropriate), on listed species needs. Reclamation will establish an outreach and education program, in collaboration with the Service, to help water users integrate implementation of the CVPIA and requirements of the contract renewal process as it relates to the ESA.

8. Interior will work closely with the water users, providing them maps of listed species habitats within their service-areas and guiding them through the consultation process to address site specific effects. Reclamation may encourage CVP contractors to complete HCPs encompassing the affected areas.

9. Reclamation and/or the Service will develop provisions for compensation for the loss of endangered species habitat resulting from the direct or indirect effects of a Reclamation action not covered under prior biological opinions that occur within the CVP service areas from the date of this opinion until completion of either: (a) contract

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area specific Section 7 consultation, (b) any other required site specific Section 7 consultation on the effects of the conversion in question, or (c) the completion of an HCP that encompasses the area in question.

10. Reclamation and CVP contractors will comply with all applicable opinions related to the CVP (CVPIA PBO pages 1-11 to 1-12). Flow standards that form the environmental baseline of the 1995 OCAP biological opinion will be met, and Reclamation will take no discretionary actions (e.g. new contracts, contract amendments, facility construction) that would incrementally increase diversions and alter hydrologic and environmental conditions in the Delta until any required consultation is reinitiated and completed [USFWS 2000; CVPIA PBO Appendix L (letter to the Service and NMFS from Reclamation dated October 29, 1999)].

11. Contractors are required to conform with any applicable provisions of any biological opinions addressing contract renewal so as to prohibit the use of CVP water that results in unauthorized take or conversion of wildland habitat determined to have the potential to be occupied by listed species, or violation of any terms of the contracts pertaining to the conservation of listed species. All contracts (or related biological opinions) will also stipulate Reclamation will not undertake any discretionary action allowing the delivery of CVP water to native habitat for listed species depicted on the maps attached to the 18-month notices unless clearance pursuant to the ESA has been obtained from the Service.

12. Reclamation, relative to all new and renewed contracts will informally consult with the Service's SFWO Endangered Species Division to determine the need for formal consultation prior to contract execution.

13. Reclamation will make certain that applicable measures to ensure ESA compliance for the renewal of CVP water service contracts are provided within the text of new and/or amended long-term water contracts and related actions.

14. Reclamation will provide information related to proposed new water assignments of Project water to the Service's SFWO Endangered Species Division prior to execution of the assignment.

Since the issuance of the CVPIA PBO in 2000, Reclamation has been working with the Service to address each CVPIA PBO commitment associated with long-term contract renewal of CVP water service contracts and/or refine them so that they are clearly understood and meet the original intent of avoiding and/or addressing impacts to listed species related to the renewal of long-term water contracts. Reclamation has stated that all CVPIA PBO commitments associated with long-term contract renewal of CVP water contracts will or have been addressed to ensure that the renewal of the long-term Settlement Contracts fully comports with the requirements of the CVPIA PBO and Endangered Species Act as it pertains to federal actions.

Reclamation is committed to implement all conservation measures described in the CVPIA PBO consultation. The following is a list of the more significant measures:



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The Central Valley Conservation Program - A program funded by Reclamation and jointly implemented by Reclamation and the Service that funds activities and land conservation strategies that address species that have been impacted by the CVP.

CVPIA (b)(1) Other Program - A CVPIA program jointly administered by the Service and Reclamation specifically designed to address needs of listed species that have been impacted by the CVP.

Wildlife Habitat Augmentation Program - This was part of a program identified in the CVPIA PBO as a Wetlands Development Program. That program was terminated but those portions of the Wetland Development program that were related to commitments related to listed species were retained, reorganized and renamed. This program funds activities that have a general benefit to listed species, particularly those related to wetlands.

Comprehensive Mapping Program - This continuing Reclamation program develops spatial data on lands/habitat types and presence of species on lands that are related to CVP actions, specifically the service areas of the CVP contracts. This provides important information of the extent of habitats, trends in land use and known occurrences of listed species.

#### *Central Valley Project Operations Criteria and Plan (OCAP)*

The OCAP describes the coordinated operation of the Central Valley Project (CVP) and State Water Project (SWP) by Reclamation and the California Department of Water Resources. On July 30, 2004, the Service issued biological opinion 1-1-04-F-0140, which addressed the effects of operating the CVP/SWP and delivering CVP water for renewing water contracts and other actions on the threatened delta smelt (*Hypomesus transpacificus*). On February 15, 2005, the Service issued biological opinion 1-1-05-F-0055 in response to Reclamation's November 3, 2004 request for reinitiation of formal consultation on the OCAP to address potential critical habitat issues and effects of the OCAP on delta smelt.

The OCAP consultation analyzed the effects of numerous new actions on the delta smelt and its designated critical habitat, including storage of CVP and SWP water in reservoirs, water releases from reservoirs, river operations, operation of the Federal/State diversion facilities, and the CVP/SWP export-pumping operations in and through the Delta. The OCAP consultation addressed the operation of the CVP/SWP in the Sacramento Valley, and included all commitments of the SWP and CVP, such as meeting requirements of the CVPIA PBO (USFWS 2000), the obligations contained in the Central Valley Water Quality Control Board water right permits, obligations of CVP water service contracts, Sacramento River Settlement contracts, San Joaquin exchange contracts, and other requirements. Therefore, the OCAP BO addressed all the aquatic effects of operating the CVP/SWP.



