### SONOMA STATE UNIVERSITY MASTER PLAN REVISION FOR WASTEWATER EQUALIZATION PROJECT

EIR Addendum

Prepared for Sonoma State University Capital Planning, Design and Construction May 2007



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## CHAPTER I Introduction

### A. Environmental Review

In May 2000, the California State University (CSU) Board of Trustees certified the *Sonoma State University Master Plan Revision Environmental Impact Report (EIR)* (herein referred to as the 2000 Master Plan Revision EIR), and adopted findings in accordance with the California Environmental Quality Act (CEQA). In May 2000, the CSU Board of Trustees also approved the corresponding major revision to the Sonoma State University Master Plan (herein referred to as the 2000 Master Plan). The 2000 Master Plan identified the facilities and actions required to accommodate the University's development from the student capacity of approximately 5,400 FTE to the ultimate student capacity of 10,000 FTE. Under the existing approved 2000 Master Plan, new facilities were proposed both on its main campus, as well as on 89.3 acres of property north of the main campus across Copeland Creek, including the proposed Donald and Maureen Green Music Center (to be located on 54.7 acres of existing campus property) and university housing (to be located on 34.6 acres on property originally proposed to be acquired by the University).<sup>1</sup>

In August 2001, the CSU approved an addendum to the 2000 Master Plan Revision EIR and a corresponding minor revision to the Master Plan for development of additional on-site student housing, and expansion or relocation of a number of other school facilities. (See a description of this other minor revisions to the Master Plan that have occurred since the original approval of 2000 Master Plan, under "Previous Revisions to the 2000 Master Plan, below.)

The CSU now proposes an addendum to the 2000 Master Plan Revision EIR for a new minor revision to the Master Plan to address a proposed wastewater equalization project at the University's objective for the proposed project is to equalize the discharge of wastewater flows from the University under the existing approved Master Plan, and reduce the potential for future exceedances of the University's portion of the City of Rohnert Park's wastewater allocation designated by the Subregional Wastewater Treatment system. Under the project, wastewater generated at the University under the Master Plan in excess of this wastewater allocation would be diverted to, and temporarily stored within, an on-campus wastewater storage tank, and time-released to the City of Rohnert Park's sanitary sewer line thereby creating a more constant sanitary sewer flow from the University. Associated proposed on-campus facilities

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<sup>&</sup>lt;sup>1</sup> The University has since not pursued acquiring the 34.6-acre parcel for purchase, and instead recently acquired an 88-acre property located off Petaluma Hill Road outside the City of Rohnert Park Urban Growth boundary for development of housing for faculty and staff.

include a sewer pump station, emergency generator, aeration system and other ancillary infrastructure. (See Chapter II, Project Description, for details). This project is intended to equalize University wastewater flows under near-term conditions.

The proposed project would not affect the rate of increase in student enrollment or the total student capacity of 10,000 FTE in the existing approved Master Plan. Accordingly, the proposed project would not result in a change in the rate of increase in University wastewater flows to the municipal wastewater collection system beyond that already projected by the University in its existing approved Master Plan, nor affect the total University-generated wastewater flows under buildout of the Master Plan.

This Addendum will be considered by both the Assistant Vice-Chancellor of Capital Planning, Design and Construction, who has been delegated the authority by the CSU Board of Trustees for approving minor master plan revisions.

Section 15164(a) of the CEQA *Guidelines* allows for preparation of an addendum to a previously certified EIR if changes or additions are necessary but none of the conditions that would require preparation of a Subsequent EIR, Negative Declaration or Supplemental EIR are met. Specifically, these conditions, outlined in Section 15162 of the CEQA *Guidelines*, include:

- 1. Substantial changes are proposed in the project which will require major revisions of the previous EIR due to the involvement of new significant environmental effects or a substantial increase in the severity of previously identified impacts;
- 2. Substantial changes occur with respect to the circumstances under which the project is undertaken which will require major revisions of the previous EIR due to the involvement of new significant environmental effects or a substantial increase in the severity of previously identified impacts;
- 3. New information of substantial importance, which was not known and could not have been known with the exercise of reasonable diligence at the time the previous EIR was certified as complete, shows any of the following:
  - a) The project will have one or more significant effects not discussed in the EIR;
  - b) Significant effects previously examined will be substantially more severe than shown in the previous EIR;
  - c) Mitigation measures or alternatives previously found not to be feasible would in fact be feasible, and would substantially reduce one or more significant effects of the project, but the project proponents decline to adopt the mitigation measure or alternative; or
  - d) Mitigation measures or alternatives which are considerably from those analyzed in the previous EIR would substantially reduce one or more significant effects on the environment, but the project proponents decline to adopt the mitigation measure or alternative.

### B. Previous Revisions to the 2000 Master Plan

In 2001, the CSU approved an addendum to the 2000 Master Plan Revision EIR and a corresponding minor revision to the Master Plan. The minor revision to the Master Plan included development of an additional student housing complex on the main campus and removal of another student housing complex on the main campus that was planned under the existing approved 2000 Master Plan (for a net increase in proposed University housing on the main campus), a commitment to the development of the low-density housing scenario in the northwest acquisition area (a range of potential housing scenarios were possible under the 2000 Master Plan, a horizontal expansion of the parking structure planned under the 2000 Master Plan, a number of improvements to the on-site stormdrainage system planned under the 2000 Master Plan, development of a new Public Safety Building, and development of a new Parking and Information Booth.

In 2005, the CSU approved a second minor revision to the Master Plan. First, the revision consisted of moving the footprint of proposed Professional Schools Building (Building No. 31) to the north side of the central campus quad area. This is the site of the existing Student Commons (Building No. 16) and the Bookstore Temporary Modulars (Building No. 17) that would be removed and their program space requirements relocated to the proposed new University Center Building No. 35B. Secondly, the revision consisted of moving the Parking Information Booth (Building No. 34) to the main campus entry. The footprint for the booth would be relocated from the southwest edge of the lawn area in front of the Evert B. Person Theater (Building No. 27) to the campus entry lawn area just off East Cotati Avenue. The relocation is to facilitate traffic movement onto campus with out creating a back at the existing master plan location.

### C. Use of this EIR Addendum

This EIR Addendum provides the environmental information and evaluation necessary for the development and implementation of the proposed Minor Master Plan revision (the "project"). The project sponsor is Sonoma State University (hereinafter referred to as the University), representing the trustees of CSU (the Lead Agency). This EIR Addendum has been prepared by the University as Lead Agency in conformance with CEQA. It is anticipated that no further environmental review under CEQA would be necessary to implement any aspect of the project.

The University seeks approval for the project. The proposed Minor Master Plan revision would require approval from the Assistant Vice-Chancellor of Capital Planning, Design and Construction, who has been delegated the authority for approving minor master plan revisions by the trustees of CSU. These decision making bodies shall consider the Addendum with the 2000 Master Plan Revision Final EIR, as revised, prior to making a decision on the project.

Plans for development of the project have proceeded to a degree sufficient to permit environmental analysis in conformance with CEQA. Accordingly, this EIR Addendum presents

<sup>2</sup> Ibid.

Sonoma State University Master Plan Revision EIR Addendum

reasonable assumptions (as described in Chapter II, Project Description) for the University to undertake the proposed project and describes the attendant environmental impacts. The analyses, where necessary, are based on conservative assumptions that tend to overstate project impacts.

### D. Organization of this EIR Addendum

This EIR Addendum has been organized into the following chapters.

**Chapter I, Introduction:** This chapter provides an overview that describes the intended use and organization of this EIR Addendum, and sets forth some of the assumptions critical to the environmental analysis.

**Chapter II, Project Description:** This chapter discusses the project objectives, provides background data on the proposed project location, describes the operational and physical characteristics of the proposed project, and identifies required project approvals.

**Chapter III, Environmental Evaluation:** This chapter discusses the potential for the project to change the severity of the impacts identified in the 2000 Master Plan Revision EIR, as revised, and/or introduce new environmental effects, and discuss any changes that have occurred with respect to the circumstances under which the project is undertaken. The issue areas addressed in the EIR Addendum are land use and planning; geology, soils and seismicity; hydrology and water quality; traffic, circulation and parking; air quality; noise; visual quality; biological resources; hazardous materials; public services; utilities and service systems; energy; cultural resources, growth inducement, and mineral resources.

Chapter IV, Report Preparation: This chapter lists report preparers.

## CHAPTER II Project Description

### A. Project Overview

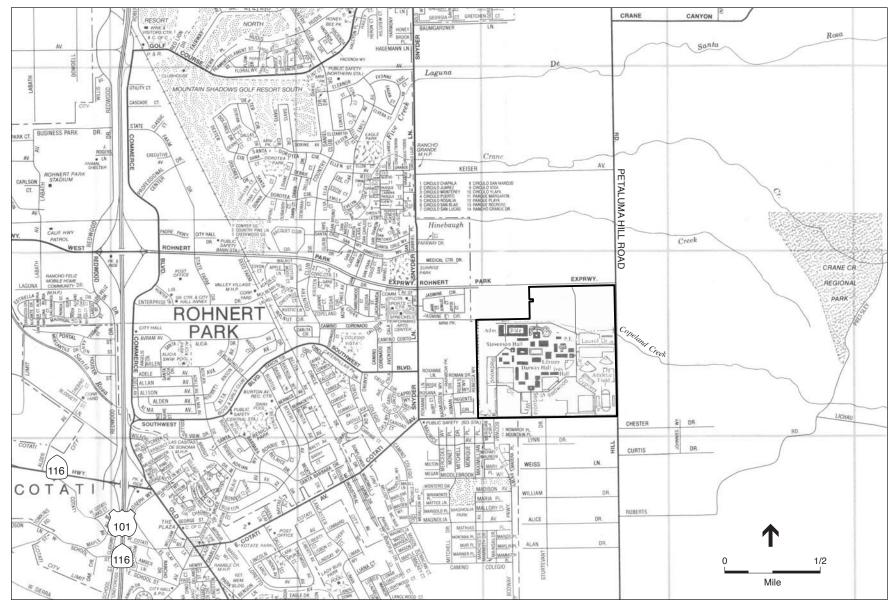
The CSU proposes an addendum to the 2000 Master Plan Revision EIR for a new minor revision to the Master Plan for a proposed wastewater equalization project at the University. The University's objective for this proposed project is to equalize the discharge of wastewater flows from the University under the existing approved Master Plan, and reduce the potential for future exceedances of the University's portion of the City of Rohnert Park's wastewater allocation designated by the Subregional Wastewater Treatment system. Under the project, wastewater generated at the University under the Master Plan in excess of this wastewater allocation would be diverted to, and temporarily stored within, on-campus wastewater storage tank, and time-released to the City of Rohnert Park's sanitary sewer line thereby creating a more constant sanitary sewer flow from the University. Associated proposed on-campus facilities include a sewer lift station, emergency generator, aeration system and other ancillary infrastructure. This project is intended to equalize University wastewater flows under near-term conditions.

