MID Modesto Irrigation District
Water and Power

1231 Eleventh St.
P.O. Box 4060
Modesto, CA 95352
(209) 526-7373

January 28, 2004

Mr. Jim Maughan
Supervising Water Resources Control Engineer
SWRCB, 15th Floor
1001 I Street
Sacramento, CA 95814

Subject: CEQA Document Submission for 2004 Statewide General NPDES Permit for Aquatic Pesticides

Dear Mr. Maughn,

The Modesto Irrigation District is submitting these documents for inclusion under the 2004 Statewide General NPDES Permit for Aquatic Pesticides. We have included the following documents:

1. CEQA Initial Study
2. Draft Negative Declaration
3. Notice of Determination.

These documents provide the following:

1. A detailed description of the proposed action, including the proposed method of completing the action is found in section 2.2.2.1 of the Initial Study, "Proposed Pesticide Application".

2. A time schedule; is found in section 2.2.2.1 of the Initial Study, "Proposed Pesticide Application".

3. A discharge and receiving water quality monitoring plan (before project application, during the project, and after project completion, with the appropriate quality assurance and quality control procedures); is found in section 2.2.2.3 of the Initial Study, "Monitoring and Reporting Program".

4. Contingency plans; is found in section 2.2.2.4 of the Initial Study, "Alternatives to Proposed Project".

5. Identification of alternate water supply (if needed); N/A

6. Residual waste disposal plans; N/A

If you have any questions regarding this report, please contact me directly at 209-526-7459 or by email at WalterW@mid.org. Thank you.

Sincerely,

Walter P. Ward
Assistant General Manager
Water Operations

NOTICE OF DETERMINATION

MODESTO IRRIGATION DISTRICT
1231 - 11th Street
Modesto, California

FILED
04 JAN 28 AM 9:08
STANISLAUS CO. CLERK-RECORDER
BY Jennifer Fic... DEPUTY

TO: County Clerk
County of Stanislaus

SUBJECT: Filing of Notice of Determination in compliance with Section 21108 or 21152 of the Public Resources Code and California Code of Regulations, Title 14, Section 15075

PROJECT TITLE: Modesto Irrigation District Aquatic Pesticide Application Program
State Clearinghouse Number: SCH# 2003122081

PROJECT LOCATION: The Proposed Project is located in the San Joaquin Valley in central California, in the Modesto area, entirely within Stanislaus County. The project service area is shown in Figure 2-1 of the Initial Study.

CONTACT PERSON: Walter Ward, Assistant General Manager, Water Operations (209) 526-7459
Modesto Irrigation District
P.O. Box 4060, Modesto, CA 95352

PROJECT DESCRIPTION: The Proposed Project is the continuation of an aquatic pesticide (Magnacide H) application program implemented by Modesto Irrigation District since 1978. The program was previously regulated in 2002 and 2003 under the State Water Resources Control Board (SWRCB) Statewide General National Pollutant Discharge Elimination System (NPDES) Permit for Discharges of Aquatic Pesticides (Water Quality Order No. 2001-12-DWQ, General Permit No. CAG990003). The proposed program would occur under a new General Permit in 2004 and is expected to be equivalent to the current program. The proposed program would be implemented for a period of approximately 5 years, or for the term of the new General Permit.

Modesto Irrigation District applies aquatic pesticides to its irrigation conveyance system to control weeds and algae that interfere with irrigation conveyance and clog waterways and irrigation machinery. To conserve water and maximize the efficiency of irrigation, many landowners currently use sprinkler, drip, or micro-irrigation systems. These systems require irrigation water to be clean and free of vegetative debris that will clog machinery.

This is to advise that on January 27, 2004 the Modesto Irrigation District approved the above-described project and has made the following determinations regarding said project.

1) The project will not have a significant effect on the environment.
2) A Negative Declaration was prepared for this project pursuant to the provisions of CEQA.
3) Mitigation measures were not incorporated as part of the approval of the project.

4) A Mitigation Monitoring and Reporting Program was not adopted for this project.

