Ventura County Resource Conservation District
P.O. Box 147 – 3380 Somis Road – Somis, California 93066
Phone (805) 386-4685 – Fax: (805) 386-4890

FINAL REPORT
FOR THE
ARUNDO AND TAMARISK REMOVAL PLAN IN THE UPPER SANTA CLARA RIVER WATERSHED

PROPOSITION 13 - $1.5 MILLION

Funding for this project has been provided in full or in part through an Agreement with the State Water Resources Control Board (SWRCB) pursuant to the Costa-Machado Water Act of 2000 (Proposition 13) and any amendments hereto for the implementation of California's Nonpoint Source Pollution Control Program. The contents of this document do not necessarily reflect the views and policies of the SWRCB, nor does mention of trade names or commercial products constitute endorsement of recommendation of use.

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Contract No. 03—153—5540

Project Name: Arundo and Tamarisk Removal in the Upper Santa Clara Watershed

Contractor Name: Ventura County Resource Conservation District (VCRCD)

CONTRACT SUMMARY

A) Contract Information	
1. Contract Number: 03-153-5540	
2. Project Title: Arundo and Tamarisk Removal in the Upper Santa Clara River Watershed	
3. Project Purpose – Problem: Address the harmful effects of arundo and tamarisk establishment within the upper Santa Clara River watershed by initiating site specific removal efforts and developing a long-term plan with a programmatic Environmental Impact Report (EIR) for future removal projects.	
4. Project Goals:	
a. Short-term Goals: Initiate site specific removal efforts.	
b. Long-term Goals: Complete a long-term plan and programmatic EIR to allow future removal efforts within the Santa Clara watershed.	
5. Project Location: (lat/longs, watershed, etc.) upper Santa Clara watershed	
a. Physical Size of Project: (miles, acres, sq. ft., etc.) approximately 16,400 acres	
b. Counties included in the project: Los Angeles	
c. Legislative Districts: Assembly Districts 37 & 38, Senate District 17 & 19, Congressional District 25	
6. Which SWRCB program is funding this contract? Please put an "X" by the one that applies. _X_ Prop 13 ___ EPA 319(h) ___ Other	
B) Contract Contact: Refers to contract project director.	
Name: Patricia Oliver	**Job Title:** District Manager
Organization: Ventura County Resource Conservation District	**Webpage Address:** www.vcrcd.org
Address: P.O. Box 147, 3380 Somis Road, Somis, CA 93066	
Phone: 805-386-4685	**Fax number:** 805-386-4890
Email: patricia.oliver@vcrcd.org	
C. Contract Time Frame: Refers to the implementation period of the contract.	
From: January 15, 2004	**To:** March 31, 2006
D) Project Partner Information: Friends of the Santa Clara River; City of Santa Clarita; Los Angeles County Department of Public Works; Los Angeles County Agricultural Commissioner; Antelope Valley Resource Conservation District; California Department of Fish and Game, US Forest Service, USDA Natural Resource Conservation Service, UC Cooperative Extension.	
E) Nutrient and Sediment Load Reduction Projection (if applicable): N/A	

Executive Summary

The Ventura County Resource Conservation District (VCRCD) is working with various resource agencies to remove invasive species on a watershed-wide basis. As the lead agency for the Ventura County Arundo Task Force and the recently-formed Ventura County Weed Management Area, the VCRCD is focusing its efforts on the most aggressive and environmentally damaging invasive plants, arundo/giant reed (Arundo donax) and tamarisk/salt cedar (Tamarix spp.).

The VCRCD received a $1.5 million grant from the Proposition 13 Costa-Machado State Water Resources Control Board (SWRCB) funding program to facilitate removal efforts of these non-native, invasive species. This project was focused on the Santa Clara River. However, the Santa Clara River watershed falls in both Los Angeles and Ventura Counties. The planning effort began in the upper Santa Clara River watershed (Los Angeles County) because successful removal of invasive plant species requires that removal occur in an upstream to downstream manner. There were two elements in the project: planning for the upper watershed and implementation of a demonstration project.

The planning for the upper watershed contained several major tasks: 1) development of the Upper Santa Clara River Arundo/Tamarisk Removal Plan (SCARP); 2) surveying and mapping 16,400 acres within the upper watershed; 3) development of the programmatic California Environmental Quality Act (CEQA) Environmental Impact Report (EIR); 4) development of a water quality monitoring plan and quality assurance project plan; and 5) initiating baseline water quality monitoring at five sites.

The SCARP provides guidance to stakeholders for implementing procedures to remove invasive, non-native plants. The primary objective of the plan is to guide and facilitate the implementation of arundo and/or tamarisk removal projects within the upper Santa Clara River watershed of Los Angeles County. The SCARP is a living document and will be updated periodically as new technologies become available, regulations change, or new resources/issues are identified. The project focus is on approximately 16,400 acres of land within the 500-year floodplain of the Santa Clara River and its primary, secondary, and tertiary tributaries.

The SCARP was prepared to provide local landowners, municipalities, environmental groups, and other stakeholders with a broad menu of available techniques for removal of arundo and tamarisk and guidance in obtaining proper permits and approval for removal. A SCARP Working Group was formed to gather input from the stakeholders and to coordinate with other agencies working on similar projects. The SCARP also provides best management practices (BMP) needed to minimize

impacts during removal projects. The following factors have been researched and considered in the development of this SCARP:

- Potential eradication methods
- Degree of infestation
- Existing habitats
- Presence of threatened and/or endangered species
- Access
- Land use
- Current work being conducted or planned
- Pre-existing environmental agency restrictions and permits, funding mechanisms in place, and strategies for future funding.

Taken together, these factors provide a framework for a long-term eradication program and associated monitoring to facilitate removal of arundo and tamarisk from the upper Santa Clara River watershed and the restoration and maintenance of natural, economic and community values provided by these riparian corridors

In addition, the project included an implementation aspect. The implementation part of the project also included several tasks: 1) development of a site specific implementation plan to remove arundo/tamarisk; 2) surveying and mapping of the site; 3) implementation of site specific removal project; and 4) pre- and post-project water quality monitoring. The implementation project did not have a minimum amount of arundo/tamarisk to be removed; however, the project successfully removed an appropriate amount of arundo/tamarisk based upon the site's constraints.

The implementation project was focused on a 297-acre parcel owned by the City of Santa Clarita. The implementation plan was written with the entire parcel to be implemented in phases. The VCRCD attempted to provide additional funding from the U.S. Army Corps of Engineers 206 program to complete the entire project area in one season. Unfortunately, the program funding was re-allocated to homeland security. With the funding available and time constraints of working outside the bird breeding season and rain events, the VCRCD focused on a dense arundo establishment in the upstream end. The methods were also limited to manual removal due to the presence of the endangered arroyo toad. The target removal area was approximately 10 acres of dense arundo growth adjacent to an urban outfall. All ten acres were removed and several mature tamarisk trees. In addition, due to less rain than expected, we removed an additional 5 acres of sparse arundo/tamarisk in downstream of the target area. The total area covered was approximately 75 acres. The hydrology of the target area has changed with increased flows leading to new streamlets in the channel.

Water quality monitoring for the site specific project was performed before and after implementation. Due to the long-term nature of invasive plant removal

benefits, immediate water quality advantages are not necessarily measurable. Results for both baseline and post-treatment sampling at both upstream and downstream sampling sites are well below stated objectives by the Basin Plan for nitrate, nitrite, total dissolved solids, and ammonia. The results were also well above the minimum for dissolved oxygen. Glyphosate measurements were below the detectable limit. Although quantitative analysis did not show significant change, the hydrology of the site showed improved surface water flow and creation of new streamlets.