The proposed project would not affect the rate of increase in student enrollment or the total student capacity of 10,000 FTE in the existing approved Master Plan. Accordingly, the proposed project would not result in a change in the rate of increase in University wastewater flows to the municipal wastewater collection system beyond that already projected by the University in its existing approved Master Plan, nor affect the total University-generated wastewater flows under buildout of the Master Plan.

The University seeks approval for this project. The proposed Minor Master Plan revision would require approval from the Assistant Vice-Chancellor of Capital Planning, Design and Construction, who has been delegated the authority for approving Minor master plan revisions by the trustees of CSU.

### **B. University Location**

Sonoma State University is located within the city limits and Urban Growth boundary of the City of Rohnert Park in Sonoma County (see Figure II-1). The approximate 270-acre campus is located approximately seven miles south of the City of Santa Rosa and approximately ten miles north of the City of Petaluma. The campus is bounded by the Rohnert Park Expressway to the north, Petaluma Hill Road to the east, East Cotati Avenue to the south, and the City limits of the City of Rohnert Park to the west. Copeland Creek, a seasonal creek, extends east-west through the northern portion



Campus Boundary

Sonoma State University Master Plan Revision EIR Addendum . 207287
 Figure II-1
 Project Location

SOURCE: ESA; California State Automobile Association

of the campus. The University Master Plan covered Assessor's Parcel Nos. (APNs) 047-131-08, -11, -18, -20, -23, -26 and -27. These parcels are all owned by the University, except APNs 047-131-26 and -27 (located north of Copeland Creek, south of Rohnert Park Expressway and west of existing parking facilities), which fall outside the existing campus boundary.

An aerial photograph of Sonoma State University and vicinity is presented in Figure II-2. The campus is located on relatively level terrain. The campus property located south of Copeland Creek is developed with existing University-related facilities, infrastructure and landscaping, including buildings, outdoor athletic fields, campus roadways and parking lots, and two manmade lakes (which serve as holding tanks for the campus fire suppression system). The creek corridor itself is bounded by a dense growth of trees and brush. Portions of the campus property north of the creek have has been developed with new parking Lots L, M, N and O, as well the proposed Green Music Center, currently under construction.

Vehicular access to the campus south is provided by three entrances from East Cotati Avenue (at South Sequoia Way, Cypress Drive and Vine Street) one off of Petaluma Hill Road (at Laurel Drive), and one from Rohnert Park Expressway. There is one vehicular crossing and two pedestrian crossings of Copeland Creek. Redwood Circle, Juniper Lane, Zelkova Lane and a number of bicycle and pedestrian walkways provide additional internal circulation within the campus. An unpaved nature trail follows along Copeland Creek.

### **C. Existing University Facilities and Characteristics**

The University currently has a building capacity for approximately 6,850 FTE. The University currently maintains 36 academic departments, offering 41 bachelor's degree programs, 14 master's degree programs, nine credential programs, and eight undergraduate and graduate certificate programs. Table II-1, below, presents existing SSU employment and student enrollment for the Spring 2007 semester. Currently, approximately 2,515 students live on-site in the University's student housing. There are approximately 5,348 student, faculty, housing, visitor and special parking spaces located on the campus.

School Component	Number <sup>b</sup>
Students	
Undergraduate	6,898
Graduate	1,202
Total Students	8,100
Employees	
Faculty	610
Staff	1,028
Total Employees	1,638

 TABLE II-1

 EXISTING STUDENTS, FACULTY AND STAFF<sup>a</sup>

a 2007 school year.

b Note: Total enrollment and employment estimates (i.e., not adjusted for full-time equivalent estimates).

SOURCE: Sonoma State University website, 2007



Campus Boundary

Sonoma State University Master Plan Revision EIR Addendum . 207287
 Figure II-2
 Aerial Photograph
 (November 2005)

SOURCE: GlobeXplorer; ESA

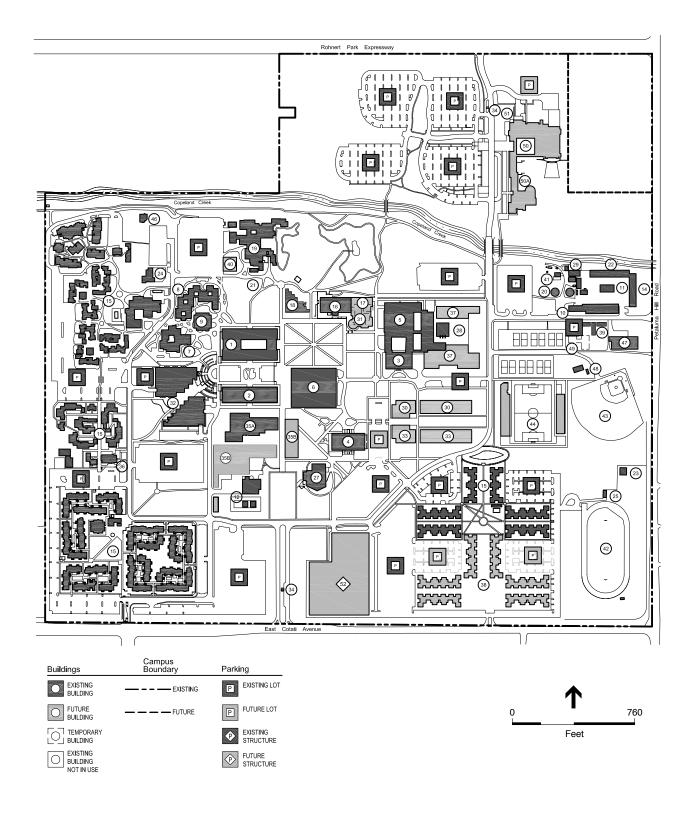
Table II-2, below, presents a summary of existing and new facilities identified under the existing approved Master Plan. The existing approved Master Plan is illustrated in Figure II-3.

Map Reference No.	Campus Facilities	Gross Square Footage (sq. ft.)	Student Capacity of Academic Facilities (FTE)
Existing Fac	ilities		
1.	Stevenson Hall (Classroom Office)	130,160	2,359
2.	Charles Darwin Hall (Science)	111,821	1,558
3.	Field House	15,826	
4.	Charles Ives Hall (Music)	48,510	663
5.	Physical Education	65,985	65
6.	Ruben Salazar Building (Library)	116,186	1,198
7.	Student Health Center	19,427	
8.	Rachel Carson Hall Ambrose Nichols Hall (Classroom/Office)	20,000	458
9. 10.	Plant Operations Office	30,700 2,692	418
10.	Corporation Yard Shops	8,300	
12	Boiler Plant	11,500	
14.	Corporation Yard Support Services	8,000	
15.	Residence Halls and Dining Facility	684,560	
15A	Police Services Building	3,860	
16.	Commons	18,500	
17.	Bookstore (temporary)	10,486	
18.	Student Union	17,600	
19.	Art Building	46,604	128
20.	Pump House	960	
21.	Pump House - Fire	1,225	
22.	Corporation Yard Warehouse	9,600	
23.	Physical Education/Storage Building	1,480	
24. 27.	Child Care Center Evert P. Person Theatre	3,804	
27. 29.	Anthropological Study Center	20,655 5,440	
32.	Jean and Charles Shulz Information Center	215,000	
35A.	Recreation Center	53,442	
41.	Recycle Plant	900	
46.	Technology Center	3,120	
47.	Campus Storage Building	7,350	
49.	California Institute for Human Services (temporary)	6,750	
	Total Existing Facilities	1,704,913	6,847
Facilities Pr	oposed under Existing Master Plan		
30.	Instructional Expansion	100,000	900
31.	Professional Schools Building	60,000	513
33.	Instructional Expansion	105,000	986
35B.	University Center	110,000	
37.	Physical Education Addition	55,000	200
38.	Student Housing (Tuscany Village)	205,811	
40.	Art Building Addition	10,000	254
44 50.	Soccer Stadium Donald and Maureen Green Music Center <i>(under</i>	64,827	
	construction)		
50A.	Music/Faculty Office Building (under construction)	32,709	
51. 52.	Restaurant/Meeting Facility (under construction) Parking Structure	7,900	300
·		751,247	3,153

## TABLE II-2EXISTING AND PLANNED FACILITIES ANDSTUDENT CAPACITIES UNDER EXISTING APPROVED MASTER PLAN

<sup>a</sup> See Figure II-3 for location of existing and planned facilities under the existing approved Master Plan.

SOURCE: Sonoma State University, 2007



Note: Refer to Table II-2 for list of facilities.

Table II-3, below, presents projected enrollment under the existing approved Master Plan. It is anticipated the University will reach its ultimate student capacity of 10,000 FTE by the 2012/2013 school year.

School Year	Student Enrollment (FTE)
2007/2008	7,615
2008/2009	7,991
2010/2011	8,356
2011/2012	9,211

#### **TABLE II-3** PROJECTED STUDENT ENROLLMENT (FTE) UNDER EXISTING ADDON/ED MASTED DI ANI 2007/2008 THEOLIGH 2011/2012ª

### D. Background and Need for Project

The University's wastewater collection system is connected to the City of Rohnert Park municipal wastewater collection system. The City of Rohnert Park wastewater collection system ultimately discharges to the Subregional Wastewater Treatment Plant (known as the Laguna Wastewater Treatment Plant, or Laguna WWTP), operated by the City of Santa Rosa Utilities Department. The Laguna WWTP is a tertiary-level treatment facility that has an average daily dry weather flow (ADWF) of 17.5 million gallons per day (mgd).