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In contrast, the Service's consultations on the long-term water-service contract renewals addressing the diversion of water at prescribed diversion points and times for the use of that water on a specified land area (the contractors' service area). All renewal contracts, while identifying a full contract amount, recognize that the delivery of full contract amount is subject to availability of water and other obligations of the CVP (such as CVPIA and biological ESA consultation requirements). In other words, the contracts create a demand (among other demands) for CVP water and the OCAP consultation addresses how the CVP/SWP projects are operated to meet those demands. There clearly is a linkage between contract renewals and the operation of the CVP/SWP. These linkages must, and are being addressed in separate but parallel individual consultations such that all of the possible effects on listed species and designated critical habitat are being identified and consulted on.

*Operation and Maintenance of Central Valley Project Water Conveyance.*

The CVPIA programmatic biological opinion (CVPIA PBO) anticipated that it may be desirable to cover some operations and maintenance (O&M) activities under long term contract renewal biological opinions (page 2-46). Pursuant to pages 2-46 to 2-49 of the CVPIA PBO and requirements of the biological opinions for CVP Interim Water-Service Renewal Contracts (1995, 1998, 2000, 2002), Reclamation has prepared regional operations and maintenance plans (O&M Plans) to describe the general and routine maintenance and operational procedures Reclamation conducts on their CVP facilities throughout California. Because Reclamation aggregated information at different geographic scales and levels of specificity for long term contracts and facility operation and maintenance, the Service determined it was necessary to conduct separate, but concurrent, consultation on operation and maintenance to meet Reclamation's target dates for long term contract renewal. On February 9, 2005 SFWO issued a biological opinion covering the O&M of the federal features in the American River Division. The service has also completed consultation on the O&M Plans for the Northern California Area Office (NCAO), the Central California Area Office (CCAO), and the South Central California Area Office (SCCAO), which includes the *Operations and Maintenance Guidelines, Integrated Pest Management Plans*, and Reclamation's *Listed Species Manual*. Those consultations analyzed effects of operation and maintenance of the CVP facilities associated with contract renewals, other than those effects analyzed in the OCAP biological opinion. The Service issued the biological opinion for the CCAO on February 9, 2005 (Service file number 1-1-05-F-0038), the biological opinion for the NCAO on February 14, 2005 (Service file number 1-1-05-F-0057) and the biological opinion for the SCCAO on February 17, 2005 (Service file number 1-1-05-F-0368).

*Central Valley Project Long-term Water Service Contract Renewals*

In addition to the City of Roseville contract analyzed in this consultation, Reclamation either has, or intends to renew about 119 CVP Water Service contracts throughout the Central Valley. All of the renewing CVP contracts are required by the *Biological Opinion on Implementation of the CVPIA (Central Valley Project Improvement Plan) and Continued Operation and Maintenance of the CVP* (CVPIA PBO) to incorporate provisions needed to comply with applicable law,

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including provisions of the CVPIA. Renewal contracts will incorporate applicable provisions of the CVPIA, including payment into the CVP Restoration Fund.

The CVP water service contracts include an annual maximum quantity of approximately 5.6 million af per year of CVP water and provide water service to approximately 3.2 million irrigable acres of land and an urban population in excess of 4.3 million people. The long term water contracts renewals, while authorizing a maximum contract amount, recognize that the delivery of the entire contract amount is subject to the availability of water and other CVP obligations.

For efficiency, Reclamation has grouped the CVP water-service contract renewal environmental documents by similar regional issues. Reclamation requested separate consultations for the following CVP regions: Shasta and Trinity Divisions, Sacramento River Division (Corning Canal, Tehama-Colusa Canal, and Black Butte Units), Feather River Water District, American River Division, Contra Costa Canal Unit, San Felipe Division, Delta-Mendota Canal Unit, and the West San Joaquin Division.

***Shasta and Trinity Divisions:***

On August 17, 2004 the SFWO determined that renewing the CVP water service contract would not likely adverse affect listed species in four of the ten districts in the Division: Shasta County Water Agency, Bella Vista Water District (WD), Shasta Community Service District (CSD), and Mountain Gate CSD. On November 12, 2004 the same conclusion was reached for: City of Redding, City of Shasta Lake, and Clear Creek CSD. On March 17, 2005 consultation was completed on the remaining CVP contracts in this Division: the contracts for the Centerville Community Service Area, Shasta County Service Area 25 - Keswick, and the U.S. Forest Service - Centimundi Marina

***Sacramento River Division:***

On August 17, 2004 the SFWO determined that renewing the water service contract would not likely adverse affect listed species in 11 of the 20 districts in the Division: 4E WD, Colusa County WD, Corning WD, County of Colusa (including 7 sub-contracts), Davis WD, Dunnigan WD, Feather WD, Kanawha WD, La Grande WD, Orland-Artois WD, Stony Creek WD, and Westside WD. On November 12, 2004 the same conclusion was reached for Thomes Creek WD and reconfirmed for Corning WD, and Orland-Artois WD based on updated Exhibit A maps. On February 14, 2005 the same conclusion was reached for Proberta WD, and on February 15, 2005 informal consultation was completed on the contracts for Glide WD, Kirkwood WD, Stonyford WD, U.S. Forest Service, and Whitney Construction, Inc.