The majority of the grant funds were spent on the planning effort and development of documentation. Due to the strict two-year timeline, the VCRCD coordinated all of the project-related issues with the March 2006 contract deadline in mind. The VCRCD completed its Proposition 13 project goals and developed new goals for the Santa Clara River Watershed. The VCRCD certified the long-term plan and environmental impact report. Furthermore, the VCRCD received funding from the Santa Clara Trustee Council to develop long-term programmatic permits for arundo and tamarisk removal. The site specific implementation project will also continue with the City of Santa Clarita and Natural Resource Conservation Service for an additional 5 years of vegetation management and planting and 20 years of monitoring.

Since the VCRCD would like to continue the work started in the upper Santa Clara River watershed into the lower portion of the watershed (Ventura County), the VCRCD has applied for additional funding from the other grant programs. The intent of the project is to ultimately unify the documents produced for the upper and lower portions of the watershed into a single, watershed-wide invasive species management plan. The VCRCD is also coordinating with the Antelope Valley Resource Conservation District to locate additional implementation project sites in the upper Santa Clara River watershed.

1.0 Problem Statement & Relevant Issues

Invasive weed infestations are most effectively addressed on a regional scale and done systematically over a period of many years. While there are numerous invasive plant species established within the state, the VCRCD has focused on the harmful effects of giant reed/arundo (*Arundo donax)* and salt cedar/tamarisk (*Tamarix* spp.). The California Invasive Plant Council (Cal-IPC) has ranked both these species as "high," which means these species have severe ecological impacts on ecosystems, plant and wildlife communities, and habitat structure. These two species in particular have high transpiration rates and much greater leaf surface area, which is two to ten times greater water loss than that of native species.

Impacts of Arundo and Tamarisk

The negative impacts of arundo and tamarisk establishment include:

- Reduction in the shading of surface water, resulting in increased water temperatures and decreased dissolved-oxygen content, which has a negative impact on native wildlife
- Reduction in groundwater availability through rapid transpiration
- Alterations in channel morphology by retaining sediments and constricting flows
- Increased bank erosion due to the diversion of water around established stands
- Displacement of riparian habitat through monopolization of soil moisture
- Displacement of riparian habitat due to establishment dense monocultures of arundo
- Reduction in the food supply (particularly insects) of riparian-dependent wildlife
- Reduction of wildlife utilization of an infested area
- Increased probability of wildfire occurrences, intensity, and area from increased fire fuel loads
- Increased salinity of surface soil from tamarisk

It is the reproductive biology in particular of these two species that facilitates their moderate to high rates of dispersal and establishment in the environment. Since the dispersal of invasive plants (arundo in particular) typically follows waterflow patterns, it is important that removal work begin in the uppermost reaches of a watershed and progress downstream.

Invasive plant removal projects fall under the same regulatory jurisdiction as all other projects, including CEQA/NEPA. The financial burden and coordination time required to produce individual CEQA/NEPA documents can make implementation projects prohibitive or reduce the amount of removal work performed. The documentation requirements impact not only organizations intending to implement removal projects, but also the regulatory agencies required to review each removal project. For example, the VCRCD experienced an issue such as this during the implementation of the VCRCD's Ventura River Demonstration Project. A noise ordinance, which was exceeded by the sound of an operating chipper, triggered the

requirement of an EIR. The development of the EIR used a large portion of the project's budget, which was originally slated for implementation funds. With the completion of the upper and lower Santa Clara River Arundo/Tamarisk Removal Plan documents, programmatic CEQA/NEPA documents, organizations will be able to apply entirely for implementation grant funding from the numerous sources of restoration funding.

1.1 Background

The Santa Clara River is regarded as the largest relatively natural river system in Southern California. It was recently named one of the ten most endangered rivers in the nation by the American Rivers organization due to rapidly increasing development in the area. The headwaters of the mainstem are located near Acton in the San Gabriel Mountains and pass through large portions of the Angeles National Forest in Los Angeles County. The headwaters of Sespe Creek, the river's largest tributary, occur in the mountainous backcountry of the Los Padres National Forest in Ventura County. The mainstem of the river flows approximately 106 miles from its headwaters westward through Los Angeles and Ventura counties to its delta between the cities of Ventura and Oxnard. The river and its tributary system have a total watershed area of approximately 1,634 square miles. Some of the major tributaries to the upper Santa Clara River watershed include Castaic Creek, San Francisquito Canyon, Bouquet Canyon, Sand Canyon, Mint Canyon, and the Santa Clara River South Fork. The portion of the river within Los Angeles County is referred to as the "upper Santa Clara River" while the portion in Ventura County is referred to as the "Lower Santa Clara River."

At certain times of the year, the river may have continuous surface flow to the Pacific Ocean from natural watershed drainage. Surface flow is supplemented by controlled releases of water from Lake Piru in Ventura County, and discharge from two wastewater treatment facilities in Saugus and Valencia and urban run-off in Los Angeles County. The Santa Clara River is the major recharge source for all groundwater basins within the watershed.

The morphology of the river is varied along its course. It originates as a typical mountain stream with a relatively narrow channel incised into hard bedrock. The river has a straight-to-meandering channel pattern, and characteristic channel bedforms represented by a sequence of bars, riffles, and pools. As the river exits the confinement of the mountains, it has a typical braided stream geomorphology. It is characterized by the frequently shifting network of channels and intervening bars, and a broad floodplain area.

1.2 Watershed Planning

Other planning efforts that incorporate areas of the Santa Clara watershed have been initiated in the past, most notably the Santa Clara River Enhancement and Management Plan (SCREMP). This plan has not been approved for use as a watershed plan due to its primary focus on the mainstem of the river; however, it is currently used as a reference document. However, the U.S. Army Corp of

Engineers (ACOE), the Los Angeles County Department of Public Works (LADPW), and the Ventura County Watershed Protection District (VCWPD) have initiated a feasibility study to encompass the watershed. Unfortunately, this plan has been suspended indefinitely because funding from ACOE has been diverted to Homeland Security. It is important that the Santa Clara River Arundo/Tamarisk Removal Plan be completed for the entire river in order to address the high priority need to support and coordinate non-native invasive plant removal projects.

2.0 Project Goals

The goal of this project is to develop a long-term plan and programmatic Environmental Impact Report to assist landowners, non-governmental organizations, and other agencies with arundo/tamarisk removal and reduce the burden of the CEQA process. These documents will facilitate project implementation. The site specific implementation project will show on the ground results of the arundo/tamarisk removal by enhancing habitat for the least Bell's vireo, southwestern willow flycatcher, three-spined unarmored stickleback, and arroyo toad. The implementation of a coordinated eradication program for invasive plants such as arundo and tamarisk will expedite the implementation of individual eradication projects. Eradication projects will not only produce improvements in riparian habitat, but will also increase surface and subsurface water flow.

The stated goals and objectives of the proposed eradication program are consistent with those of the Nonpoint Source (NPS) Program and the Watershed Management Initiative (WMI). Specifically, "Eradication of exotic species and habitat restoration" is listed as one of the priority projects on the Regional Water Quality Control Board's (RWQCB) NPS Program's Target Projects List. Also, in the WMI Chapter dated December 2000, the Regional Board lists "Impacts from exotic vegetation" as one of the significant watershed issues for the Santa Clara River watershed.

The Upper Santa Clara River Watershed Arundo/Tamarisk Removal Plan's (SCARP) primary objective is to provide local landowners, municipalities, environmental groups, and other stakeholders with a broad menu of available techniques for removal of arundo and tamarisk and guidance in obtaining proper permits and approval for removal. The SCARP also provides best management practices (BMP) needed to minimize impacts during removal projects. The following factors have been researched and considered in the development of this SCARP:

- Potential eradication methods
- Degree of infestation
- Existing habitats
- Presence of threatened and/or endangered species
- Access
- Land use

- Current work being conducted or planned
- Pre-existing environmental agency restrictions and permits, funding mechanisms in place, and strategies for future funding.