The University is included in the City of Rohnert Park's current allocation of 3.43 mgd average ADWF designated by the Subregional Wastewater Treatment system. The City of Rohnert Park maintains an agreement with the University, allowing the University to use up to 0.25 mgd ADWF of the City of Rohnert Park's wastewater allocation.

The University monitors and records daily sewage flows and determines monthly averages. The ADWF is determined annually by the Subregional Wastewater Treatment system administrator. Table II-4 summarizes ADWF for the three most recent years.

Year	ADWF (in mgd) <sup>a</sup>	Occurrence Month
2004	0.195	October
2005	0.194	October
2006	0.205	September

TABLE II-4
SONOMA STATE UNIVERSITY AVERAGE DRY WEATHER FLOWS (ADWF)

SOURCE: Sonoma State University, 2007

In the near-term, the University plans to develop a number of new facilities identified in their existing approved Master Plan, including Tuscany Village (student housing), the Green Music Center and the University Center. Estimated ADWF sewage flow increases from these facilities are shown in Table II-5.

New Near-Term Campus Facility	Projected ADWF Increase (in mgd) <sup>a</sup>
Student Housing (Tuscany Village)	0.032
Green Music Center	0.004
University Center	0.006
	0.042

TABLE II-5 ESTIMATED ADWF SEWAGE FLOW FROM NEAR-TERM DEVELOPMENT IDENTIFIED IN EXISTING APPROVED UNIVERSITY MASTER PLAN

<sup>a</sup> ADWF occurrence month determined by the Subregional Wastewater Treatment system administrator.

SOURCE: Sonoma State University, 2007

When considering the wastewater anticipated to be generated by this near-term University development along with that generated by existing University facilities, the total projected monthly average wastewater flows that would be generated by the University during ADWF-determinant months would approach the University's existing allocated capacity. While the average monthly flows may remain less than the allocated capacity, the daily flows have been shown to vary substantially during any given month and would likely be above the allotted capacity.

### **E. Project Characteristics**

The CSU proposes an addendum to the 2000 Master Plan Revision EIR for a new minor revision to the Master Plan for a proposed wastewater equalization project at the University. The proposed project is designed to equalize the discharge of wastewater flows from the University under the existing approved Master Plan, and reduce the potential for future exceedances of the University's portion of the City of Rohnert Park's wastewater allocation designated by the Subregional Wastewater Treatment system. Under the project, wastewater generated at the University under the Master Plan in excess of this wastewater allocation would be diverted and pumped to a 0.25 to 0.3 million gallon on-campus wastewater storage tank for temporary storage. This wastewater would be time-released back to the City of Rohnert Park's sanitary sewer line, thereby creating a more constant sanitary sewer flow from the University. This project is intended to equalize University wastewater flows under near-term conditions.

The proposed wastewater tank and pump station would be equipped with internal aeration and mixing devices, odor control and washdown facilities, emergency generator and electrical controls. Electric motor driven blowers would provide air for the internal tank aeration devices. The electrical controls and blowers would be housed in a secured structure. The site of the

wastewater tank, pump station and blower and control room would be fenced for security and appearance purposes.

Wastewater stored in the tank would be returned to the metering facility location through the same pipeline used for diversion. When the tank is emptied, a washdown system would be activated that washed the tank internals and pump station with recycled water. After the washdown is complete the pump station would pump the rinse water back to the metering facility through a sewage forcemain. A washdown booster pump station would be constructed to provide high-pressure recycled water for the washdown system.

The proposed project would not affect the rate of increase in student enrollment or the total student capacity of 10,000 FTE in the existing approved Master Plan. Accordingly, the proposed project would not result in a change in the rate of increase in University wastewater flows to the municipal wastewater collection system beyond that already projected by the University in its existing approved Master Plan, nor affect the total University-generated wastewater flows under buildout of the Master Plan.

### Location and Existing Site Description

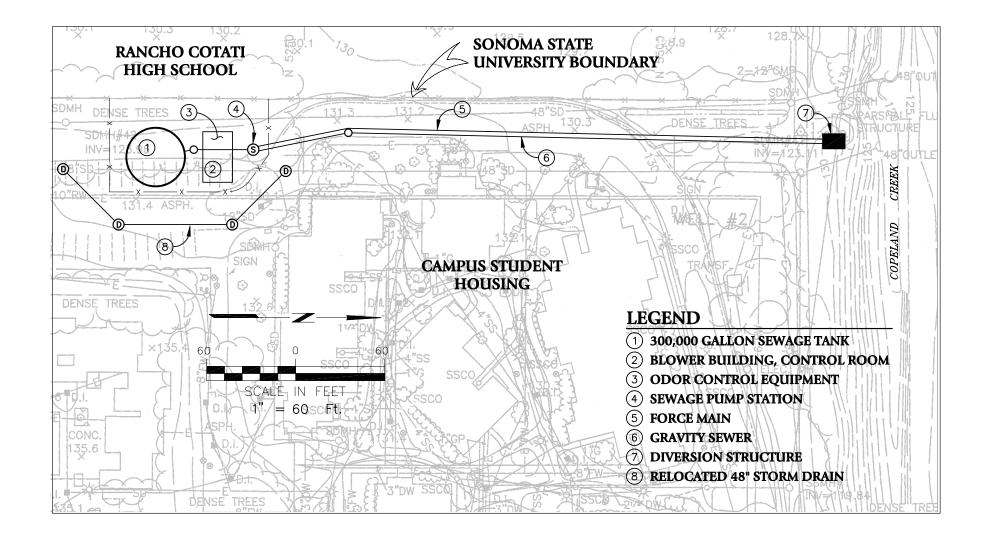
The proposed wastewater equalization facilities would be located in the northwest corner of, and entirely within, the University property, primarily within previously disturbed land. Figure II-4 provides a conceptual site plan for the location of proposed facilities.

Wastewater from the University currently exits the University property via an 18-inch diameter sewer line that runs in a westward direction roughly parallel to, and south of, the Copeland Creek corridor. The University's existing sewer meter operates via a "Parshall Flume"<sup>1</sup> structure near the sewer exit point from the campus. This subsurface structure measures approximately 11 feet in length by 3 feet-8 inches in width, at a depth of approximately 11 feet-4 inches below existing grade. Existing access to the flume structure is controlled via a fenced enclosure.

Wastewater would be diverted upstream and adjacent to, this metering station and conveyed approximately 400 feet south to the proposed wastewater tank site. The alignment of the proposed conveyance/return pipe would extend south along an existing paved walkway adjacent to the University's Cabernet Village and through a portion of the student parking lot adjacent to the University's Zinfandel Village to the tank site.

The site of proposed wastewater tank and ancillary facilities (e.g., pump station, blower structure, emergency generator) would measure approximately 110 by 65 feet. This site is located partially within the existing paved student parking lot west of the University's Zinfandel Village (across from Semillon Hall), and extending onto a portion of unpaved land between the parking lot and the west University property boundary. In order to accommodate the site plan for

<sup>&</sup>lt;sup>1</sup> A Parshall flume is a specially-shaped structure to measure sewage (or storm water) flow rate. Parshall flumes are the accepted and most widely used type of flume for permanent flow monitoring.



the proposed tank storage facilities, it is estimated approximately ten existing student parking spaces within the lot would be permanently removed. Two rows of eucalyptus trees extend along the University west property boundary. It is anticipated approximately three of these eucalyptus trees would removed to accommodate the site plan. In addition, one of two existing 48-inch subsurface University storm drains that extend north through the proposed tank site plan would need to be re-routed for a short distance around the tank site.

### Construction

Construction associated with the proposed project would be initiated in January 2008, with construction completed by September 2008.

During construction, areas adjacent to the site plan would be temporarily affected by temporary materials storage, construction worker parking, and safety fencing. In the vicinity of the wastewater tank/pump station site, the construction zone could temporarily remove up to ten student parking spaces (in addition to the ten spaces permanently removed). The proposed conveyance pipeline construction between the wastewater tank site and the sewer diversion structure could be expected to have temporary construction zone of up to 20-feet in width along the length of the alignment, and could temporarily affect use of the Copeland Creek multi-use trail and/or the pedestrian walkway connecting the student parking lot with the trail. Installation of the proposed diversion structure could require a temporary construction zone of approximately 20 feet by 40 feet, and would also temporarily affect use of the Copeland Creek multi-use trail.

See also construction design details associated with each of the proposed facility components, below.

### **Description of Proposed Wastewater Equalization Facilities**

#### Wastewater Storage Tank and Foundation

The proposed wastewater storage tank would be above ground and have a capacity of between 0.25 and 0.30 million gallons. Dimensions of the tank would be approximately 36 to 40 feet in diameter and 32 to 40 feet in elevation. The tank would consist of bolted steel construction, and would be coated with epoxy or acceptable finishing to prevent corrosion. The design of the tank would adhere to American Water Works Standards D-100 earthquake resistance. The foundation for the tank would consist of a concrete slab with footings designed to Seismic Zone 4 standards. The concrete floor beneath the tank would be sloped in the center to with a central drain installed to allow for complete tank draining. The tank would contain a mechanical mixer to keep solids within the tank from settling.

#### **Pump Station**

The pump station would be constructed adjacent to the tank site. Dual submersible sewage pumps would be installed, each capable of providing full required capacity. The pump station facility

would include a cylindrical concrete wet well measuring approximately eight feet in diameter and 20 feet in depth. Pump station electrical controls would be provided in an adjacent block building.

#### Aeration, Odor Control and Washdown Systems

The proposed wastewater equalization project shall incorporate a number of aeration, odor control and washdown features and design considerations to ensure proper operation and efficiency of the system, and provide containment of gases and elimination of odors that can be associated with wastewater storage.

Both the proposed tank and pump station would be equipped with internal aeration and mixing devices. The aeration system for the wastewater storage tank and pump station wet well would consist of jet, floating and/or coarse bubble diffusers, and centrifugal or positive displacement blowers. The electric-powered blowers would be contained in a secured structure on the tank site. The blower structures would incorporate appropriate interior sound insulation on the walls and ceiling and other features as necessary to minimize noise.