A copy of the Negative Declaration may be examined at the Modesto Irrigation District offices at 1231-11th Street, Modesto, California.

This is to certify that the environmental documentation and determinations for the project and any related mitigation measures, monitoring provisions and findings have been adopted on the basis of the whole record before the District and reflect the District's independent judgement and analysis. The environmental review period and record of project approval may be examined at the above noted address.

Dated: January 27, 2004

MODESTO IRRIGATION DISTRICT

By: Allen Short

ALLEN SHORT
General Manager

CALIFORNIA DEPARTMENT OF FISH AND GAME
CERTIFICATE OF FEE EXEMPTION

De Minimis Impact Finding

Project Proponent

Modesto Irrigation District
P.O. Box 4060
1231 11th Street
Modesto, CA 95352

Project Title/Location:

Modesto Irrigation District
Aquatic Pesticide Application Program
SCH# 2003122081

The Proposed Project is located in the San Joaquin Valley in central California, in the Modesto area, entirely within Stanislaus County. The project service area is shown in Figure 2-1 of the Initial Study.

Project Description:

The Proposed Project is the continuation of an aquatic pesticide (Magnacide H) application program implemented by Modesto Irrigation District since 1978. The program was previously regulated in 2002 and 2003 under the State Water Resources Control Board (SWRCB) Statewide General National Pollutant Discharge Elimination System (NPDES) Permit for Discharges of Aquatic Pesticides (Water Quality Order No. 2001-12-DWQ, General Permit No. CAG990003). The proposed program would occur under a new General Permit in 2004 and is expected to be equivalent to the current program. The proposed program would be implemented for a period of approximately 5 years, or for the term of the new General Permit.

Modesto Irrigation District applies aquatic pesticides to its irrigation conveyance system to control weeds and algae that interfere with irrigation conveyance and clog waterways and irrigation machinery. To conserve water and maximize the efficiency of irrigation, many landowners currently use sprinkler, drip, or micro-irrigation systems. These systems require irrigation water to be clean and free of vegetative debris that will clog machinery.

Findings of Exemption (attach as necessary):

As the lead agency, Modesto Irrigation District conducted an Initial Study to evaluate the potential for adverse environmental impacts and has found that, when considering the

record as a whole, there is no evidence before the District that the proposed project will have any potential for an adverse effect on fish and wildlife resources or the habitat upon which the wildlife depends. The District has, on the basis of substantial evidence, rebutted the presumption of adverse effect contained in the California Code of Regulations, Title 14, Section 753.5 (d).

Certification:

I hereby certify that the public agency has made the above findings and that the project will not individually or cumulatively have an adverse effect on wildlife resources, as defined in Section 711.2 of the Fish and Game Code.

By: Allen Short
ALLEN SHORT

Title: General Manager
Lead Agency: Modesto Irrigation District
Date: January 27, 2004

REC'T # 0001403139
January 28, 2004 ---- 09:15:49

Stanislaus, County Clerk
Lee Lundrigan County Clerk's Off

Document #04-229123 -

RECD BY

County Admin Fee	$50.00
Total fee	$50.00
Amount Tendered...	$50.00
Change	$0.00

JJF,C1/0

STATE OF CALIFORNIA - THE RESOURCES AGENCY
DEPARTMENT OF FISH AND GAME
ENVIRONMENTAL FILING FEE CASH RECEIPT
DFG 753.5a (6-01)

229123

Lead Agency: Modesto Irrigation District Date: 1-28-04

County / State Agency of Filing: Stan. County clerk-Rec. Document No.:

Project Title: MID Aquatic Pest. App Program State clearinghouse # SCH#2003122081

Project Applicant Name: MID Phone Number:

Project Applicant Address: 1231 11th

Project Applicant *(check appropriate box):* Local Public Agency ☑ School District ☐ Other Special District ☐
State Agency ☐ Private Entity ☐

CHECK APPLICABLE FEES:

( ) Environmental Impact Report		$850.00	$
( ) Negative Declaration		$1,250.00	$
( ) Application Fee Water Diversion *(State Water Resources Control Board Only)*		$850.00	$
( ) Projects Subject to Certified Regulatory Programs		$850.00	$
(✓) County Administrative Fee	Cash 50.00	~~$25.00~~	$ 50.00
( ) Project that is exempt from fees			50.00
		TOTAL RECEIVED	$

Signature and title of person receiving payment:

WHITE-PROJECT APPLICANT YELLOW-DFG/FASB PINK-LEAD AGENCY GOLDENROD-STATE AGENCY OF FILING

STATE OF CALIFORNIA
Governor's Office of Planning and Research
State Clearinghouse and Planning Unit

Arnold
Schwarzenegger
Governor

Jan Boel
Acting Deputy
Director

January 20, 2004

Walter Ward
Modesto Irrigation District
1231 11th Street
Modesto, CA 95354

Subject: Aquatic Pesticide Application Program for the Modesto Irrigation District
SCH#: 2003122081

Dear Walter Ward:

The State Clearinghouse submitted the above named Negative Declaration to selected state agencies for review. The review period closed on January 16, 2004, and no state agencies submitted comments by that date. This letter acknowledges that you have complied with the State Clearinghouse review requirements for draft environmental documents, pursuant to the California Environmental Quality Act.

Please call the State Clearinghouse at (916) 445-0613 if you have any questions regarding the environmental review process. If you have a question about the above-named project, please refer to the ten-digit State Clearinghouse number when contacting this office.

Sincerely,

Terry Roberts

Terry Roberts
Director, State Clearinghouse

Document Details Report
State Clearinghouse Data Ba

SCH# 2003122081
Project Title Aquatic Pesticide Application Program for the Modesto Irrigation District
Lead Agency Modesto Irrigation District

Type Neg Negative Declaration

Description Proposed project is the continuation of an aquatic pesticide application program implemented by MID since 1978. This program was regulated in 2002 and 2003 under SWRCB General NPDES Permit No. CAG990003. This permit expires in 2004. The MID program would occur under a new General permit in 2004 and is expected to be equivalent to the current program.

Lead Agency Contact

Name Walter Ward
Agency Modesto Irrigation District
Phone 209.526.7459 **Fax**
email
Address 1231 11th Street
City Modesto **State** CA **Zip** 95354

Project Location

County Stanislaus
City Modesto
Region
Cross Streets Various (existing irrigation water conveyance system)
Parcel No. various
Township **Range** **Section** **Base**

Proximity to:

Highways 99,108,132
Airports Modesto
Railways Union Pacific, Santa Fe
Waterways San Joaquin, Tuolumne and Stanislaus Rivers, Dry Creek
Schools various
Land Use Land use along the irrigation system is primarily open space/agricultural, with some urban/developed areas.

Project Issues Vegetation; Water Quality; Wetland/Riparian; Wildlife; Cumulative Effects

Reviewing Agencies Resources Agency; Department of Fish and Game, Region 4; Department of Parks and Recreation; Reclamation Board; Department of Water Resources; Caltrans, Division of Aeronautics; Caltrans, District 10; Department of Food and Agriculture; Regional Water Quality Control Bd., Region 5 (Sacramento); Department of Toxic Substances Control; Native American Heritage Commission; State Lands Commission

Date Received 12/18/2003 **Start of Review** 12/18/2003 **End of Review** 01/16/2004

Note: Blanks in data fields result from insufficient information provided by lead agency.

MID Modesto Irrigation District
Water and Power

1231 Eleventh St.
P.O. Box 4060
Modesto, CA 95352
(209) 526-7373

December 29, 2003

State Clearinghouse
Regulatory Agencies
Interested Parties

RE: Modesto Irrigation District
Aquatic Pesticide Application Program
Stanislaus County

Recently the Modesto Irrigation District distributed the Notice of Public Meeting, Proposed Negative Declaration and Initial Study for the above referenced proposed Project.

On the cover letter only, the public comment period was incorrectly stated to be from December 16, 2003 through February 17, 2004. **The correct time period is from December 16, 2003 through January 17, 2004.** We regret any inconvenience to the recipients of this document.