Taken together, these factors provide a framework for a long-term eradication program and associated monitoring to facilitate removal of arundo and tamarisk from the upper Santa Clara River watershed and the restoration and maintenance of natural, economic and community values provided by these riparian corridors

3.0 Project Description

3.1 Project Type

This project addressed the removal of two specific invasive plant species from the upper Santa Clara River watershed. The following items were produced during the course of this project in an effort to facilitate coordinated, watershed-wide removal of arundo and tamarisk:

- A long-term implementation plan, which includes vegetation maps, removal methods, options to perform removal projects, and potential funding sources.
- Programmatic environmental documentation for the upper Santa Clara River watershed, which removes the need to complete Environmental Impact Reports for individual projects within the upper Santa Clara River watershed.
- Agency partnerships to assist with the implementation of the long-term plan.
- A site-specific arundo and tamarisk removal project in the City of Santa Clarita in a highly visible area bordered by recreational trails to demonstrate an implementation project to the public, improve habitat, and increase surface water.
- A water quality monitoring plan and quality assurance project plan for baseline monitoring of the upper watershed and site specific pre- and post-project monitoring
- Community outreach via workshops which increased community awareness of invasive species.

The project not only benefits the upper Santa Clara River watershed, but will also help those restoration efforts downstream in Ventura County by reducing the arundo that washes out of the channel annually and is deposited on downstream beaches.

3.2 Project Costs

3.2.1 Total Costs

The project includes both planning and implementation tasks to remove arundo and tamarisk from the upper Santa Clara River watershed. The project was funded $1.5 million through the Proposition 13 Costa Machado SWRCB grant program. The grant originally proposed $374,000 matching. The project received $856,663 in matching from various organizations and agencies. Matching was provided through

in-kind services such as documents, agency meetings, SCARP Working Group meetings, document review, facility use, and property use for staging areas.

Task Budget

Task Description	Prop 13 Share	Match Amount	Total Budget
Task 1 – Project Administration	$101,430	$0	$101,430
Task 2 – CEQA/NEPA Documents and Permits	$324,678	$17,000	$341,678
Task 3 – Quality Assurance Project Plan	$7,955	$3,000	$10,955
Task 4 – One-time Advance Payment Request	$1,612	$0	$1,612
Task 5 – Project Assessment and Evaluation Plan	$5,200	$$2,000	$7,200
Task 6 – Long-term Implementation Plan	$353,545	$24,000	$377,545
Task 7 – Site Specific Eradication Procedures	$6,885	$0	$6,885
Task 8 – Memorandum of Understanding	$8,630	$0	$8,630
Task 9 – Eradication Implementation	$663,350	$326,000	$989,350
Task 10 – Education/Outreach	$19,190	$$2,000	$21,190
Task 11 – Draft and Final Project Report	$7,525	$0	$7,525
TOTAL BUDGET	**$1,500,000**	**$374,000**	**$1,874,000**

Line Item Budget

Line Item Description			Prop 13 Share	Match Amount	Total Budget
1. Personnel Services			$268,000	$0	$268,000
Project Director	400 hrs	$40			
Clerical/Accounting	1200 hrs	$40			
Project Manager	3400 hrs	$60			
2. Operating Expenses (Printing, Postage, Phones, Supplies and Equipment, Travel)			$66,000	$30,000	$96,000
3. Professional and Consultant Services			$615,900	$44,000	$659,900
Mapping					
CEQA/NEPA					
QAPP					
Professional Technical Assistance					
Laboratory Testing					
4. Construction Expenses (Eradication Activities)			$500,000	$300,000	$800,000
5. General Overhead – 15%.			$50,100	$0	$50,100
TOTAL BUDGET			**$1,500,000**	**$374,000**	**$1,874,000**

3.2.2 Matching Funds

Matching amounts were provided by in-kind labor, permit fees, facilities, documentation, and other services. The grant originally proposed $374,000 matching. The project received $856,663 in matching. Matching was provided through The VCRCD has exceeded the required matching amounts by $482,663 due to the high interest in the project and many partnerships with various organization and agencies.

Matching was provided by:

U.S. Army Corps of Engineers
U.S. Fish and Wildlife Service

U.S. Department of Agriculture Natural Resource Conservation Service (Somis and Lancaster offices)
U.S. Department of Agriculture Forestry Service
Los Angeles Regional Water Quality Control Board
California State Water Resources Control Board
California Department of Fish and Game
California Department of Pesticide Regulation
California State Clearinghouse
California Conservation Corps
University of California Cooperative Extension
Ventura County Watershed Protection District
Los Angeles County Department of Public Works
Los Angeles County Agricultural Commissioner
Los Angeles Weed Management Area
Santa Barbara Weed Management Area
Santa Margarita and San Luis Rey Weed Management Area
Santa Ana Watershed Protection Authority
City of Santa Clarita
Newhall Water District
United Water Conservation District
Valencia Public Library
Acton Community Club
Agua Dulce Women's Club
Hart Pony and Baseball League
Ventura County Arundo Task Force
Team Arundo Angeles
Los Angeles and San Gabriel Rivers Watershed Council
National Biological Information Infrastructure
California Invasive Plant Council
The Nature Conservancy
Friends of the Santa Clara River

4.0 Project Tasks

4.1.1 Contract Summary Form

The contract summary form was submitted on May 28, 2004. It is included in the final report before the executive summary.

4.1.2 Project Assessment and Evaluation Plan

The project assessment and evaluation plan was submitted on August 20, 2004. This aspect of the grant was difficult due to the lack of a clear template. The VCRCD contacted Steven Rodriguez of the SWRCB Sacramento office to review the draft. In his review, he suggested several recommendations, some of which were clearly beyond the scope of the contract. The contract manager assisted with the final revisions and the VCRCD was able to compromise on the requirements.

4.1.3 Memorandum of Understanding (MOU) Partners

The MOU with the Antelope Valley Resource Conservation District was submitted on May 28, 2004. The SCARP Working Group MOU signatory pages were submitted March 1, 2005.

Current MOU partners include:

1) U.S. Fish and Wildlife Service,
2) U.S. Forest Service,
3) University of California Cooperative Extension,
4) Los Angeles Department of Public Works,
5) Los Angeles Agricultural Commissioner's Office,
6) Los Angeles Weed Management Area,
7) City of Santa Clarita,
8) Friends of the Santa Clara River.

4.1.4 Vegetation Mapping and Baseline Inventory

The project area is described as the upper Santa Clara River watershed, including but not limited to the 500-year floodplain and its primary, secondary, and tertiary tributaries.

The aerial photography of the upper Santa Clara River watershed has been purchased with a 2-foot resolution. The projection is State Plane California 405 NAD83 in feet. Surveying is conducted on maps at a scale of 1"=400' for programmatic level documentation. The minimum mapping unit is 1-acre for vegetation. Individual stands of arundo or tamarisk were mapped as observed.

A modified Sawyer Keeler Wolf classification system was developed to include arundo and tamarisk. Areas of 100 percent arundo or tamarisk were mapped as a separate classification. Combined areas of native habitat with arundo or tamarisk will be rated into 4 percentage levels of 1-25, 25-50, 51-75, and 75-99.