While the specific odor control system would not be selected until the schematic design level stage for this project, it could include, but not limited to, a two-stage chlorine scrubber or activated carbon. The selected odor control system would be active at all times that wastewater would be stored in the tank and pump station. This system would create a negative air pressure within the tank and wet well, constantly drawings gases out and to the odor treatment system, and drawing fresh air into the tank from vents. Such system would be designed to properly neutralize all odors caused by sulfides or other noxious odiferous compounds that typically emanate from wastewater.

Following each draining of wastewater from the storage tank and return of wastewater back to the exit sewer line, a washdown system would be utilized for the tank and pump station wet well to wash down these facilities to ensure equipment is free of residual materials and to further prevent potential odors. A hydro-pneumatic tank and pump housed within the blower structure would provide high pressure water to nozzles mounted in the tank and wet well to thoroughly wash down exposed surfaces. The tank and wet-wet floor would be sloped to the center with a central drain outlet to allow for complete washdown and draining. Water to supply the washdown process would be supplied from the University's recycled water system.

#### Wastewater Diversion Structure

The wastewater diversion structure would be installed adjacent to and upstream (east) of the existing metering facility. This would be provided by a concrete structure measuring approximately 10 feet in length and buried 15 feet deep. In order to accommodate the excavation and construction, and to minimize potential effects to the adjacent Copeland Creek stream bank, sheet piles are anticipated to be driven into the ground on the north and east sides of the diversion structure. It is proposed that the diversion structure would be built completely around the existing sewer line prior to any break in the sewer line in order to maintain sewer operation during construction.

#### Wastewater Conveyance

The gravity piping from the diversion structure to the pump station would be constructed of eight to 12-inch diameter PVC, installed at an average depth of approximately 15 feet below ground. The force main from the pump station to the diversion structure would be constructed of four to six-inch diameter PVC, installed at approximately three feet below ground.

#### **Operation, Maintenance and Automated Controls**

The system operation would be fully automatic. Automatic level measuring devices would monitor the levels in the tank and the pump station wet well as well as the existing Parshall flume that measures all campus sewage flows. A programmable logic controller (PLC) and data logger would record flows and levels and direct adjustments in the sewage tank level. Nevertheless, general maintenance would occur on a daily basis. University operations staff would regularly check logged data, levels of chemicals in the odor control systems, and review the operation of all pumps, blowers and aeration devices. Special operator care and attention would be given to monitoring the amounts of sewage to be diverted to and returned from the sewage tank on a daily basis.

#### Safety and Security Considerations

An emergency generator would be installed at the tank site to ensure emergency power shall be provided to all components of the sewage equalization system (including blowers, pump station, aeration, odor controls and washdown systems, electric valves and control systems) in the event of a electrical power disruption to the campus. The emergency generator would be mounted on a concrete slab and completely contained within a weather enclosure, and fitted with an automatic transfer switch and load cell.

Any potential chemicals used for the operation of the project (e.g., liquid sodium hypochlorite, 12.5% solution for the odor control system, propane or natural gas for the emergency generator), shall be properly stored (double contained) and managed on-site. Moreover, any potential waste products generated by the wastewater equalization project shall be handled, transported and disposed by a licensed handler in accordance with all applicable laws and regulations governing the waste.

The site containing the tank and associated facilities (pump station, blower structure, and generator) would contain perimeter security fencing and low lighting.

#### Visual Screening

The tank is proposed to be painted a dark green (e.g., Sea Ranch Green), to minimize visual color contrast and glare, and to blend with existing nearby foliage. This color is similar to an existing large water tank located on-campus at the Boiler Plant.

Wooden security fencing, similar in material and style to other existing fencing on-campus, is proposed on the tank site perimeter and would serve to partially screen visible elements of the

wastewater equalization facilities. The University also proposes to plant new trees and large shrubs on the tank site perimeter, as appropriate, to help further screen visible features of the project, and compensate for the loss of the three existing eucalyptus trees that would be removed under the project.

### F. Project Approvals

The project sponsor is Sonoma State University (hereinafter referred to as the University), representing the trustees of CSU (the Lead Agency). The University will use the Addendum and Master Plan Revision EIR, as revised, in its decisionmaking for approving the Master Plan revision.

Prior to construction, schematic-level project plans will require approval by the CSU Capital Planning, Design and Construction. In addition, the project plans will require approval from the Division of the State Architect, State Fire Marshall, the CSU Seismic and Mechanical Review Board, and Willdan (third party plan check mechanical, electrical, and structural review). Specific permits that may be required to implement the specific developments under the Master Plan revision include:

- Section 404 of the Clean Water Act (Nationwide Permit [if less than 0.5 acres jurisdictional waters of the U.S.]) from the U.S. Army Corps of Engineers;
- Section 7 of the federal Endangered Species Act (Biological Opinion) from U.S. Fish and Wildlife Service / National Marine Fisheries Service;
- Section 401 of the Clean Water Act and the Maceeter Petris Act (Water Quality Certification or Waiver) from the Regional Water Quality Control Board;
- General Stormwater Permit (SWPPP Notice of Intent) from the State Water Resources Control Board;
- 1600-1616 of the California Fish and Game Code (Streambed Alteration Agreement);
- Section 2081 of the California Fish and Game Code (2081 agreement for state listed Threatened, Rare, or Endangered Species) from CDFG; and
- Revocable License from the Sonoma County Water Agency for access and construction within the SCWA easement along Copeland Creek.

## **CHAPTER III** Environmental Evaluation

### Introduction

For each environmental category presented below is a summary statement of applicable impacts identified in the 2000 Master Plan Revision EIR (certified May, 2000) and subsequent addendum (August, 2001), followed by a discussion of the potential for each element of the proposed wastewater equalization project to change the severity of the identified impacts and/or introduce new environmental effects, and a discussion of any changes that have occurred with respect to the circumstances under which the project is undertaken.

### A. Land Use and Planning

## Conversion of Existing Agricultural Land to Non-Agricultural Use

The site for the proposed wastewater equalization facilities is previously disturbed, and designated Urban and Built Up Land (Department of Conservation, 2004). The conversion of this site to from one non-agricultural use to another would have no impact on conversion of agricultural land. The proposed project would not affect the conclusion of significance reached in the 2000 Master Plan Revision EIR, as amended, regarding conversion agricultural land that would occur under the Master Plan.

## Increase in Residential Population on the Project Site and Local Community

The proposed wastewater equalization project would serve to equalize the discharge of wastewater flows from the University under the existing Master Plan, including from future onsite student housing. The proposed project would not affect the rate of increase in student enrollment or the total student capacity of 10,000 FTE in the Master Plan. As a result, the proposed project would not affect the conclusion of significance reached in the 2000 Master Plan Revision EIR, and subsequent addendum, regarding effects of increases in residential population that would occur under the Master Plan.

# Compatibility with Existing or Approved Development in Project Vicinity

The proposed wastewater equalization facilities would be located entirely within University property. Existing nearby land uses in the vicinity of the tank site include the athletic fields of the Rancho-Cotati High School to the west, the University's Cabernet and Zinfandel Village student housing developments to the northeast and east, and student parking to the south. School and residential uses are considered sensitive land uses. The introduction of the proposed use that is industrial in nature has the potential to be incompatible with nearby sensitive land uses if operation of the proposed project resulted in adverse environmental effects to those uses (e.g., noise, odor and visual effects).

However, as discussed in the Project Description, a number of design features and planning considerations have been incorporated into the proposed project to ensure these potential effects would remain less than significant. With respect to noise, all noise generating equipment (e.g., pumps, blowers) would be completely enclosed and/or located underground, and additional insulation as appropriate such that ambient noise levels would not be substantially affected. With respect to odor, all wastewater would be contained within a completely sealed equalization storage system, and the project proposes an extensive aeration and odor control system that would neutralize all odors that can emanate from wastewater. With respect to aesthetics, the tank and associated facilities would be similar in size, materials, and color to other existing tank storage and mechanical facilities located elsewhere on the campus. Furthermore, the proposed perimeter fencing and additional vegetative screening that would be implemented would additional visual screening. Collectively, these design features and planning considerations would ensure potential incompatibility with nearby land uses would remain less than significant.

### B. Geology, Soils, and Seismicity

### Seismic Hazards Associated with New Construction

As identified in the 2000 Master Plan Revision EIR, new construction would potentially expose persons and property to seismic related hazards, including localized liquefaction, related ground failure and seismically-induced settlement. However, the proposed wastewater equalization project would be subject to a site-specific geotechnical investigation. All proposed construction under the proposed project would be required to comply with the site-specific recommendations and standards for seismic design as provided by the project geotechnical engineer; the seismic design requirements of the California Code of Regulations, Title 24; and as recommended by the CSU Seismic Review Board. This level of protection would be adequate to meet the currently accepted standard of an acceptable level of risk, and would reduce hazards resulting from seismic ground shaking to less-than-significant levels.

There are no apparent physical or operational characteristics of the proposed project that would change the conclusion of significance reached in the 2000 Master Plan Revision EIR regarding potential seismic hazards. Mitigation measures identified in the 2000 Master Plan Revision EIR,

and adopted and incorporated into the existing approved 2000 Master Plan, would be adequate to ensure potential seismic hazards associated with the proposed project would be mitigated to a less than significant level.

### Geologic Hazards Associated with New Construction

As identified in the 2000 Master Plan Revision EIR, proposed construction under the project could be subjected to the geologic hazards related to expansive soils, differential settlement and corrosivity. As described above, each proposed project component would be subject to a site-specific geotechnical investigation. The proposed construction associated with the proposed wastewater equalization project would be required to comply with site-specific recommendations and standards for soils and foundation engineering as provided by the project geotechnical engineer; the California Code of Regulations, Title 24; and as recommended by the CSU Seismic Review Board. This level of protection would be adequate to meet the currently accepted standard of an acceptable level of risk, and would reduce geologic hazards to less-than-significant levels.