***Sacramento River Settlement Contract:***

In addition to the water service contracts, SFWO completed consultation on long-term renewal of 138 Sacramento River Settlement Contracts on February 18, 2005. On March 9, 2005 the consultation on the renewal of the Settlement Contract for the Natomas Central Mutual Water Company was completed; on May 12, 2005 consultation was completed on the renewal of the

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Settlement contracts for Anderson-Cottonwood Irrigation District and the City of Redding, and on May 26, 2005 consultation was completed on the long-term renewal of the water service contract for Colusa Drain Mutual Water Company. These contracts provide for a total of about 1.8 million af of base supply (based on prior water rights) and about 400,000 af of CVP contract water to the Settlement contractors.

***Delta Division:***

***Delta-Mendota Canal (DMC) Unit:*** On February 15, 2005 the SFWO determined that renewing the water service contract would not likely adversely affect listed species in 20 of the 21 districts in the DMC Unit. Consultation has also been completed for the contract to provide water to the San Joaquin Veterans Cemetery. The contract for the City of Tracy has been deferred pending the conclusion of contract negotiations with Reclamation.

***Contra Costa County Water District:*** On March 11, 2005 the SFWO completed a formal consultation and conference on the renewal of this long-term renewal of this water service contract.

***Friant Division, Cross Valley Unit, Hidden Unit Division; Buchanan Unit Division:***

The Friant Division consists of three units having a total of forty-one water districts; the Cross Valley Unit consists of eight water districts; and the Hidden and Buchanan Divisions. The consultation for the Friant and Cross Valley Division Contractors (FWS 1-1-01-F-0825) was completed on January 19, 2001. The CVP water delivery contracts for the Cross Valley Unit have never been executed and the Friant Division is the subject of on-going litigation that has challenged the validity of the biological opinions issued for these water delivery contracts.

***Sacramento County Water Agency (SCWA) P.L. 101-514 (Fazio) Contract and East Bay Municipal Utility District***

On March 11, 1999, the Service issued biological opinion 1-1-97-F-0161, on a CVP water supply contract with SCWA, commonly known as the P.L. 101-514 (Fazio) contract (Service 1999a). That biological opinion addressed service area effects within the expanded Zone 40 service area of Sacramento County. In addition, the biological opinion on the SCWA P.L. 101-514 contract analyzed the growth induced effects of additional water deliveries to Zone 40, the same area as the proposed assignment of water from SMUD to SCWA. On December 10, 2004, we issued a no jeopardy biological opinion on the long term renewal of the CVP water service contract for East Bay Municipal Utility District, and a preliminary no jeopardy finding for an early consultation on the long term renewal of the CVP water service contract for the SCWA (Service File No. 1-1-04-0224). We are in ongoing consultation on Reclamation's proposal to renew the SCWA long term contract, which will require some revisions to the existing project description to address the transfer of Mather Field from the United States Air Force to the County of Sacramento.

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*Local Development Projects*

***City of Roseville – Pleasant Grove Wastewater Treatment Plant***

This action was a formal consultation (FWS 1-1-99-F-0006) on a Corps of Engineers Section 404 permit for the 110-acre proposed Pleasant Grove Wastewater Treatment Plant (PGWTP) project located to the west of the city limits at that time. On May 25, 1999 SFWO issued a BO on the endangered vernal pool fairy shrimp and the threatened vernal pool tadpole shrimp. The project site contains a total of 2.08 acres of waters and wetlands that include 1.04 acres of vernal pools, and 0.56 acre of swales that were known to provide habitat for both species. To minimize the direct and indirect effects of the PGWTP project construction to the vernal pool fairy shrimp and the vernal pool tadpole shrimp, the Roseville committed to purchase 2.72 acres of vernal pool preservation credits and 1.04 acres of vernal pool creation credits in a Service-approved mitigation bank, and to purchase 0.56 acre of seasonal wetland credits in a Service-approved conservation bank to compensate for the fill of 0.56 acre of seasonal wetlands prior to groundbreaking for the proposed project. Roseville also agreed to enter into a memorandum of understanding (MOU) with the Service that set out a process to address future development under its jurisdiction within the PGWTP service area that had not undergone section 7 consultation. The MOU also established a process to develop an interim conservation strategy, and Roseville agreed to work with the other jurisdictions within the Service Area to facilitate their participation in the planning effort.

In response to SFWO concerns regarding the potential effects of future urban development facilitated by construction of the Pleasant Grove Water Treatment Plant (PGWTP) on listed species, Roseville entered into an MOU with the SFWO. Section 1.4b and Section 8 of the MOU includes a commitment by Roseville and SFWO to cooperatively develop a long-term HCP, or its equivalent, in order to minimize the effects on federally-listed species of future development serviced by Phase II of the PGWTP and located in Roseville or other participating jurisdictions. Activities covered by the HCP, or its equivalent, are expected to consist of future public works projects, private development, and other activities to be specified during the development process. Species to be covered will include the vernal pool species, other listed species, as well as proposed, candidate, sensitive or other species of concern occupying habitats in the City of Roseville and other participating jurisdictions.

On May 17, 2000 the City of Roseville adopted a resolution approving the MOU, and on August 18, 2000 was executed. The consultations on the Westpark/Fiddymont Ranch Projects (discussed below) were conducted in accordance with the MOU. The area considered in the consultation on the permit represented the last contiguous areas of undeveloped vernal pool habitat within the jurisdiction of the City of Roseville, aside from City-owned preserves and open spaces.