AMEC Earth and Environmental, the environmental consultant completed vegetation and target species mapping on the mainstem from November 2004 to March 2005. Unusual flooding occurred, which interrupted the surveys and caused temporal changes in the previously mapped vegetation cover. AMEC subcontracted Condor Environmental to perform vegetation and target species mapping on the tributaries, which occurred from November to December 2005. Thus, the tributary maps were not completed until February 2006. The main stem vegetation maps and flora/fauna inventory were submitted on July 1, 2005. The tributary vegetation maps and flora/fauna inventory will be submitted on April 1, 2006. All of the mapping was completed per the contract.

4.1.5 Long-Term Plan

The SCARP was developed to assist landowners, non-governmental organizations, and other agencies with the removal of arundo/tamarisk. The plan includes background on the watershed, information about arundo/tamarisk, removal

methods, maintenance, monitoring, and revegetation. The VCRCD created the SCARP Working Group to provide input for the long-term implementation plan. The administrative draft long-term plan was completed in May 2005. Hardcopies and electronic versions on CD were distributed at the May 31, 2005 SCARP Working Group meeting.

After review by the SCARP Working Group, removal and disposal methods were finalized. The removal methods include: 1) above- and below-ground biomass removal by physical means; 2) herbicide application including, but not limited to glyphosate, imazapyr, and triclopyr with and without surfactants; 3) tarping; 4) controlled burning; and 5) proposed combinations of various methods. Biological control and grazing/herbivory are discussed as a supplemental tool. The disposal methods include: 1) chipping biomass for mulch or compost; 2) cottage industry such as hand-crafted flutes or walking canes; 3) commercial use such as musical reeds; 4) co-generation; 5) incineration; 6) landfill disposal; and 7) leave biomass outside 25-year floodplain on terrace (to be monitored for re-growth). Best Management Practices (BMPs) were developed to prevent and reduce impacts to the environment.

The administrative draft was submitted on September 1, 2005, which included the long-term eradication, maintenance, and monitoring program, the description of funding mechanisms, and the public outreach strategy. Final versions of the funding mechanisms and public outreach strategy were submitted on December 1, 2005. The SCARP (Long-term Plan) was revised and re-organized for increased readability and ease of use. The SCARP was finalized and approved on February 14, 2006. The draft for SWRCB approval was submitted on March 1, 2006.

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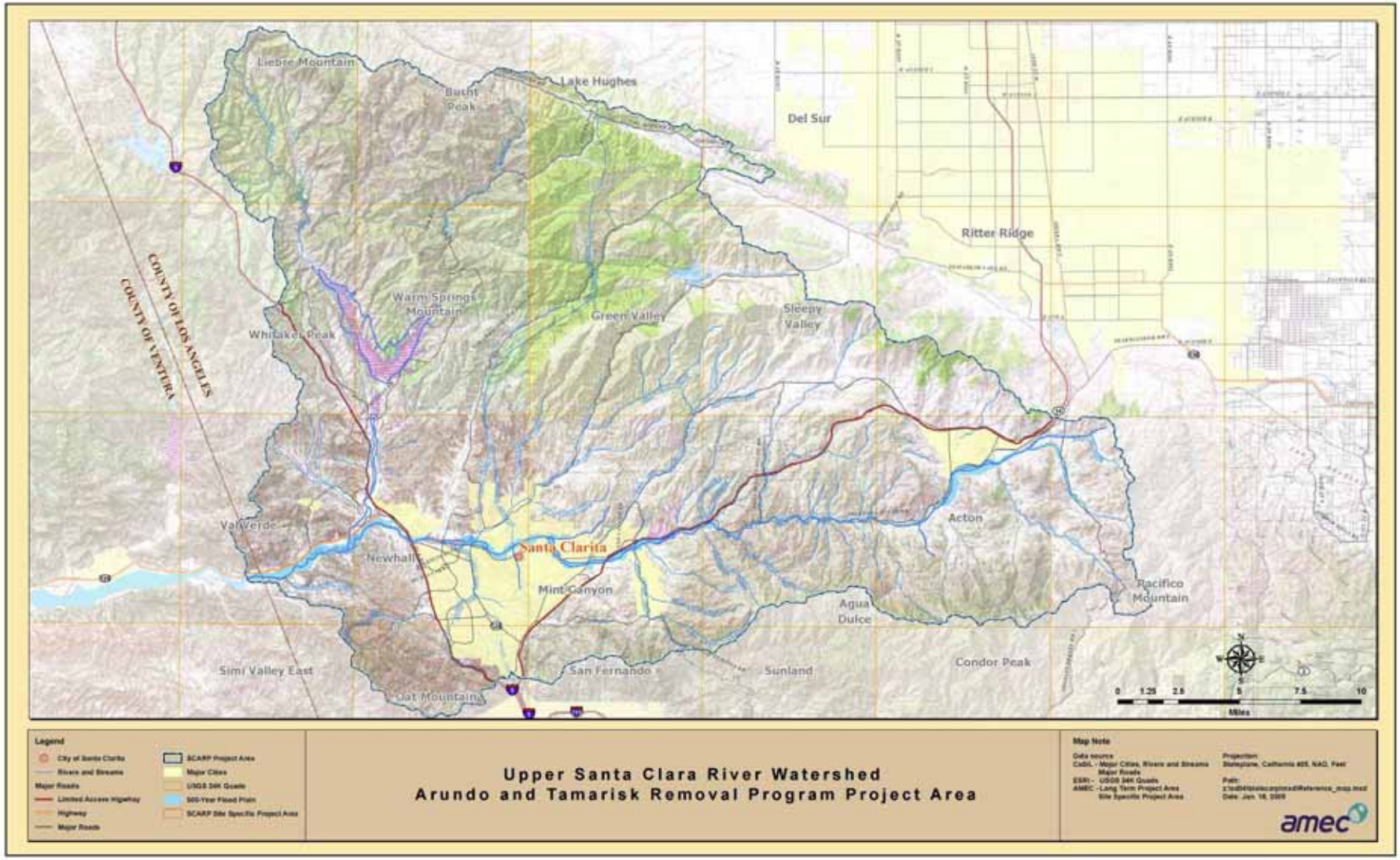

Ventura County Resource Conservation District
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4.1.6 CEQA and NEPA Documentation

NEPA Lead Agency

The federal agencies involved with the SCARP include the USFWS, the U.S. Department of Agriculture (USDA) Forest Service (USFS), and the ACOE. The ACOE has elected to be the NEPA Lead Agency if the SCARP process proceeds with an Environmental Assessment (EA) and then proceed with an Environmental Impact Statement (EIS) if necessary. However, due to the magnitude of the project, the USFWS and USFS would have preferred an EIS developed, but neither agency was willing to be the federal lead.

CEQA Lead Agency

The state and local agencies involved with the SCARP include the CDFG, the VCRCD, the LADPW, Los Angeles Agricultural Commissioner's Office (LAAC), and the City of Santa Clarita. The VCRCD Board of Directors approved the VCRCD as lead agency, although the project is outside the VCRCD's jurisdiction because it will carry out the project (CEQA Guidelines Section 15051.a).

Notice of Preparation

The Notice of Preparation (NOP) was prepared and distributed via e-mail on December 3, 2004. It was published in the Daily News – Santa Clarita Edition and the Antelope Valley Press on December 7, 2005. A letter of support was received from the Ventura County Watershed Protection District.

ACOE published a public notice from September 30 to October 31, 2005 regarding the VCRCD's application for the programmatic 404 permit and received no comments.

Scoping Meetings

Scoping meetings were initially proposed for December 2004. However, due to scheduling issues, the scoping meetings were postponed to January 2005. The meeting on January 24, 2005 was held at the City of Santa Clarita. The next meeting was held on January 31, 2005 at the Agua Dulce Women's Club.