There are no apparent physical or operational characteristics of the proposed project that would change the conclusion of significance reached in the 2000 Master Plan Revision regarding potential geologic hazards. Mitigation measures identified in the 2000 Master Plan Revision EIR, and adopted and incorporated into the existing approved 2000 Master Plan, would be adequate to ensure potential geologic hazards associated with the proposed project would be mitigated to a less than significant level.

### C. Hydrology and Water Quality

### Potential Increase in Stormflows to Copeland Creek

The majority of the proposed site plan is located within an existing paved student parking lot, and therefore, development of the proposed wastewater equalization project would not result in a substantial change in impervious surfaces within the campus.

As such, the proposed project would not change the conclusion of significance reached in the 2000 Master Plan Revision EIR regarding potential increases in peak stormflows to Copeland Creek. Mitigation measures were identified in the 2000 Master Plan Revision EIR, and adopted and incorporated into the existing approved 2000 Master Plan, to ensure potential flooding hazards associated with the 2000 Master Plan would be mitigated to a less than significant level. The implementation these mitigation measures would ensure potential flooding hazards associated with development under the proposed project would remain less than significant.

# Introduction of New Development within a 100-Year Flood Zone

The proposed tank site is located approximately 400 feet from the Copeland Creek channel, and well outside creek's associated 100-year flood zone. The only construction associated with the

project that would occur within the 100-year flood zone would be associated with the subsurface diversion structure and associated pipes which would tie into the existing campus sewer exit line. These improvements would not result in any long-term effects as it relates to ability for the creek to provide flood control. Consequently, the proposed project would not result in any effects associated with this issue.

# Increase in Load on the Existing Drainage Systems on the Main Campus

As indicated above, the majority of the proposed site plan is located within an existing paved student parking lot, and therefore, development of the proposed wastewater equalization project would not result in a substantial change in impervious surfaces within the campus. Consequently, the proposed project would therefore not result in a substantial increase in runoff and associated load on the existing storm drainage system on the main campus with this project. The implementation of mitigation identified in the 2000 Master Plan Revision EIR, and adopted and incorporated into the existing approved 2000 Master Plan, would be adequate to ensure the collection and routing of runoff from the project site would be mitigated to a less than significant level.

# Increased Nonpoint Source Pollution, Creating the Potential for Degradation of Water Quality

As identified in the 2000 Master Plan Revision EIR, use of landscaping materials, cleaning solvents, and accumulation of petroleum products and metals in parking lots are all sources of polluted runoff. The proposed wastewater equalization facilities would not be expected to be a substantial contributor of these sources of non-point source pollution, given the size and contained nature of the facilities.

There are no apparent physical or operational characteristics of the proposed project components that individually or cumulatively, would change the conclusion of significance reached in the 2000 Master Plan Revision regarding increases in nonpoint source pollution. Mitigation measures identified in the 2000 Master Plan Revision EIR, and adopted and incorporated into the existing approved 2000 Master Plan, would be adequate to ensure non-point source pollution impacts would be mitigated to a less than significant level.

# Construction-Related Increases in Erosion and Sedimentation, with Subsequent Impacts to Water Quality

As identified in the 2000 Master Plan Revision EIR, construction would expose large areas of bare soil during construction that could be exposed to precipitation and subsequent erosion. Construction activities involving soil disturbance, excavation, cutting/filling, stockpiling, and grading activities could result in increased erosion and sedimentation to surface waters, and corresponding decreased water quality, unless erosion control and sedimentation precautions are

employed. While the construction site size for the proposed wastewater equalization project as a whole would not be large, construction of the water diversion structure would occur in immediate vicinity of Copeland Creek channel, and could contribute to short-term increases in erosion and associated sedimentation in the creek.

There are no apparent characteristics of the proposed project components that, individually or cumulatively, would change the conclusion of significance reached in the 2000 Master Plan Revision regarding potential construction-related hydrologic and water quality effects. Construction of the proposed wastewater equalization project would be subject to the provisions of, the SWPPP and the RWQCB requirements of the NPDES General Permit for Discharges of Storm Water Associated with Construction Activity. This mitigation measure identified in the 2000 Master Plan Revision EIR, and adopted and incorporated into the existing approved 2000 Master Plan, would be adequate to ensure construction-related hydrologic and water quality effects would be mitigated to a less than significant level.

### Cumulative Changes in Runoff Characteristics and Water Quality

The proposed wastewater equalization facilities would not be expected to result in any substantial long-term changes in storm water runoff characteristics or long-term contributor of sources of non-point source pollution, either individually or cumulatively.

### D. Traffic, Circulation and Parking

## Study Intersection Level of Service During the A.M. and P.M. Peak Hours under Cumulative Conditions

Operation and maintenance of the proposed wastewater equalization project could infrequently generate new off-site vehicle trips, such as delivery of materials or parts, maintenance contractors, etc. However, any such miscellaneous vehicle trips would not substantially affect peak hour conditions at local intersections, either individually or cumulatively.

### **Demand for Additional On-Campus Parking Facilities**

The proposed wastewater equalization project would result in a temporary loss of approximately 20 student housing parking spaces during the construction period, and a permanent loss of approximately ten student housing parking spaces. This temporary and permanent loss of this parking would not substantially affect the campus-wide parking space-to-bed ratio, and therefore, no significant impacts to parking supply are identified.

### **Temporary Construction Traffic Effects**

Construction of the proposed wastewater equalization project would result in temporary transportation impacts resulting from truck movements to and from the project site during activities association with project construction. These temporary transportation effects would be of a level similar to that described for other new development under the existing approved Master Plan, and would not change the conclusion of significance reached in the 2000 Master Plan Revision EIR regarding construction traffic effects. Mitigation measures identified in the 2000 Master Plan, would be adequate to ensure potential temporary construction traffic effects associated with the proposed project would be mitigated to a less than significant level.

### E. Air Quality

### **Construction Emissions**

Construction-related air quality emissions associated with new development under the proposed project would be similar to those described for the existing approved 2000 Master Plan. Mitigation measures identified in the 2000 Master Plan Revision EIR, and adopted and incorporated into the existing approved 2000 Master Plan, would adequately reduce all construction-related emissions under the project to a less-than-significant level.

### **Operational Emissions**

There would be an incremental increase in energy consumption from the operation of the proposed pumps, blowers and other mechanical equipment associated with the wastewater equalization project. The projected net increase in emissions associated with the increase in energy consumption would be minor, and would not increase long-term operational emissions substantially above that previously assessed in the 2000 Master Plan Revision EIR and subsequent addendum.

As such, the proposed wastewater equalization project would not change the conclusion of significance reached in the 2000 Master Plan Revision regarding increases in criteria air pollutant emissions associated with University. Mitigation measures identified in the 2000 Master Plan Revision EIR, and adopted and incorporated into the existing approved 2000 Master Plan, would reduce air quality emissions under the 2000 Master Plan to the extent feasible.

### **Cumulative Emissions**

The existing approved 2000 Master Plan would result in a significant effect on regional emissions on an individual basis. Consequently, based on the approach to cumulative impact analysis in the Bay Area Air Quality Management District's *CEQA Guidelines*, emissions under the proposed project would also be considered to contribute to a significant cumulative air quality effect. Mitigation measures identified in the 2000 Master Plan Revision EIR, and adopted and

incorporated into the existing approved 2000 Master Plan, would reduce air quality emissions under the proposed project. However, as with the existing approved 2000 Master Plan, this impact would remain significant.

### Odors

As discussed in the Project Description, the proposed wastewater equalization project shall incorporate a number of aeration, odor control and washdown features and design considerations to ensure proper containment of gases and elimination of odors that can be associated with wastewater storage. While the specific odor control system would not be selected until the schematic design level stage for this project, it could include, but not limited to, a two-stage chlorine scrubber or activated carbon. The selected odor control system would be active at all times that wastewater would be stored in the tank and pump station. Such system would be designed to properly neutralize all odors caused by sulfides or other noxious odiferous compounds that typically emanate from wastewater. As a consequence, no significant odor impacts are anticipated associated with operation of the proposed wastewater equalization project.

### F. Noise

### **Construction Noise**

Construction of the proposed wastewater equalization project would result in temporary and localized impacts, particularly in the vicinity of the adjacent University on-campus student housing, and the recreational fields of the adjacent Rancho-Cotati High School. Construction of the new facilities would incrementally increase the overall amount of construction beyond that anticipated by the existing approved 2000 Master Plan. However, the temporary construction-related noise impacts associated with development of the wastewater equalization facilities would be similar in type and scale to those described for other new development identified in the existing 2000 Master Plan.

There are no characteristics of the proposed project that would change the conclusion of significance reached in the 2000 Master Plan Revision EIR regarding construction noise impacts. Mitigation measures identified in the 2000 Master Plan Revision EIR, and adopted and incorporated into the existing approved 2000 Master Plan, would be adequate to ensure potential construction noise impacts associated with the proposed project would be mitigated to a less than significant level.

### Long-term Noise Increases

The 2000 Master Plan Revision EIR discussed the long-term noise impacts associated with growth and development with respect to the new equipment and mechanical noise sources. Under the proposed project, new noise generating equipment would include the pump station, blowers, and emergency generator. This noise-generating equipment would be similar in type to that used for other existing University mechanical facilities on the campus. As discussed in the

Project Description, the proposed electric-powered blowers and the pump for the washdown system would be contained in a secured structure, and incorporate appropriate interior sound insulation on the walls and ceiling and other features as necessary to minimize noise. The pumps for the wastewater lift station would be both submerged and fully enclosed and as a result would not be expected to generate a substantial increase in noise. The emergency generator would also be fully enclosed and would only be operated under emergency circumstances, and as required for testing.

There are no characteristics of the proposed project that would change the conclusion of significance reached in the 2000 Master Plan Revision EIR regarding building and mechanical noise impacts. Mitigation measures identified in the 2000 Master Plan Revision EIR (standard design features, such as installation of relatively quiet models, orientation or shielding to protect sensitive uses, installation within an enclosure), and adopted and incorporated into the existing approved 2000 Master Plan, would be adequate to ensure potential noise impacts under the proposed project would be mitigated to a less than significant level.