***Westpark/Fiddymont Ranch Project***

This is the Formal Consultation (FWS 1-1-03-F-0013) on the proposed Westpark/Fiddymont Ranch Project, in western Placer County. The project consists of constructing approximately 8,430 low, medium and high density housing units, with supporting infrastructure, numerous

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commercial facilities, schools, and parks on a 3,142 acre parcel. This consultation dealt with the effects of the project on the endangered vernal pool tadpole shrimp and the threatened vernal pool fairy shrimp and their designated critical habitat. The project site contains 63.89 wetted acres of wetlands, including 33.91 wetted acres vernal pools and 8.05 wetted acres drainage swales considered habitat for listed vernal pool crustaceans. The area also includes approximately 3.92 wetted acres of seasonal wetlands, 0.62 wetted acres of emergent marsh, as well as the Pleasant Grove Creek and Kaseberg seasonal creek. To avoid a jeopardy opinion for the loss of species and habitat, the project proponent agreed to avoid approximately 699.3 acres of vernal pool grassland habitat, in four separate areas; to preserve approximately 25.48 acres off-site at the Sheridan East property and 1.2 acres at the Yankee Slough property both in Placer County; and restore approximately 43.00 acres of vernal pool grassland habitat at the off-site Yankee Slough property;

***West Roseville Specific Plan's Westpark/Fiddymont Ranch Project***

This is the reinitiation of the Formal Consultation (FWS 1-1-05-F-0061) for the proposed West Roseville Specific Plan's Westpark/Fiddymont Ranch Project that evaluated new information for inclusion in the consultation. As a result of a Settlement Agreement reached in *Defenders of Wildlife v. Gale Norton, et al.* (E.D. Dist. Cal. Case. No. 04-2478 DFL DAD), the applicant also included additional conservation measures for the protection of the species.

The applicants modified their proposed project to include additional Conservation Measures:

- 1) Preservation of the approximate 420-acre property (Hofman Ranch), 72 percent of which (304 acres) is located within the boundaries of the designated critical habitat for Placer County (Unit 12). The site is located between Wise Road and Manzanita Road north of the City of Lincoln and approximately 6 miles northwest of the Project site. The property contains approximately 3 acres of vernal pools and 12 acres of swales (all in designated critical habitat) that provide potential habitat for vernal pool crustaceans and are likely occupied by vernal pool fairy shrimp;
- 2) Preservation of the approximate 454-acre JBL property, located on the north side of Lincoln and completely within designated critical habitat, approximately 5 miles north of the Project site. The JBL property contains approximately 18.89 acres of vernal pools, 2.85 acres of seasonal wetland swales and 2.29 acres of seasonal wetlands totaling 24.03 wetted acres that represent suitable habitat for vernal pool crustaceans. The property is located within designated critical habitat Unit 12 and is situated immediately north of the Ahart vernal pool preserve, a property that supports a unique Merhten formation vernal pool complex and;
- 3) Preservation of a 210-acre portion of the 1335± acre Reason Farms property within designated critical habitat. Reason Farms is northwest of and contiguous to the subject property. The site is suitable for both fairy shrimp habitat preservation and restoration.
- 4) Acquisition and protection by Placer Land Trust of approximately 3,835 additional acres of fairy shrimp critical habitat (provided such habitat is feasibly available for acquisition) through the terms of a Settlement Agreement between Applicants and the Sierra Club, City of Roseville

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and Sierra Foothills Audubon Society and the terms of a Settlement Agreement between Applicants and Defenders of Wildlife and Butte Environmental Council. The Settlement Agreement imposes a 0.5 percent conveyance fee on the resale of qualifying residential lots in the Project. Over a 20-year period, the conveyance fee is projected to generate \$85 million. At least 65% of the fees collected under the Conveyance Fee Agreement that are available for property acquisition shall be used to acquire critical habitat for vernal pool endangered species, to the extent that such habitat is feasibly available. The conveyance fees are to be managed by the Placer Land Trust, in consultation with the City of Roseville. Fifteen percent of the funds collected shall be set aside for the long-term maintenance of the lands acquired.

5) In accordance with the Defenders of Wildlife Settlement Agreement the applicants will

(a) establish a funding mechanism for the acquisition and maintenance of critical habitat in Placer County by obtaining Irrevocable Letters of Credit totaling \$20 million. Placer Land Trust shall be entitled to make calls on the Irrevocable Letters of Credit to make additional purchases of critical habitat within Placer County. The Irrevocable Letters of Credit are expected to provide the funds to acquire and preserve approximately 1,000 acres of vernal pool critical habitat within Placer County.

(b) contribute to Placer Land Trust the sum of \$220,460, for each of the years 2005, 2006, and 2007, for a total of \$661,380, to provide the initial funding for habitat conservation and stewardship.

(c) contribute to Placer Land Trust \$250,000 for the purpose of funding a study of the cumulative impacts of the destruction of vernal pool wetlands and their associated grassland watersheds within the Central Valley portion of the U.S. Army Corps' Sacramento District.

(d) contribute to Placer Land Trust \$100,000 for the purpose of funding a study on the long-term viability of "postage stamp" vernal pool preserves, defined as small preserves that lack an adequate buffer, fail to protect the surrounding uplands and supporting watershed, and are vulnerable to indirect impacts and edge effects.