Notice of Completion - Draft EIR

The administrative draft EIR was completed in June 2005. The draft EIR was distributed for review. The EIR document review concentrated on Section 4, impacts and mitigation measures. BMPs and mitigation measures were revised to allow as many types of projects as possible. The public draft of the EIR was distributed September 19, 2005, and the comment period closed November 7,

2005. A Notice of Availability (NOA) was published in the Daily News on September 19, 2005. A Notice of Completion and 15 draft copies were sent to the State Clearinghouse on September 19, 2005.

Public Hearings

A public hearing was held in Santa Clarita on October 20, 2005 and one in Agua Dulce on October 27, 2005. There were no oral comments submitted at the public hearings. Written comments were received from Bill Neill of Riparian Repairs, Sandy Matsumoto of The Nature Conservancy, Richard Sweet of Friends of the Santa Clara River, Christian Dellith of USFWS, and the VCWPD. Late written comments were submitted by Denise Steurer of USFWS, Lynne Plambeck of Santa Clarita Organization for Planning the Environment, Mark Rentz of California Department of Pesticide Regulation, and Dan Mansada of Castaic Water. All comments were addressed in the final EIR.

Notice of Determination

The VCRCD Board of Directors certified the Final EIR and the Statement of Overriding Consideration on February 14, 2006. The Notice of Determination was sent to the State Clearinghouse and Los Angeles County Clerk on March 1, 2006.

3.3.7 Site Specific Project

In addition to the broader based SCARP project, a site-specific project was completed to demonstrate an implementation project to the public, improve habitat, and increase surface water at one project location within the upper Santa Clara River watershed. The site specific project was an arundo/tamarisk removal project in the City of Santa Clarita. The implementation of the site specific project was performed by the California Conservation Corps (CCC). The project site was chosen for several reasons, but primarily for its sole ownership and high visibility (it is bounded by recreation trails on its northern and southern perimeters). The site is also a good candidate for a future restoration project. The City of Santa Clarita was willing to assist with both the site specific project and the long-term plan.

The site specific project utilized a Categorical Exemption Class 4 – Minor Alteration to Land. It was approved by the VCRCD Board of Directors on July 1, 2005. The VCRCD partnered with the LAAC to assist with site analysis and the CCC to perform the initial implementation. The VCRCD hired subconsultants to perform wildlife surveys prior to beginning work. The VCRCD assumed presence of arroyo toad since two males were observed in 2003. The NRCS took the federal lead for the National Environmental Policy Act (NEPA) and negotiated a Section 7 letter of concurrence for the VCRCD's activities. The VCRCD developed the letter of concurrence for the NRCS and USFWS Section 7 consultation to avoid sensitive species impacts. The

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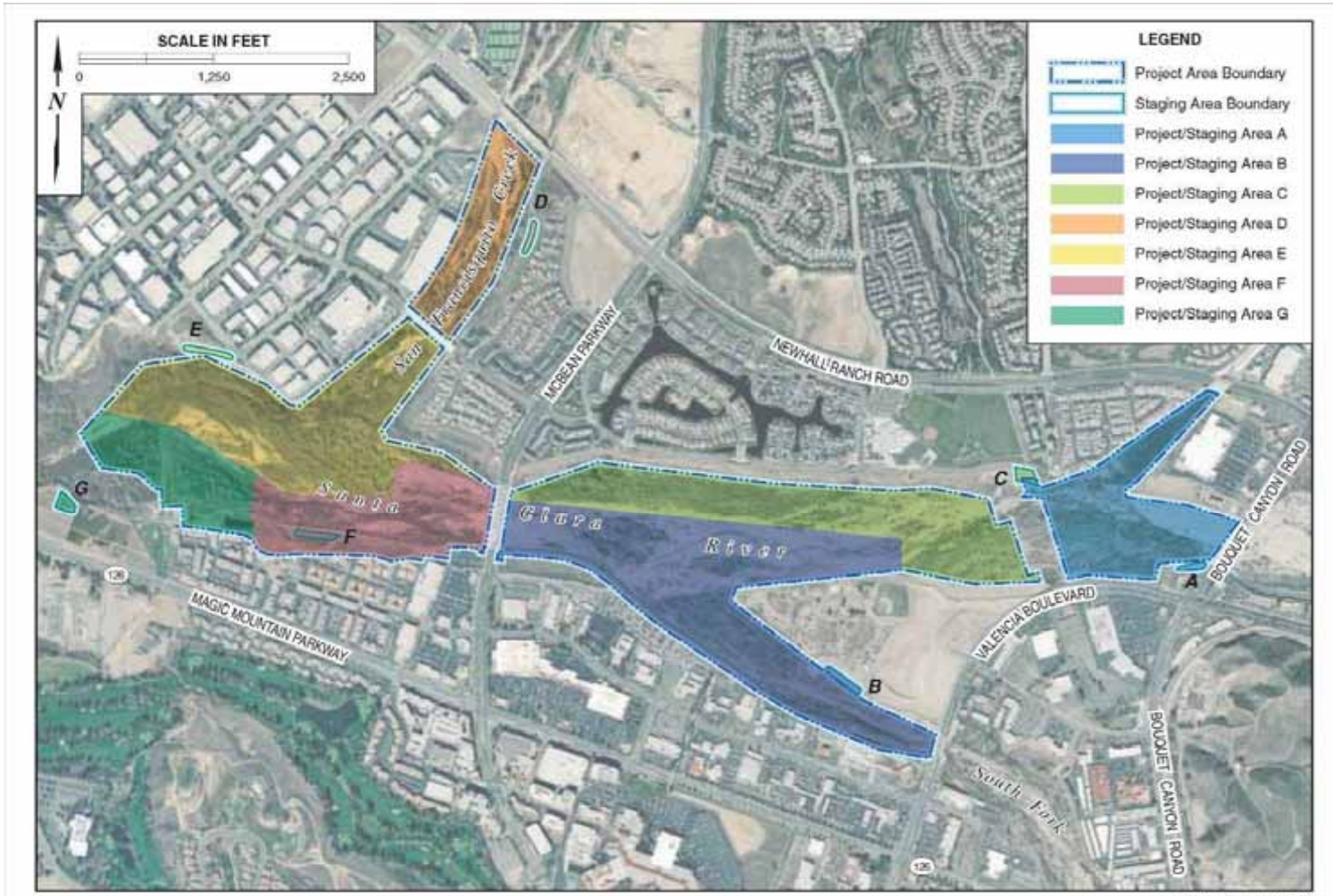

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Project Area Locations and Associated Staging Areas

FIGURE 6

USFWS review of the letter of concurrence took longer than the 30-day requirement. With NRCS approval, the project moved forward with all hand-removal methods. The letter of concurrence was submitted December 1, 2005.

The VCRCD also coordinated with the ACOE, the RWQCB, and the CDFG. Site specific permits were obtained from CDFG and LADPW. The VCRCD obtained exemptions from ACOE and RWQCB.

Since the project site crossed Los Angeles Department of Public Works easements and Metropolitan Water District property, the VCRCD also negotiated permits to work on their property. The VCRCD coordinated usage of staging areas on adjacent property with the City of Santa Clarita, Lennar-LNR (Newhall Land and Farming), and the Hart Baseball and Softball League.