### G. Visual Quality

### Scenic Vistas / Visual Character

Close-range views of the tank site are available from the adjacent University student housing (Zinfandel and Cabernet Villages) to the north and east, from existing student parking facilities to the south, from the Copeland Creek multi-use trail to the north, and from athletic fields of the Rancho-Cotati High School to the west. The University residential buildings facing the tank site are two-story in height. Views of the site from the north and west are partially screened by mature trees located along the University west boundary and along nearby walkways.

The proposed tank would be the largest and most visible element of the wastewater equalization facilities, and would measure up to 40 feet in height and 40 feet in diameter. Other smaller facilities would include structures associated with the pump station, blowers and emergency generator. Given the location and size of the tank site in relation to the campus as a whole, the level grade of the site and surrounding area, and the presence of other existing developed uses in the vicinity, the project would not significantly block long-range views of the Sonoma foothills from the adjacent off-site land use to the west.

The tank is proposed to be painted a dark green (e.g., Sea Ranch Green), to minimize visual color contrast and glare, and to blend with existing nearby foliage. This color is similar to an existing large water tank located on-campus at the Boiler Plant. Wooden security fencing, similar in material and style to other existing fencing on-campus, is proposed on the tank site perimeter and would serve to partially screen visible elements of the wastewater equalization facilities. The University also proposes to plant new trees and large shrubs on the tank site perimeter, as appropriate, to help further screen visible features of the project, and compensate for the loss of the three existing eucalyptus trees that would be removed under the project. These measures would ensure effects on visual character would be less than significant.

As discussed in the Master Plan Revision EIR, new plans for development would be developed in consultation with, and subject to review and approval by, the University's Campus Planning Committee (comprised of the President of the University, the University building program officer, the Campus Planner, the Director of Public Safety, various faculty, staff and students and a representative from the community). This process would ensure all development proposed under the project would be designed in a manner that would be consistent with the aesthetic guidelines of the University, and the visual character of the local community.

Recommended measures identified in the 2000 Master Plan Revision EIR, and adopted and incorporated into the existing approved 2000 Master Plan, would further ensure potential visual effects would remain less than significant.

### Light and Glare

There are no apparent physical or operational characteristics of the proposed wastewater equalization facilities that would affect the conclusions reached in the 2000 Master Plan Revision EIR related to potential light and glare impacts. The site containing the tank and associated facilities (pump station, blower structure, and generator) would contain perimeter security fencing and low lighting which would not be considered a substantial generator of spill light or glare to adjacent uses.

### H. Biological Resources

### **Jurisdictional Wetlands/Waters**

Copeland Creek is the southernmost drainage that flows into Llano de Santa Rosa, which drains from south to north and feeds into the Santa Rosa Plains and eventually flows into the Russian River. Copeland Creek is a water of the U.S. and within the jurisdiction of the U.S. Army Corps of Engineers (ACOE) under Section 404 of the Clean Water Act. The California Department of Fish and Game (CDFG) protects the streambanks and streambed of Copeland Creek under Sections 1600 -1616 of the California Fish and Game Code. The Regional Water Quality Control Board (RWQCB) protects the water quality of Copeland Creek under Section 401 of the Clean Water Act.

The majority of the wastewater equalization project facilities, including tank and pump station, are located over 400 feet south of the Copeland Creek corridor and therefore, construction and operation of those facilities would have no significant effect on the plant or wildlife associated with the Copeland Creek corridor.

However, certain other construction activities associated with the project would extend into the Copeland Creek corridor and result in temporary biological impacts. As discussed in the Project Description, the existing 18-inch exit sanitary sewer line and flume structure (meter) are located adjacent to the bank of Copeland Creek. The immediate vicinity of this location is previously disturbed by presence of the partially exposed flume structure and associated equipment within a

perimeter fenced enclosure, concrete bank support, storm sewer infrastructure on either side of the flume structure and short walkway connecting the flume structure to the Copeland Creek paved trail.

The proposed construction in this vicinity includes the installation of a subsurface wastewater diversion structure and connecting the proposed sewage conveyance pipes. The proposed project would require construction on the bank of Copeland Creek and may require construction activities within the streambed (below the ordinary high water mark). All construction equipment would work from an existing paved trail. No construction equipment is proposed to be located within the creek. Construction activities on the top of the bank of Copeland Creek would likely include installation of sheet piles, approximately 20 feet deep, on the north and east side of the proposed diversion structure to allow excavation in this location. Once the sheet piles are in place, a trench would be dug in the location of the proposed about 15 feet deep from the grade of the top of the bank. The sheet pile would either remain in place or be removed following construction if feasible. The initial installation of the sheet piles could result in eroding soils which could reduce water quality in Copeland Creek; however following installation of these sheet piles, the majority of construction would be contained in the box created by the sheet piles. Following the installation of the waste diversion structure, the site would be backfilled and revegetated.

Construction activities for the proposed project at Copeland Creek would require obtaining a Section 404 permit<sup>1</sup> from the Corps, a Section 401 permit from the RWQCB, and a Streambed Alteration Agreement from CDFG. Construction activities at Copeland Creek would be considered less than significant with implementation of Mitigation Measures H.1a and H.1c identified in the 2000 Master Plan Revision EIR, and adopted and incorporated into the existing approved 2000 Master Plan. Measures applicable to the project include completing a wetland delineation, adhering to the conditions of wetland permits and agreements once obtained, biological construction monitoring of the creek, implementing a weed abatement plan, implementing stormwater and Spill Prevention and Pollution Best Management Practices, and restoring the bed and bank with appropriate creek materials and native riparian vegetation on-site as negotiated with the COE, CDFG and RWQCB following construction activities. A preconstruction notification (PCN) may be necessary to complete if required by the COE within the Nationwide Permit Program. Implementation of Mitigation Measures C.4 and C.5 of the Hydrology and Water Quality would reduce effects on Copeland Creek due to erosion and other hydrologic effects to less than significant levels.

### Loss of Natural Communities

Copeland Creek supports a continuous stand of woody riparian shrubs and trees along the length of the project area. Common species occurring within Copeland Creek include big-leaf maple (*Acer macrophyllum*), box elder (*Acer negundo* ssp. *californicum*) and Oregon ash (*Fraxinus latifolia*) with white alder (*Alnus rhombifolia*) along the stream edges. Red willow (*Salix* 

<sup>&</sup>lt;sup>1</sup> It is assumed that a Nationwide permit would be applicable if the impacts on Copeland Creek below the ordinary high water mark does not exceed a <sup>1</sup>/<sub>2</sub> acre.

*laevigata*) and arroyo willow (*Salix lasiolepis*) also occur along the edges of the creek and in tributaries to Copeland Creek. The most abundant understory species is a non-native blackberry species, Himalayan blackberry (*Rubus discolor*). The CDFG protects riparian vegetation along Copeland Creek under Sections 1600-1616 of the California Fish and Game Code.

The proposed elements of construction in this vicinity of Copeland Creek would require pruning and/or removal of a minimum amount of riparian vegetation in the creek corridor, including mostly non-native grasses and Himalayan blackberry, and willow. Construction activities within the riparian habitat associated with Copeland Creek would be considered less than significant with implementation of Mitigation Measures H.1c and H.2c identified in the 2000 Master Plan Revision EIR, and adopted and incorporated into the existing approved 2000 Master Plan. Measures applicable to the project include adhering to the conditions of wetland permits and agreements, biological monitoring, implementing a weed abatement plan, and on-site restoration of all disturbed areas at Copeland Creek due to the project with native riparian vegetation. As described in Mitigation Measures H.1c an on-site conceptual restoration plan will be necessary for disturbance to riparian vegetation.

### **Sensitive Animal Species**

The California Natural Diversity Data Base (CNDDB), U.S. Fish and Wildlife Service (USFWS) and California Native Plant Society (CNPS) species lists in Appendix A of this Addendum updates the species table provided in the 2000 Master Plan Revision EIR (Table IV.H-1 and Appendix D, Table D-1). Of the species identified, the site vicinity of the wastewater diversion structure at Copeland Creek provides habitat for special-status aquatic species, including central California coast steelhead, foothill yellow-legged frog, western pond turtle, California tiger salamander and Ricksecker's water scavenger beetle, and special-status bird species associated with riparian habitat, including yellow warbler and several raptor and passerine bird species. These species have moderate to high potential occurrence in the Copeland Creek corridor. There are no USFWS or National Marine Fisheries Service (NMFS) Critical Habitat designations in Copeland Creek in the project vicinity.

Construction activities, particularly those in the vicinity of the Copeland Creek corridor, could reduce water quality due to eroding soils in Copeland Creek, and as a result potentially cause smothering of eggs and other adverse effects to aquatic species, such as reduction in forage success and irritation of soft tissue such as gills. Additionally, installation of the sheet piles and other construction activities could result in short-term ambient noise levels that could adversely affect special-status bird species. Adverse effects on special-status bird species may include nest abandonment. The proposed project would also require removal or pruning of riparian habitat and removal of three eucalyptus trees. The loss of riparian habitat and eucalyptus trees, although minimally disturbed, could decrease wildlife habitat that may provide roosting and nesting for several raptor and passerine birds protected by California Fish and Game Code 3503, 3503.5 and 3511 as well as by the Migratory Bird Treaty Act. Implementation of Mitigation Measures H.3a, H.3b and H.5 identified in the 2000 Master Plan Revision EIR, and adopted and incorporated into the existing approved 2000 Master Plan, for carrying out preconstruction surveys, and relocating

encountered species out of the construction zone by a biologist with the appropriate permits, or delaying construction until nesting activity is complete, would mitigate these potential impacts to a less than significant level. In addition, the University may need to consult with USFWS / NMFS regarding effects on central California Coastal steelhead, and prepare a Section 7 Biological Assessment if required by the COE, USFWS or NMFS.

### **Removal of Trees**

There are no significant trees at Copeland Creek that would be affected by the proposed project. However, development at the tank site would require the removal three eucalyptus trees, which may be classified as significant trees (trees greater than 12-inch diameter at standard height). No aspects of the proposed project would change the conclusion of significance of impacts related to tree loss at this site. The implementation of Mitigation Measures identified in the 2000 Master Plan Revision EIR (e.g., avoidance of significant trees if feasible, placement of new development outside of drip line and away from other tree roots, not removing trees without a bird survey) would mitigate this potential impact on trees to a less than significant level.