#### Placer County HCP Commitments

Placer County's open space and agricultural conservation effort known as Placer Legacy, is currently developing comprehensive, multi-species Habitat Conservation Plans (HCPs) and Natural Community Conservation Plans (NCCPs) that will address listed and non-listed species. The primary objectives of the HCPs/NCCPs are to provide for the conservation of the County's natural resources and provide for the protection of sensitive species and their respective habitats. The County has partnered with other local agencies and state government to develop these plans. Participating agencies in the Phase 1 of the Placer County Conservation Plan (PCCP) include the City of Lincoln, the South Placer Regional Transportation Authority (SPRTA), Placer County Water Agency (PCWA), and the Placer County Resource Conservation District (RCD). Phase 1 is currently under development, and it is anticipated that the HCP will be implemented within the next few years (City of Roseville 2004). Phase 2 will include the upper foothills of the Sierra



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Nevada and rapidly developing lands east of the Sierra crest and phase 3 will include public and private timber lands in the Sierra Nevada.

This plan is proposed to be a joint Habitat Conservation Plan and Natural Community Conservation Plan (HCP/NCCP). This is a large, regional planning effort that will conserve habitat for listed and unlisted species and their ecosystems within one of the fastest growing Counties in California. A variety of diverse habitats including but not limited to vernal pools and grasslands, and other wetlands, riparian woodland, oak woodland, montane riparian, montane hardwoods, mixed conifer, and aquatic resources will be protected. This project has higher conservation value because of the high degree of threat to listed species and their associated habitats posed by urban growth in Placer County and because it is anticipated to benefit both species and constituents, and the greater conservation that will result from a joint HCP/NCCP.

The following communities will be included within the Phase 1 conservation plan:

- 1) Agricultural lands including rice cropland, non-flooded herbaceous cropland and woody cropland;
- 2) Natural vegetation communities including river and stream systems, vernal pool complexes, grasslands, emergent wetlands, oak woodlands, and small patch habitats; and
- 3) Developed communities.

It is anticipated that the following activities will be included within the Phase 1 conservation plan: Routine maintenance; known, approved, and funded projects; planned projects (e.g. capital improvement plans that have been prepared for the 10-20 year planning horizon; and general activities or facilities that are anticipated but the specific capital improvement planning/funding is not complete or known (e.g. Placer Parkway or a South Placer Administrative facility) (City of Roseville 2004).

The following Federally listed species will be included in the Phase 1 conservation plan:

Animals: Vernal pool fairy shrimp, vernal pool tadpole shrimp, valley elderberry longhorn beetle, bald eagle, giant garter snake, California tiger salamander, and California red-legged frog.

These species are included in the conservation plan because they are known to be present in western Placer County; or because suitable habitat is present; or because their historic home range included this area; or because the actions proposed under the HCP could assist in the recovery of these species. In addition to the federally listed threatened or endangered species above, the list for the Phase 1 conservation plan includes state-listed species as well as federal candidate, other special status species, and a number of non-listed or sensitive species. Whole interrelated natural communities will be protected through the conservation strategy thus ensuring the viability of populations for a wide range of plants and animals, beyond those specifically covered in the Phase 1 PCCP.

Since natural communities will be evaluated and conserved as ecosystems, the conservation strategy developed through a HCP/NCCP will allow for a number of resource conservation

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objectives to be met such as maintaining connectivity, ensuring population viability, buffering reserve lands from outside influences, and establishing sufficiently sized conservation areas.

Biological resource protection and, more specifically, the conservation of natural communities will benefit the public in a number of ways:

1. Protection of covered species and natural communities will provide permanent large-scale open space areas for the residents of Placer County. Some of these areas may be open to the public for passive recreational uses, including wildlife viewing and hiking.
2. The establishment of an open space reserve system will help to buffer the individual residential communities of western Placer County while providing for open space protection and viable agricultural operations.
3. The Phase 1 PCCP will improve regulatory certainty and help to streamline the regulatory permitting process.

The SFWO and Placer County are preparing an Implementation Proposal that the County will present to their board of Supervisors in December 2005. In order to prepare this document, most of the plan will need to be in place and basic agreements between all parties done. It is anticipated that the HCP/NCCP will be written by early 2006, and then the CEQA/NEPA will be prepared and circulated for public review and comment.

### **Conservation Banks**

Wildlands Mitigation Bank was established in the fall of 1994, was the first wetland mitigation bank in the western United States to be authorized to sell compensatory mitigation credits. This preserve is located 22 miles north of Sacramento in Placer County, California, encompassing 616 acres. It provides compensatory mitigation for the vernal pools and swales, seasonal wetland, oak woodland, elderberry scrub and savanna, seasonal and perennial marsh, perennial stream channel, open water marsh, and riparian scrub and woodland. Over seventy species of plants indigenous to similar habitats in the local region flourish at the bank. Target wildlife species include the giant garter snake, western pond turtle, burrowing owl, valley elderberry longhorn beetle, and vernal pool fairy shrimp. Many other special-status species make use of the bank, including white-faced ibis, bald eagle, and Peregrine falcon.

Orchard Creek Conservation Bank was established in January of 1997. The bank is dedicated to the preservation of vernal pools and the protection of the special-status plants and animals that depend on the vernal pool habitat. The 632-acre preserve is located five miles north of Roseville in Placer County, California. Its complex vernal pool ecosystem supports several unique biological elements that are protected and maintained in perpetuity through a permanent conservation easement:

- The vernal pool fairy shrimp, a threatened species under the Federal Endangered Species Act.
- Special-status plants, including *Legenere*, dwarf *Downingia*, and Ahart's dwarf rush.
- Many native grasses and wild flowers endemic to the region.