The Site Specific Plan was developed and submitted to the SWRCB for approval on September 1, 2005. With the tight schedule, implementation moved forward without written approval. The presence of endangered species on the project site limited the methods to hand removal and herbicide application of glyphosate. A biological monitor was present on site during all work. No vehicles or large equipment were used within the channel. The CCC performed the biomass removal and spraying. The arundo/tamarisk was hand-cut with loppers and chainsaws. Rope was wrapped around a section of arundo canes prior to cutting to bundle the canes. After cutting, the arundo canes and tamarisk branches/trunks were dragged or hand-carried from the site to a staging area. The biomass was fed through a chipper and spread in the staging area by crew members. In some areas, crew members painted cut arundo stalks and tamarisk stumps with glyphosate. In other areas the crews mixed tanks of herbicide for backpack sprayers to foliar spray re-growth of arundo/tamarisk.

The site specific implementation project in the City of Santa Clarita successfully covered approximately 75 acres of the 297-acre site and removed 20 acres of arundo and tamarisk. Due to the timeframe of the grant and the presence of endangered species, the VCRCD was only able to initiate the first year of the site-specific removal project. The CCC worked from September 19, 2005 through January 2006. The VCRCD began on the upstream end of the project site and worked down. The arundo and tamarisk on the property was established in small sections with some large dense areas. Dense areas of “old growth” arundo were very difficult to remove due to the growth habit. Arundo canes grow to 30 feet tall and then fall from its weight. New arundo shoots then sprout from the stem nodes of the fallen arundo. The cumulative effect is a dense “basket weave” thicket that is difficult for crews to penetrate.

Without heavy equipment, it takes an extreme amount of time and effort to remove the biomass. The CCC crews spent ten weeks at Area A. This area contained the thickest arundo growth, due to perennial water supply (1,000,000 gallons daily)

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Contractor Name: Ventura County Resource Conservation District (VCRCD)

Area A – September 2005: CCC began implementation of arundo and tamarisk removal at the uppermost end of the project site in Area A. The snag in the middle of the photo was used as a reference point.

Area A – October 2005: One month after the project started, the CCC has removed biomass around the snag with chainsaws.

Area A- November 2005: Two months after the project started, the CCC has removed biomass around the snag with chainsaws and loppers.

Area A- November 2005: Three months after the project started, the CCC has made significant progress removing the arundo biomass.

Area A – December 2005: Four months after the project started, the CCC has moved on to the other side of the streamlet. Arundo has resprouted from cut stalks as expected. The arundo has been sprayed with glyphosate.

Area A – January 2006: Five months after the project started, the arundo is dying back after the glyphosate application.

from a water treatment outfall. Additional water was supplied to the site when a bridge construction project at the upstream end of the site, began dewatering their project site onto the VCRCD's project site. This created additional streamlets, which crews were required to avoid during the removal process.

The CCC contracted with the VCRCD for $425,000 to perform removal work. Photographs of Site A are attached below in chronological order. A total of four crews from three different CCC offices worked on the site. The Camarillo office took the lead with two crews and the Los Angeles and Norwalk offices provided one crew each. One Camarillo crew was taught about herbicide safety and received operator identification, which will expire in one year. Although the VCRCD was able to accomplish a large portion of the site, it was difficult to keep the same number of crew members at the site each week. The CCC did not have a primary site manager for the project. As crews were rotated, invasive plant removal training had to occur with each new group. New crew members also had to receive an education program from the biological monitor. Hurricane Katrina also impacted the project as the best crew members were reassigned to assist with the disaster for one month. When they returned, the project continued at a strong pace. After six months of working on the project site, the CCC crews were well-trained in arundo and tamarisk removal.

In order to continue the work on the site-specific project, the VCRCD coordinated additional funding for the continued restoration work on the project for the next five years through the NRCS Wildlife Habitat Incentive Program (WHIP) with the City of Santa Clarita. The removal of invasive species such as arundo and tamarisk requires a minimum of three to five years of monitoring and maintenance removal.

3.3.8 Water Quality Monitoring Plan and Quality Assurance Project Plan

The VCRCD submitted the draft Water Quality Monitoring Plan and Quality Assurance Project Plan on November 11, 2004 to the RWQCB. The VCRCD did not receive comments on the draft plan until February 25, 2005. Due to the timing of the grant, the VCRCD proceeded with the VCRCD's site-specific water quality monitoring after received an email approval from the QA officer. The final version was received by RWQCB on March 11, 2005. It was signed by the contract manager on May 11, 2005 and by the QA officer on June 6, 2005. The VCRCD received it back on July 12, 2005. Baseline SCARP and pre-treatment site specific water quality sampling was conducted on March 9, 2005 and post-treatment site specific water quality sampling was conducted on January 9, 2006. The monitoring checked for:

- total dissolved solids
- total suspended solids
- turbidity
- nitrate
- nitrite
- ammonia

- total and dissolved phosphorus
- total and dissolved organic carbon
- BOD
- glyphosate
- fecal coliform
- dissolved oxygen
- pH
- conductivity
- salinity
- flow
- temperature

Due to the long-term nature of invasive plant removal benefits, immediate water quality advantages are not necessarily measurable. Results for both baseline and post-treatment sampling at both upstream and downstream sampling sites are well below stated objectives by the Basin Plan for nitrate, nitrite, total dissolved solids, and ammonia. The results were also well above the minimum for dissolved oxygen. Glyphosate measurements were below the detectable limit. Statistical comparisons are not possible due to sample size and low number of sample events.

As displayed in the table below, general water temperature, salinity, turbidity, and conductivity increased and dissolved oxygen decreased from upstream to downstream within the upper Santa Clara River. This general decrease in water quality from upstream to downstream occurs as water moves downstream and receives greater cumulative input from wastewater discharges and stormwater outfalls. Total dissolved solids levels were below the maximum values identified in the Basin Plan Water Quality Objectives (Harris et al 1994) at all five sampling locations. Ammonia levels were below the U.S. Environmental Protection Agency (USEPA) 1999 standard currently recognized as the water quality objective by an amendment to the Basin Plan (RWQCB 2002). Similarly, both total and dissolved phosphorus concentrations were below the maximum allowable levels. The water quality objective for glyphosate, the primary ingredient in the herbicide proposed for arundo and tamarisk removal, is 0.7 mg/L (Harris et al 1994). All reaches tested below the laboratory detection level of 5.0 µg/L glyphosate and were therefore within established water quality objectives.

Total coliform and fecal coliform levels varied greatly by sampling location. This level of variance may be attributed to the location of wastewater discharges along the Santa Clara River, and the varying levels of flow, which may have diluted the samples. In addition, land use changes along the river may have impacted fecal and total coliform levels. Areas with a higher percentage of urban and residential land uses may have higher coliform levels as a result of domesticated animal (e.g., horse, cat, and dog) droppings that may have runoff into stormwater systems or directly into the river. The water quality objective for fecal coliform is an average of 200 MPN/100 mL resulting from four sample events over a 30-day period. Therefore the single sampling event that occurred may represent a monthly

maximum or minimum and does not serve as a good comparison to Basin Plan Water Quality Objectives.