### I. Hazardous Materials

### Increase in the Quantities of Hazardous Chemicals Used, Stored and Disposed by University Facility Operations

The operation of the proposed wastewater equalization facilities would incrementally increase the quantities of hazardous chemicals necessary used, stored and disposed by the University facilities operations.

The University's Department of Environmental Health and Safety (DEHS) is responsible for managing storage, maintaining records, and establishing emergency response procedures for the use of hazardous materials on campus. As additional hazardous materials are introduced into the campus environment due to expansion under the proposed Master Plan revision, the University DEHS will update hazardous material use practices accordingly, including the Hazardous Materials Business Plan. Continued management of hazardous materials and necessary revisions to the emergency response contingency plans by the University DEHS will ensure that the increased use of hazardous materials will not result in additional risks to the campus population.

### J. Public Services

### Fire and Police Protection Services

The project would be required by state regulations to include fire protection and security systems, as needed. As discussed in the Project Description, perimeter security fencing and security lighting would be provided at the tank site. Prior to construction, schematic-level project plans will require approval by the CSU Capital Planning, Design and Construction, the Division of the

State Architect, State Fire Marshall, the CSU Seismic and Mechanical Review Board, and Willdan (third party plan check mechanical, electrical, and structural review). As under existing conditions, the University would continue coordination with the Rancho Adobe Fire Protection District for campus fire drills and emergency response plans. Therefore, the project's impact to public fire protection and police protection services would remain less than significant.

### **Construction and Demolition Debris**

The proposed project would result in incrementally more facility construction than under the existing approved 2000 Master Plan, and an associate greater amount of construction and demolition debris. Implementation of the recommended measure of recycling of construction waste identified in the Master Plan Revision EIR would help to meet the overall waste diversion goals of Sonoma County's *Source Reduction and Recycling Element*.

### K. Utilities and Service Systems

# Effects on Increase in Potable Water Demand and Groundwater Extraction

The proposed wastewater equalization project would not require the use of potable water. As discussed in the Project Description, water to supply the washdown process would be supplied from the University's recycled water system. No impacts to increases in use for potable water or to groundwater extraction are anticipated.

### Increase in Non-Potable Water Demands

The proposed wastewater equalization project would incrementally increase the existing demand for reclaimed water from the Subregional Reclaimed Water System for use in the washdown process. Following each draining of wastewater from the storage tank and return of wastewater back to the exit sewer line, a washdown system would be utilized for the tank and pump station wet well to wash down these facilities to ensure equipment is free of residual materials and to further prevent potential odors. Any net increase in University demand for reclaimed water beyond that originally projected in the 2000 Master Plan EIR would be adequately accommodated by the reclaimed water system. As such, the proposed project would not change the conclusion of significance reached in the 2000 Master Plan Revision regarding potential increases in non-potable water demand.

### Increase in Demand for Wastewater Treatment

Under the project, excess wastewater generated at the University under the Master Plan would be diverted to, and temporarily stored within, on-campus wastewater storage tank, and time-released to the City of Rohnert Park's sanitary sewer line thereby creating a more constant sanitary sewer flow from the University. The proposed project is designed to equalize the discharge of

wastewater flows from the University under the existing approved Master Plan, and reduce the potential for future exceedances of the University's portion of the City of Rohnert Park's wastewater allocation designated by the Subregional Wastewater Treatment system.

The proposed project would not affect the rate of increase in student enrollment or the total student capacity of 10,000 FTE in the existing approved Master Plan. Accordingly, the proposed project would not result in a change in the rate of increase in University wastewater flows to the municipal wastewater collection system beyond that already projected by the University in its existing approved Master Plan, nor affect the total University-generated wastewater flows under buildout of the Master Plan. As such, the proposed wastewater equalization project would not result in an increase in demand for wastewater treatment from the Subregional Wastewater Treatment Plant.

It is important to note that proposed project is anticipated to be most effective in providing wastewater equalization for the University in the near-term. As new development identified with buildout of the existing Master Plan continues, corresponding increases in wastewater flows as projected in Master Plan Revision EIR and subsequent addendum would also occur. In order to continue equalizing wastewater flows to remain under the University's wastewater allocation, the proposed sewage tank would need to store wastewater for gradually longer periods, which would result in a corresponding gradual decrease in the tank storage capacity.

As was discussed in the 2000 Master Plan Revision, since the University does not have an approved increase in allocation that would accommodate the University's projected wastewater flows Master Plan development, the potential exists for the University to exceed its future wastewater treatment allocation over the long-term. It is unknown at this time as to the potential for the University to "borrow" reserve capacity in the future from other agencies participating in the subregional treatment system, therefore, the potential exceedance of future wastewater treatment allocation with Master Plan buildout would remain a significant impact, and cumulatively significant.

However, the wastewater equalization project itself would not result in any new significant impacts associated with effects on wastewater treatment capacity, nor would the project result in a substantial increase in the severity of impacts identified in the 2000 Master Plan Revision EIR and subsequent addendum. Moreover, the mitigation identified in the 2000 Master Plan Revision EIR would be applicable for the proposed project.

## Increase in Wastewater Flows to On- and Off-Site Wastewater Collection Infrastructure

As discussed above, the proposed project would not result in a change in the rate of increase in University wastewater flows to the municipal wastewater collection system beyond that already projected by the University in its existing approved Master Plan, nor affect the total University-generated wastewater flows under buildout of the Master Plan.

As discussed in the Master Plan Revision EIR and subsequent addendum, the University's on-site wastewater collection infrastructure has ample capacity to convey projected wastewater discharges from the campus. In addition, there is sufficient capacity within the City's wastewater collection system to convey projected University wastewater flows downstream of the University to the Laguna WWTP. There are no apparent capacity deficiencies in conveying the University Master plan buildout wastewater flows to the point of treatment.

# L. Energy

### **Energy Consumption**

Operation of the proposed wastewater equalization project would involve the use of pumps, blowers and other mechanical equipment that would require electricity to operate. This would result in an incrementally higher energy demand than that anticipated in the existing approved 2000 Master Plan as revised. This increase would not be considered significant.

Though no specific energy mitigation measures were identified in energy section of the 2000 Master Plan Revision EIR, mitigation measures identified in the air quality section of that document would reduce the expected increase in energy consumption of non-renewable resources. No new mitigation measures would be required.

# M. Cultural Resources

# Effect on Previously Undiscovered Historic or Archaeological Resources

None of the proposed construction is located on the site of any recorded Native American cultural resources. However, as with new construction identified under the existing approved 2000 Master Plan EIR, new project construction under the project could result in impacts to other possible buried archaeological deposits contained on the project site. The project would not substantially change conclusions reached in the 2000 Master Plan Revision EIR related to cultural resources at the University. Mitigation measures identified in the 2000 Master Plan Revision EIR, and adopted and incorporated into the existing approved 2000 Master Plan, would be adequate to ensure potential impacts to undiscovered historic or archaeological would be less than significant.

# N. Growth Inducing Impacts

The proposed wastewater equalization project would serve to equalize the discharge of wastewater flows from the University under the existing Master Plan. The proposed project would not affect the rate of increase in student enrollment or the total student capacity of 10,000 FTE in the Master Plan. The project would also not result in any additional housing to be development beyond that already identified in the existing Master Plan. As a result, the proposed project would not affect the conclusion of significance reached in the 2000 Master Plan Revision

EIR, as amended, regarding effects of increases in residential population that would occur under the Master Plan.

# **O. Other Effects Found Not to Be Significant**

Based on the Initial Study completed for the 2000 Master Plan Revision EIR, potential environmental impacts in the area of Mineral Resources were found to be less than significant, and not require further review. There are no apparent characteristics of the proposed project that would affect the conclusions reached in the 2000 Master Plan Revision EIR related potential effects to mineral resources.

# CHAPTER IV EIR Addendum Preparation

### Lead Agency / EIR Addendum Author

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# **EIR Addendum Consultants**

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# APPENDIX A Special Status Species List Update

U.S. Fish and Wildlife Service Federal Endangered and Threatened Species List

California Department of Fish and Game Natural Diversity Database

California Native Plant Society Inventory

# **United States Department of the Interior**



# FISH AND WILDLIFE SERVICE



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

May 2, 2007

Document Number: 070502085923

Yolanda Molette ESA 225 Bush Street Suite 1700 San Francisco, CA 94104

Subject: Species List for Sonoma State Wastewater Equalization Project

Dear: Ms. Molette

We are sending this official species list in response to your May 2, 2007 request for information about endangered and threatened species. The list covers the California counties and/or U.S. Geological Survey  $7\hat{A}^{1/2}$  minute quad or quads you requested.

Our database was developed primarily to assist Federal agencies that are consulting with us. Therefore, our lists include all of the sensitive species that have been found in a certain area *and also ones that may be affected by projects in the area*. For example, a fish may be on the list for a quad if it lives somewhere downstream from that quad. Birds are included even if they only migrate through an area. In other words, we include all of the species we want people to consider when they do something that affects the environment.

Please read Important Information About Your Species List (below). It explains how we made the list and describes your responsibilities under the Endangered Species Act.

Our database is constantly updated as species are proposed, listed and delisted. If you address proposed and candidate species in your planning, this should not be a problem. However, we recommend that you get an updated list every 90 days. That would be July 31, 2007.

Please contact us if your project may affect endangered or threatened species or if you have any questions about the attached list or your responsibilities under the Endangered Species Act. A list of Endangered Species Program contacts can be found at <u>www.fws.gov/sacramento/es/branches.htm</u>.