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- Numerous waterfowl and shore birds feeding on the plants and aquatic insects and crustaceans in the vernal pools.

### Conclusion

After review of information provided to us in the September 2004, *Final Biological Assessment for the Central Valley Project, Long-Term Water Service Contract Renewals* (BA), the January 2005, *Draft Central Valley Project Long-Term Service Contract Renewals, American River Division, Environmental Impact Statement* (EIS), the *Draft Environmental Assessment/ Initial Study for the Long-term Warren Act Contract Between the United States of America and the City of Roseville*, and discussions with Area Office and Regional Office staff in July, August, and September 2005 it is our determination that renewal of the CVP long term water service contract, approval of the Warren Act Contract for the City of Roseville, and inclusion of the West Roseville Specific Plan Area into the CVP water service area are not likely to adversely affect federally listed species or designated critical habitat. There is no suitable habitat for the vernal pool fairy shrimp and vernal pool tadpole shrimp remaining inside the expanded Roseville action area that has not already been covered by a biological opinion. The direct and indirect effects of development on the listed species in the West Roseville footprint were fully evaluated in 2003 as part of consultations (FWS 1-1-03-F-0013) conducted for a Section 404 permit issued by the Corps of Engineers for the Westpark/Fiddymont Ranch Project; and in 2005 during the reinitiation of the formal consultation (FWS 1-1-05-F-0061) for the West Roseville Specific Plan's Westpark/Fiddymont Ranch Project. There is no critical habitat for vernal pool species designated in the action area.

### Closing

The Sacramento Fish and Wildlife Office would like to thank you and your staff for their assistance in providing information, ground-truthing, helping us better understand Reclamation's water contracting process, and commitment to working with us to conserve listed species. Please contact Jan Knight or Mike Welsh at (916) 414-6600 with questions about the City of Roseville long term contract renewal.

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### Literature Cited

- Ahl, J. S. B. 1991. Factors affecting contributions of the tadpole shrimp, *Lepidurus packardii*, to its over-summering egg reserves. *Hydrobiologia* 212: 137-143.
- Austin, C. and H.B. Shaffer. 1992. Short-, medium-, and long-term repeatability of locomotor performance in the tiger salamander, *Ambystoma californiense*. *Functional Ecology* 6:145-153.
- Barr, C. B. 1991. The distribution, habitat, and status of the valley elderberry longhorn beetle *Desmocerus californicus dimorphus*. U.S. Fish and Wildlife Service. Sacramento, California.
- Bolger, D. T., A. C. Alberts, and M. E. Soule. 1991. Occurrence Patterns of Bird Species in Habitat Fragments: Sampling, Extinction, and Nested Species Subsets. *American Naturalist* 137:155-156.
- California Department of Pesticide Regulation Internet website, 2002. 2000 Annual pesticide use report preliminary data: Sonoma County Indexed by Commodity.
- California Natural Diversity Database (CNDDB). Natural Heritage Division, California. Department of Fish and Game. State of California.
- City of Roseville. 1999. Draft EIR for the Water Treatment Plant Expansion Project and 60-inch Raw Water Pipeline Project.
- City of Roseville. 2002. Urban Water Management Plan. City of Roseville Environmental Utilities Division.
- City of Roseville. 2003. West Roseville Specific Plan and Sphere of Influence Amendment Area Draft Environmental Impact Report
- City of Roseville. 2004. West Roseville Specific Plan and Sphere of Influence Amendment Area Final Environmental Impact Report

Chief, Resource Management Division

21

Collinge, S. K. 1996. Ecological Consequences of Habitat Fragmentation: Implications for Landscape Architecture and Planning. *Landscape and Urban Planning* 36:59-77.

Collinge, S. K., M. Holyoak, C. B. Barr, and J. T. Marty. 2001. Riparian habitat fragmentation and population persistence of the threatened valley elderberry longhorn beetle in central California. *Biological Conservation* 100:103-113.

Conrad, S. G., R. L. MacDonald, and R. F. Holland. 1977. Riparian Vegetation and Flora of the Sacramento Valley. Pp. 47-56. *in* A. Sands (ed), *Riparian Forests in California: their Ecology and Conservation*. UC Davis. May 14.

Driver, E. A. 1981. Caloric value of pond invertebrates eaten by ducks. *Freshwater Biology* 11: 579-581.

Fahrig, L. 1997. Relative Effects of Habitat Loss and Fragmentation on Population Extinction. *Journal of Wildlife Management* 61:603-610.

Frayser, W. E., D. D. Peters, and H. R. Pywell. 1989. Wetlands of the California Central Valley: Status and Trends, 1939 - mid-1980's. U.S. Fish & Wildlife Service, Region 1. Portland, Oregon.

Fugate, M. L. 1992. Speciation in the fairy shrimp genus *Branchinecta* (Crustacea: Anostraca) from North America. Ph. D. Dissertation. Department of Biology, University of California. Riverside, California.

Gilliom, R. J. 1999. Pesticides in the Nation's Water Resources. U. S. Geological Survey. Water Environment Federation Briefing Series Presentation. Capitol Building, Washington D.C. March 19, 1999.