Baseline SCARP Monitoring Results

Constituent	Site 1B	Site 2B	Site 3B	Site 4B	Site 5B	Water Quality Objective[1]
Water Temperature (°C)	23.1	23.0	19.5	17.5	13.4	
Dissolved Oxygen (mg/L)	8.46	8.41	9.22	8.49	9.76	>7
pH	8.66	8.98	9.15	8.41	8.36	6.5 – 8.5[2]
Salinity (%)	0.04	0.03	0.03	0.02	0.02	
Conductivity (µS/cm)	1.030	0.730	0.705	0.575	0.394	
Glyphosate (µg/L)[3]	<5.0	<5.0	<5.0	<5.0	<5.0	0.7 mg/L
Ammonia as N (mg/L)[4]	0.04	0.16	0.21	0.08	0.06	
Biochemical Oxygen Demand (mg/L)[5]	<5	<5	<5	<5	<5	
Dissolved Organic Carbon (mg/L)	5.52	5.58	5.22	5.32	6.05	>5
Nitrate as N (mg/L)	1.09	0.94	1.32	1.12	0.18	45[6]
Phosphorus, dissolved (mg/L)	0.13	0.11	0.04	0.06	0.06	
Phosphorus, total (mg/L)	0.64	3.77	0.30	0.25	0.06	
Total Organic Carbon (mg/L)	5.69	5.74	5.52	5.42	6.4	
Total Dissolved Solids (mg/L)	584	382	322	294	232	1,000
Total Suspended Solids (mg/L)	371	1,960	105	93	5	
Turbidity (NTUs)	305	1,520	43	28.7	6.1	
Nitrite as N (mg/L)[7]	0.108	0.636	<0.100	<0.100	<0.100	1
Total Coliform (MPN/100 ml])	3,000	700	800	23	900	
Fecal Coliform (MPN/100 ml)	800	500	800	23	27	200[8]

[1] If applicable.
[2] Inland surface waters may not be above or below this limit as a result of waste discharges.
[3] 5.0 µg/L is the minimum detectable limit.
[4] Ammonia water quality objective tables provided in Appendix A.
[5] 5.0 mg/L is the minimum detectable limit.
[6] 45 mg/L is the primary drinking water standard. For this reach of the Santa Clara River, the nitrate-nitrogen plus nitrite-nitrogen water quality objective is 5 mg/L.
[7] 0.100 mg/L is the minimum detectable limit.
[8] Taken as an average of 4 samples over a 30-day period.

mg/L = milligrams per liter
MPN/100 ml = most probable number per 100 milliliters
NTU = Nephelometric Turbidity Unit
µg/L = micrograms per liter
µS/cm = microsiemens per centimeter

Pre-eradication baseline water quality monitoring was conducted according to the RWQCB certified QAPP on 9 March 2005. Water quality monitoring sites are displayed in Figure 6. Results for all parameters are displayed in Table 1. Pre-eradication monitoring results showed constituent level that meet standards described in the 1994 RWQCB Basin Plan for Coastal Watersheds for Los Angeles and Ventura Counties. Total coliform and fecal coliform levels are higher than Basin Plan standards; however, coliform standards are based on an average of multiple samples collected over a 30-day period and not a single sample. Also, samples were taken at the river's edge and not in the center of flow due to ease of access; therefore, it is possible that animal wastes are more concentrated in such locations.

Site-Specific Implementation Project Monitoring Results

Constituent	Site 1A (downstream of treatment)		Site 2A (upstream of treatment)	
	Baseline	Post-treatment	Baseline	Post-treatment
Water Temperature (°C)	24.4	15.9	24.8	17.1
Dissolved Oxygen (mg/L)	7.56	6.28	7.96	8.98
pH	8.41	7.8	8.51	7.9
Salinity (%)	0.06	0.04	0.03	0.02
Conductivity (µS/cm)	1.35	1.05	0.756	0.677
Glyphosate (µg/L)[1]	<5.0	<5.0	<5.0	<5.0
Ammonia as N (mg/L)	0.08	0.11	0.13	1.24
Biochemical Oxygen Demand (mg/L)[2]	<5	<5	<5	<5
Dissolved Organic Carbon (mg/L)	7.85	5.15	5.6	1.26
Nitrate as N (mg/L)	1.78	1.37	1.10	2.11
Phosphorus, dissolved (mg/L)	0.19	0.13	0.12	0.03
Phosphorus, total (mg/L)	2.10	0.13	3.12	0.03
Total Organic Carbon (mg/L)	9.08	7.86	5.61	1.80
Total Dissolved Solids (mg/L)	868	586	424	348
Total Suspended Solids (mg/L)[2]	1,264	<5	2,088	<5
Turbidity (NTUs)	1,070	1.5	2,320	0.8
Nitrite as N (mg/L)[3]	0.519	<0.100	0.983	<0.100
Total Coliform (MPN/100ml)	16,000	900	9,000	13
Fecal Coliform (MPN/100ml)	16,000	170	2,000	2

[1] 5 µg/L is the minimum detectable limit.
[2] 5 mg/L is the minimum detectable limit.
[3] 0.100 mg/L is the minimum detectable limit.

5.0 Public Outreach

The VCRCD conducted public outreach in various ways. In order to promote the project and receive support, the VCRCD developed a Memorandum of Understanding for its partnering agencies and organizations. The VCRCD created the SCARP Working Group to communicate with the various agencies and organizations interested in invasive plant removal. As part of the CEQA process, the VCRCD held two public scoping meetings before the EIR was developed and two public hearings after the draft EIR was released. Furthermore, two public outreach workshops were held to educate the residents about invasive plants. The VCRCD participated in various events including the Cal-IPC Symposium, the Society for Ecological Restoration Symposium, the Southern California Wetlands Recovery Project, the Los Angeles Weed Management Area, the Ventura County Fair, and the City of Santa Clarita River Rally. VCRCD staff also sat on a panel to discuss invasive plant removal during the Wetland Recover Project Symposium on March 9, 2006.

Two public outreach workshops were scheduled for Saturday, April 30, 2005 at the Acton Community Center and at the Valencia Library. In order to reach a larger audience, the outreach event was titled “Rescue Your River” and focused on various elements of river education. There was a short presentation and a few tables where residents picked up brochures and information from different local agencies and organizations. The VCRCD also showed the CDFG arundo video. The workshops had representatives from the NRCS Lancaster Field Office, LADPW, USFS, and the UC Cooperative Extension.

The VCRCD developed signage and posted it throughout the site-specific project area adjacent to trails. In addition, the VCRCD also mailed 962 postcards to residents within 500 feet of the project site prior to the start of the project.

6.0 Conclusions

6.1 Project Evaluation and Effectiveness

6.1.1 Watershed Planning

The SCARP project provides landowners, non-governmental organizations, and other agencies assistance with arundo/tamarisk removal. The completion and certification of the programmatic EIR has led to the development of programmatic permits, which will allow the implementation of many more coordinated invasive plant removal projects.

Overall, the planning aspect of the project was successful. In hindsight, the VCRCD would have included budget for more staff time. Regarding the budget, the EIR documentation printing expenses were much more than the VCRCD had budgeted. Furthermore, the VCRCD would also include the development of programmatic permits in the contract. Ideally, the contract would have been longer than two years. The contract was originally supposed to be three years, but contracting

issues decreased the time to two years. The VCRCD would have also included a staff watershed coordinator to perform public outreach and coordinate with the various Santa Clara River responsible agencies and organizations since it took a large amount of time away from the project management.

The proposed implementation procedures will produce environmental documentation and a long-term plan for future invasive species removal projects. This project will meet its short-term objectives; however the site-specific removal project is unlikely to produce any beneficial short-term results. Arundo and tamarisk eradication projects performed and expedited by the development of the long-term plan and environmental documentation will produce several long-term benefits. These goals include the following: improving wildlife habitats, predominately riparian woodland for species such as the southwestern willow flycatcher and least Bell's vireo; increasing the available surface and subsurface water; reducing erosion and sedimentation after native vegetation becomes established; reducing salinity in the water and soil produced by tamarisk trees; and improving hydrogeomorphological characteristics of the watershed.