Endangered Species Division



#### Federal Endangered and Threatened Species that Occur in or may be Affected by Projects in the Counties and/or U.S.G.S. 7 1/2 Minute Quads you requested

Document Number: 070502085923

Database Last Updated: March 5, 2007

#### Quad Lists

#### Listed Species

#### Invertebrates

- Syncaris pacifica
  - California freshwater shrimp (E)

#### Fish

- Oncorhynchus kisutch
  - o coho salmon central CA coast (E) (NMFS)
- Oncorhynchus mykiss
  - Central California Coastal steelhead (T) (NMFS)
  - Central Valley steelhead (T) (NMFS)
  - Critical habitat, Central California coastal steelhead (X) (NMFS)
- Oncorhynchus tshawytscha
  - California coastal chinook salmon (T) (NMFS)
  - o Central Valley spring-run chinook salmon (T) (NMFS)
  - winter-run chinook salmon, Sacramento River (E) (NMFS)

#### Aniphibians

- Ambystoma californiense
  - o California tiger salamander, central population (T)
- Rana aurora draytonii
  - California red-legged frog (T)

#### Birds

- Haliaeetus leucocephalus
  - o bald eagle (T)
- Sternula antillarum (=Sterna, =albifrons) browni

- California least tern (E)
- Strix occidentalis caurina
  - northern spotted owl (T)

#### Plants

- Blennosperma bakeri

   Baker's stickyseed [=Sonoma Sunshine] (E)
- Lasthenia burkei

   Burke's goldfields (E)
- Limnanthes vinculans

   Sebastopol meadowfoam (E)

#### **Candidate Species**

Fish

- Oncorhynchus tshawytscha
  - Central Valley fall/late fall-run chinook salmon (C) (NMFS)
  - Critical habitat, Central Valley fall/late fall-run chinook (C) (NMFS)

Quads Containing Listed, Proposed or Candidate Species:

#### COTATI (501C)

#### **County Lists**

No county species lists requested.

#### Key:

- (E) Endangered Listed as being in danger of extinction.
- (T) Threatened Listed as likely to become endangered within the foreseeable future.
- (P) Proposed Officially proposed in the Federal Register for listing as endangered or threatened.
- (NMFS) Species under the Jurisdiction of the <u>National Oceanic & Atmospheric Administration</u> <u>Fisheries Service</u>. Consult with them directly about these species.
- Critical Habitat Area essential to the conservation of a species.
- (PX) Proposed Critical Habitat The species is already listed. Critical habitat is being proposed for it.
- (C) Candidate Candidate to become a proposed species.
- (V) Vacated by a court order. Not currently in effect. Being reviewed by the Service.

• (X) Critical Habitat designated for this species

#### **Important Information About Your Species List**

#### How We Make Species Lists

We store information about endangered and threatened species lists by U.S. Geological Survey 7Å<sup>1</sup>/<sub>2</sub> minut quads. The United States is divided into these quads, which are about the size of San Francisco.

The animals on your species list are ones that occur within, or may be affected by projects within, the quad covered by the list.

- Fish and other aquatic species appear on your list if they are in the same watershed as your quad or if water use in your quad might affect them.
- Amphibians will be on the list for a quad or county if pesticides applied in that area may be carried to their habitat by air currents.
- Birds are shown regardless of whether they are resident or migratory. Relevant birds on the county list should be considered regardless of whether they appear on a quad list.

#### Plants

Any plants on your list are ones that have actually been observed in the area covered by the list. Plants may exist in an area without ever having been detected there. You can find out what's in the surrounding quads through the California Native Plant Society's online Inventory of Rare and Endangered Plants.

#### Surveying

Some of the species on your list may not be affected by your project. A trained biologist or botanist, familiar with the habitat requirements of the species on your list, should determine whether they or habitats suitable for them may be affected by your project. We recommend that your surveys include any proposed and candidate species on your list.

For plant surveys, we recommend using the <u>Guidelines for Conducting and Reporting Botanical</u> <u>Inventories</u>. The results of your surveys should be published in any environmental documents prepared for your project.

#### Your Responsibilities Under the Endangered Species Act

All animals identified as listed above are fully protected under the Endangered Species Act of 1973, as amended. Section 9 of the Act and its implementing regulations prohibit the take of a federally listed wildlife species. Take is defined by the Act as "to harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect" any such animal.

Take may include significant habitat modification or degradation where it actually kills or injures wildlife by significantly impairing essential behavioral patterns, including breeding,

feeding, or shelter (50 CFR §17.3).

#### Take incidental to an otherwise lawful activity may be authorized by one of two procedures:

- If a Federal agency is involved with the permitting, funding, or carrying out of a project that may result in take, then that agency must engage in a formal <u>consultation</u> with the Service.
- During formal consultation, the Federal agency, the applicant and the Service work together to avoi or minimize the impact on listed species and their habitat. Such consultation would result in a biological opinion by the Service addressing the anticipated effect of the project on listed and proposed species. The opinion may authorize a limited level of incidental take.
- If no Federal agency is involved with the project, and federally listed species may be taken as part ( the project, then you, the applicant, should apply for an incidental take permit. The Service may issue such a permit if you submit a satisfactory conservation plan for the species that would be affected by your project.
- Should your survey determine that federally listed or proposed species occur in the area and are likely to be affected by the project, we recommend that you work with this office and the California Department of Fish and Game to develop a plan that minimizes the project's direct and indirect impacts to listed species and compensates for project-related loss of habitat. You should include the plan in any environmental documents you file.

#### **Critical Habitat**

When a species is listed as endangered or threatened, areas of habitat considered essential to its conservation may be designated as <u>critical habitat</u>. These areas may require special management considerations or protection. They provide needed space for growth and normal behavior; food, water, air, light, other nutritional or physiological requirements; cover or shelter; and sites for breeding, reproduction, rearing of offspring, germination or seed dispersal.

Although critical habitat may be designated on private or State lands, activities on these lands are not restricted unless there is Federal involvement in the activities or direct harm to listed wildlife.

If any species has proposed or designated critical habitat within a quad, there will be a separate line for this on the species list. Boundary descriptions of the critical habitat may be found in the Federal Register. The information is also reprinted in the Code of Federal Regulations (50 CFR 17.95). See our <u>critical habitat page</u> for maps.

#### **Candidate Species**

We recommend that you address impacts to candidate species. We put plants and animals on our candidate list when we have enough scientific information to eventually propose them for listing as threatened or endangered. By considering these species early in your planning process you may be able to avoid the problems that could develop if one of these candidates was listed before the end of your project.

#### Species of Concern

The Sacramento Fish & Wildlife Office no longer maintains a list of species of concern. However, various other agencies and organizations maintain lists of at-risk species. These lists provide essential information

for land management planning and conservation efforts. More info

#### Wetlands

If your project will impact wetlands, riparian habitat, or other jurisdictional waters as defined by section 404 of the Clean Water Act and/or section 10 of the Rivers and Harbors Act, you will need to obtain a permit from the U.S. Army Corps of Engineers. Impacts to wetland habitats require site specific mitigation and monitoring. For questions regarding wetlands, please contact Mark Littlefield of this office at (916) 414-6580.

#### Updates

Our database is constantly updated as species are proposed, listed and delisted. If you address proposed and candidate species in your planning, this should not be a problem. However, we recommend that you get an updated list every 90 days. That would be July 31, 2007.

#### California Department of Fish and Game Natural Diversity Database Selected Elements by Scientific Name - Landscape Data Request for the Cotati USGS 7.5 Minute Quadrangle

Scientific Name	Common Name	Element Code	Federal Status	State Status	Global Rank	State Rank	CNPS	CDFG
1 Agelaius tricolor	tricolored blackbird	ABPBXB0020			G2G3	S2		SC
2 Alopecurus aequalis var. sonomensis	Sonoma alopecurus	PMPOA07012	Endangered		G5T1Q	S1.1	1B.1	
3 Ambystoma californiense	California tiger salamander	AAAAA01180	Threatened		G2G3	S2S3		SC
4 Athene cunicularia	burrowing owl	ABNSB10010			G4	S2		SC
5 Blennosperma bakeri	Sonoma sunshine	PDAST1A010	Endangered	Endangered	G1	S1.2	1B.1	
6 Centromadia parryi ssp. parryi	pappose tarplant	PDAST4R0P2			G4?T2	S2.2	1B.2	
7 Coccyzus americanus occidentalis	western yellow-billed cuckoo	ABNRB02022	Candidate	Endangered	G5T2Q	S1		
8 Emys (=Clemmys) marmorata	western pond turtle	ARAAD02030			G3G4	S3		SC
9 Emys (=Clemmys) marmorata marmorata	northwestern pond turtle	ARAAD02031			G3G4T3	S3		SC
10 Lasthenia burkei	Burke's goldfields	PDAST5L010	Endangered	Endangered	G1	S1.1	1B.1	
11 Leptosiphon jepsonii	Jepson's leptosiphon	PDPLM09140			G2	S2.2	1B.2	
12 Limnanthes vinculans	Sebastopol meadowfoam	PDLIM02090	Endangered	Endangered	G2	S2.1	1B.1	
13 Microseris paludosa	marsh microseris	PDAST6E0D0			G2	S2.2	1B.2	
14 Pleuropogon hooverianus	North Coast semaphore grass	PMPOA7Y031		Threatened	G1	S1.1	1B.1	
15 Rana aurora draytonii	California red-legged frog	AAABH01022	Threatened		G4T2T3	S2S3		SC
16 Rana boylii	foothill yellow-legged frog	AAABH01050			G3	S2S3		SC
17 Trifolium amoenum	showy indian clover	PDFAB40040	Endangered		G1	S1.1	1B.1	

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ď		Blennosperma bakeri 🖾	Sonoma sunshine	Asteraceae	List 1B.1
Ê		<u>Centromadia parryi</u> ssp. <u>parryi</u>	pappose tarplant	Asteraceae	List 1B.2
Ê		Fritillaria liliacea 🖾	fragrant fritillary	Liliaceae	List 1B.2
ß		Lasthenia burkei 🛱	Burke's goldfields	Asteraceae	List 1B.1
ð		Limnanthes vinculans	Sebastopol meadowfoam	Limnanthaceae	List 1B.1
ß		Microseris paludosa 🛱	marsh microseris	Asteraceae	List 1B.2
È		Pleuropogon hooverianus	North Coast semaphore grass	Poaceae	List 1B.1
È		Rhynchospora globularis var. <u>globularis</u> 🖾	round-headed beaked-rush	Cyperaceae	List 2.1
Ê		Trifolium amoenum 🖾	showy Indian clover	Fabaceae	List 1B.1