Holland, R. F. 1978. The geographic and edaphic distribution of vernal pools in the Great Central Valley, California. *California Native Plant Society, Special Publ.* 4:1-12.

Holway, D. A. 1998. Distribution of the Argentine ant (*Linepithema humile*) in Northern California. *Conservation Biology* 9:1634-1637.

Jones and Stokes and Associates. 1988. Final Report: Field Investigation of Life History Characteristics of the Valley Elderberry Longhorn Beetle along the Cosumnes River, Sacramento County, California. Prepared for the U.S. Fish and Wildlife Service. Prepared by Jones and Stokes Associates, Inc. Sacramento, California. 6 pp. with appendix.

Katibah, E. F. 1984. A brief history of riparian forests in the Central Valley of California. pp. 23-29. *In* R.E. Warner and K. M. Hendrix, eds. *California riparian systems: ecology, conservation, and productive management*. University of California Press, Berkeley.

Chief, Resource Management Division

22

- Katibah, E. F., K. J. Dummer, and N. Nedeff. 1984. Current condition of riparian resources in the Central Valley of California. pp. 314-321 *In*: R. E. Warner and K. M. Hendrix, eds. California riparian systems: ecology, conservation, and productive management. University of California Press, Berkeley.
- Keeler-Wolf, T., D. R. Elam, K. Lewis, and S. A. Flint. 1998. California vernal pool assessment preliminary report. California Department of Fish and Game.
- Krapu, G. L. 1974. Foods of breeding pintails in North Dakota. *J. Wildl. Manage.* 1974; 38(3): 408-417.
- Lande, R. 1988. Genetics and Demography in Biological Conservation. *Science* 241:1455-1460.
- McCarten, N. F. and C. A. Patterson. 1987. Vegetation Quality and Rare Plant Study of Riparian Plant Communities along the Middle Sacramento River, California. CDFG Non-game Heritage Program. November.
- McGill, Robert, R., Jr. 1975. Land use Changes in the Sacramento River Riparian Zone, Redding to Colusa. State of California, Resources Agency, Department of Water Resources. April, 1975. 23 pp.
- Pennak, R. W. 1989. Freshwater Invertebrates of the United States. Third Edition. John Wiley and Sons. New York, New York.
- Primack, R. B. 1998. Essentials of Conservation Biology. Second Edition. Sinaur Associates. Sunderland, Massachusetts.
- Shaffer, M.L. 1981. Minimum Populations Sizes for Species Conservation. *Bioscience* 31: 131-134.
- Simovich, M., R. Brusca, and J. King. 1992. Invertebrate surveys 1991-1992 PGT-PGE/Bechtel pipeline expansion project. University of San Diego. Alcala Park, San Diego, California.
- Smith, F. 1977. A short review of the status of riparian forests in California. pp. 1-2. *In*: Riparian forests in California: their ecology and conservation. A. Sands, ed. Institute of Ecology Publication No. 15, Davis, California. 98 pages plus appendices.
- Thompson, K. 1961. Riparian forests of the Sacramento Valley, California. *Annals of the Association of American Geographers* 51: pp. 294-315.
- U. S. Bureau of Reclamation. 2005. Central Valley Project Long-Term Service Contract Renewals, American River Division, Environmental Impact Statement.

Chief, Resource Management Division

23

U. S. Bureau of Reclamation. 2005. 2005. Environmental Assessment, Long-term Warren Act Contract Between the United States of America and the City of Roseville.

U. S. Fish and Wildlife Service. 1980. Endangered and Threatened wildlife and plants. Determination of threatened status for the valley elderberry longhorn beetle. Federal Register 45: 52803.

\_\_\_\_\_. 1984. Recovery plan for the valley elderberry longhorn beetle. Endangered Species Program, Portland, Oregon.

\_\_\_\_\_. 1994a. Endangered and threatened wildlife and plants: Critical habitat determination for the delta smelt. December 19, 1994. Federal Register 59: 65256-65279.

\_\_\_\_\_. 1994b. Endangered and threatened wildlife and plants. Determination of endangered status for the Conservancy fairy shrimp, longhorn fairy shrimp, and the vernal pool tadpole shrimp; and threatened status for the vernal pool fairy shrimp; Final Rule. Federal Register 59: 48136-48153.

\_\_\_\_\_. 1995. Formal consultation and conference on the effects of long-term operation of the Central Valley Project and State Water Project on the threatened delta smelt, delta smelt critical habitat, and proposed threatened Sacramento splittail. Sacramento, California. 52 pp. plus figures and attachment.

\_\_\_\_\_. 1996a. Endangered and threatened wildlife and plants. Proposed policy and proposed rule on the treatment of intercrossoes and intercross progeny (the issue of "hybridization"); request for public comment. Proposed Rule. Federal Register 61: 4710.

\_\_\_\_\_. 1999a. Formal Consultation on Water Service Contracts with Sacramento County Water Agency, San Juan Water District, and City of Folsom. Sacramento, California. 65 pp. plus figures and attachments.

\_\_\_\_\_. 1999c. Conservation Guidelines for the Valley Elderberry Longhorn Beetle. Sacramento California. 13 pp.

\_\_\_\_\_. 2000a. Formal Consultation on the Implementation of the Central Valley Project Improvement Act (CVPIA) and Continued Operation and Maintenance of the Central Valley Project (CVP). Sacramento, California. 142 pp. plus figures and attachments.