6.1.2 Implementation

The implementation of the site specific project was successful. The removal was performed by the CCC on City of Santa Clarita property. The project site was chosen for several reasons, as previously discussed, including ownership, visibility, public access, and partnership with the City of Santa Clarita. The implementation plan included all 297 acres in phases; however, the VCRCD did not expect to cover the entire site during the first removal season due to cost, schedule, and permitting restrictions. Cost estimates for arundo removal vary highly depending upon methodology, terrain, access, and occurrence of special status plant/wildlife species. Permit requirements included biological surveys prior to implementation and a biological monitor present during implementation activities. Methods were limited to manual methods outside the bird breeding season and during clear weather forecasts. Hand-removal increases costs substantially. The CCC was contracted for $425,000 and worked from September 19, 2005 through March 15, 2006. They completed approximately one-quarter of the site and removed approximately 15 acres of arundo and tamarisk within the 75-acre area. The establishment of arundo and tamarisk on the property was patchy with some large dense areas.

Due to the long-term nature of invasive plant removal benefits, immediate water quality advantages are not necessarily measurable. However, as shown by the before and after photographs, it is easy to see that biomass removal reduces flooding and wildfire hazards. In addition, it is apparent that the removal of tamarisk and arundo significantly changes the hydrology of the channel. Natural recruitment of native vegetation occurs within weeks of removal. Dormant willow trees that were once out-shaded sprouted new saplings. Water flows increased and created new streamlets. Photos and water quality data are attached.

6.2 Next Steps

The project area includes the 500-year floodplain of the mainstem and includes, but is not limited to, the primary, secondary, and tertiary tributaries. In order to complete the planning documents, the VCRCD mapped approximately 16,400 acres within the upper Santa Clara River watershed.

The VCRCD is working with all of its SCARP Working Group partners to continue the implementation of the long-term plan in the upper watershed and complete the programmatic permits. After consultation with the regulatory agencies, programmatic permits were the apparent next step. Unfortunately, the VCRCD was not able to broaden the project goals to incorporate the permits under this grant. However, the VCRCD was still able to find additional funding.

The Santa Clara River Trustee Council has approved the development of programmatic regulatory permits to assist both the agencies and the project proponents to complete environmentally beneficial projects. The VCRCD will be developing programmatic permits, which include an individual 404 Permit from ACOE, a 401 Certification from the RWQCB, a formal Section 7 Consultation with the USFWS, and a Master Streambed Alteration Agreement from CDFG. ACOE is working with USFWS on the Section 7 Biological Opinion.

The VCRCD has also coordinated additional funding for the site specific project in Santa Clarita from the NRCS WHIP. In addition, the VCRCD has applied for funding from the SWRCB Consolidated Grants Program under Proposition 40 to develop a lower watershed plan and integrate it with the upper watershed plan for a complete watershed plan.

Public outreach and coordination with the multitude of agencies and organizations in the Santa Clara River watershed is integral to the success of the project. Much of the river is owned by private residents. The VCRCD is working with the USFS, City of Santa Clarita, the LADPW, the Los Angeles Weed Management Area, and the Antelope Valley Resource Conservation District to implement coordinated projects. The VCRCD has also applied for the Integrated Regional Water Management Program with Ventura County for the Calleguas Creek watershed.

Contract No. 03—153—5540

Project Name: Arundo and Tamarisk Removal in the Upper Santa Clara Watershed

Contractor Name: Ventura County Resource Conservation District (VCRCD)

Appendices

List of Deliverables

Task	Sub—Task	Deliverables	Due Date	Date Submitted
1		**Project Administration**		
	1.2	Progress Reports	1/31/05 and monthly thereafter	3/1/06
	1.5	Contract Summary Form	5/28/04	5/28/04
	1.6	Subcontractor Documentation	8/15/04 and quarterly thereafter	3/1/06
	1.7	Expenditure/Invoice Projections	6/15/04 and every 6 months thereafter	3/1/06
	1.8	Project Survey Form	3/1/2006	3/1/06
2		**CEQA/NEPA Documents and Permits**		
	2.1	CEQA/NEPA Documentation (Programmatic EIR)	12/1/2005	12/1/05
	2.2	CEQA/NEPA Documentation (Site specific documentation)	6/1/2005	7/1/05
	2.3	Permits	6/1/2005	12/1/05
3		**Quality Assurance Project Plan**		
	3.1	Approved and Signed QAPP	12/15/2004	9/1/05
	3.2	Approved Monitoring Plan	12/15/2004	9/1/05
4		**One-time Advance Payment Request**		
	4.1	Written Justification with Recoupment Schedule	3/15/2004	02/20/04
	4.2	Proof of Separate Bank Account	3/15/2004	02/20/04
	4.3	Bank Statements	3/15/2004	02/20/04
5		**Project Assessment and Evaluation Plan**		
	5.1	Project Assessment and Evaluation Plan	7/15/2004	8/30/04
6		**Long-term Implementation Plan**		
	6.1	Vegetative Map	12/15/2004	4/1/06
	6.2	Target Plant Map	12/15/2004	4/1/06
	6.3	Baseline Biological Inventory and Water Quality Data (to SWRCB's Project Representative only)	2/15/2005	7/1/05
	6.4	Long-term Eradication, Maintenance and Monitoring Plan	6/15/2005	9/1/05
	6.5	List of Eradication Methods	6/15/2005	9/1/05
	6.6	Description of Funding Mechanisms	10/15/2005	12/1/05
	6.7	Public Outreach/Education Plan/Strategy	10/15/2005	12/1/05
	6.9	Draft Long-term Implementation Plan	10/15/2005	3/1/06
	6.10	Approved Long-term Implementation Plan	12/15/2005	4/1/06
7		**Site Specific Eradication Procedures**		
	7.2	Draft Site Specific Implementation Plan and Site Specific Eradication Procedures	6/15/2005	9/1/05
	7.3	Approved Site Specific Implementation Plan and Site Specific Eradication Procedures	8/10/2005	4/1/06
8		**Memorandums of Understanding**		
	8.1	Signed MOUs	12/15/2005	3/1/05
	8.2	Signed MOU with Antelope Valley RCD	12/15/2005	5/28/04
9		**Eradication Implementation**		
	9.2	Signed Access Agreements	10/15/2005	10/1/05
	9.4	Water Quality Data (to SWRCB's Project Representative only)	1/15/2006	4/1/06
	9.5	Summary of Water Quality Changes	1/15/2006	4/1/06
	9.6	Photo Documentation of Eradication Efforts	12/15/2005	3/1/06
10		**Education/Outreach**		
	10.1	Sign—in Sheets and Pictures from Workshops	12/10/2005	7/1/05
	10.2	Advertisement Information	12/10/2005	7/1/05
	10.3	Workshop Materials	12/10/2005	7/1/05
11		**Draft and Final Project Report**		
	11.2	Draft Project Report	2/1/2006	3/1/06
	11.3	Final Project Report	3/1/2006	4/1/06

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Project Name: Arundo and Tamarisk Removal in the Upper Santa Clara Watershed

Contractor Name: Ventura County Resource Conservation District (VCRCD)

List of Subcontractors

Subcontractor	Date	Total Contract
Ventura County Counsel	10/1/04 11/1/04	$1807.00 $104.25
Peggy Rose	4/13/04	$79,000
Carlos Montes	4/25/05	$18/hr
Trudy Ingram	10/1/04	$6,000
AMEC, Earth & Environmental	8/13/04	$523,657
Foothill Consultants	8/25/05	$13,415
White & Leatherman BioServices	6/7/05 8/25/05 10/18/05 11/14/05	$3150 $15,000 $10,000 $15,000
Leatherman BioConsulting	3/01/06 3/3/06	$29,0000 $6,000
California Conservation Corps	9/21/05 12/13/05	$300,000 $125,000

References

Harris et al. 1994. Basin Plan for the Coastal Watersheds of Los Angeles and Ventura Counties. Regional Water Quality Control Board, Los Angeles Region.

Regional Water Quality Control Board. 2002. Update to Ammonia Objectives for Inland Surface Waters. April 25.