\_\_\_\_\_. 2000b. Endangered and threatened wildlife and plants. Emergency rule to list the Santa Barbara County distinct population of the California tiger salamander as endangered. Rule and proposed rule. Federal Register 65: 3096.

\_\_\_\_\_. 2003a. GIS.

## Chief, Resource Management Division

24

- \_\_\_\_\_. 2003b. Endangered and threatened wildlife and plants. Designation of critical habitat for four vernal pool crustaceans and eleven vernal pool plants in California and Southern Oregon. Final Rule. Federal Register 68: 46684-46867.
- \_\_\_\_\_. 2004. Formal and Early Section 7 Endangered Species Consultation on the Coordinated Operations of the Central Valley Project and State Water Project and the Operational Criteria and Plan. Sacramento, California. 231 pp.
- Ward, P. S. 1987. Distribution of the Introduced Argentine Ant (*Iridomyrex humilis*) in Natural Habitats of the Lower Sacramento Valley and its Effects on the Indigenous Ant Fauna. *Hilgardia* 55:1-16.
- Warner, R. E. and K. M. Hendrix. 1985. Riparian Resources of the Central Valley and California Desert. California Department of Fish and Game, Sacramento, California. 226 pp.
- Wilcove, D. S., D. Rothstein, J. Dubow, A. Phillips, and E. Losos. 1998. Quantifying Threats to Imperiled Species in the United States. *Bioscience* 48 (8): 607-615.

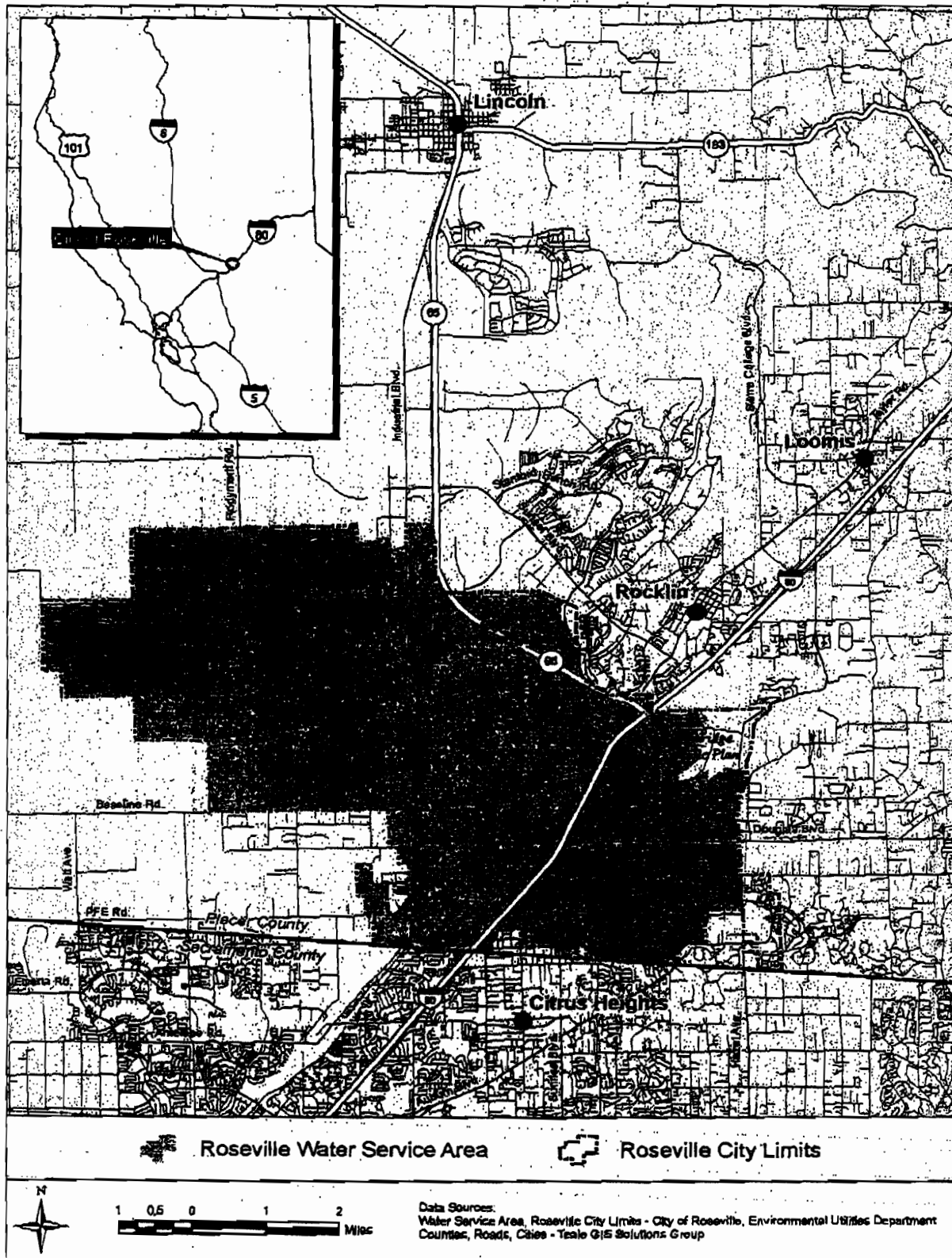


Figure 1. City of Roseville Service Area