If you have any questions, please call Walter Ward at (209) 526-7459. Please address your comments to:

Modesto Irrigation District
P.O. Box 4060
Modesto, CA 95352
Attn: Walter Ward

Thank you very much.

Sincerely,

Karleen Ashby

Karleen Ashby, CECM
Environmental Compliance Officer

Modesto Irrigation District
Water and Power

1231 Eleventh St.
P.O. Box 4060
Modesto, CA 95352
(209) 526-7373

December 16, 2003

State Clearinghouse
Regulatory Agencies
Interested Parties

RE: Modesto Irrigation District
Aquatic Pesticide Application Program
Stanislaus County

Enclosed is the Notice of Public Meeting, Proposed Mitigated Negative Declaration and Initial Study for the above referenced proposed Project.

The public comment period is from December 16, 2003 through February 17, 2004. If you have any questions, please call Walter Ward at (209) 526-7459. Please address your comments to:

Modesto Irrigation District
P.O. Box 4060
Modesto, CA 95352
Attn: Walter Ward

Thank you very much.

Sincerely,

Karleen Ashby, CECM
Environmental Compliance Officer

Enclosures

NOTICE OF PUBLIC MEETING OF THE BOARD OF DIRECTORS OF THE MODESTO IRRIGATION DISTRICT TO CONSIDER A NEGATIVE DECLARATION FOR ITS AQUATIC PESTICIDE APPLICATION PROGRAM

NOTICE IS HEREBY GIVEN that the Modesto Irrigation District (MID) Board of Directors, at the Board Meeting on January 27, 2004, proposes to adopt a Negative Declaration in accordance with the California Environmental Quality Act (CEQA) for the following project. The Board Meeting will begin at approximately 9:00 a.m. in MID's Board Room located at 1231 11th Street, Modesto, California.

- **Name and Description of Project: MID Aquatic Pesticide Application Program**

  The Proposed Project is the continuation of an aquatic pesticide (Magnacide H) application program implemented by Modesto Irrigation District since 1978. The program was previously regulated in 2002 and 2003 under the State Water Resources Control Board (SWRCB) Statewide General National Pollutant Discharge Elimination System (NPDES) Permit for Discharges of Aquatic Pesticides (Water Quality Order No. 2001-12-DWQ, General Permit No. CAG990003). The proposed program would occur under a new General Permit in 2004 and is expected to be equivalent to the current program. The proposed program would be implemented for a period of approximately 5 years, or for the term of the new General Permit.

  Modesto Irrigation District applies aquatic pesticides to its irrigation conveyance system to control weeds and algae that interfere with irrigation conveyance and clog waterways and irrigation machinery. To conserve water and maximize the efficiency of irrigation, many landowners currently use sprinkler, drip, or micro-irrigation systems. These systems require irrigation water to be clean and free of vegetative debris that will clog machinery.

- **Project Location**: The Proposed Project is located in the San Joaquin Valley in central California, in the Modesto area, entirely within Stanislaus County. The project service area is shown in Figure 2-1 of the Initial Study.

The Modesto Irrigation District's Board of Directors has found, based on the Initial Study and mitigation measures incorporated into the Project, that there is no substantial evidence in light of the whole record that the Project will have a significant effect on the environment.

The Negative Declaration and Initial Study for the Project are available for review during normal business hours at the office of the Board Secretary of the Modesto Irrigation District, 1231-11th Street, Modesto, California. Comments will be received on the Mitigated Negative Declaration during the period from December 16, 2003-January 17, 2004.

Dated: December 16, 2003

MODESTO IRRIGATION DISTRICT

By: Allen Short

ALLEN SHORT
General Manager

PROPOSED
MODESTO IRRIGATION DISTRICT
NEGATIVE DECLARATION

AQUATIC PESTICIDE APPLICATION PROGRAM

DESCRIPTION OF PROJECT: MID Aquatic Pesticide Application Program.

The Proposed Project is the continuation of an aquatic pesticide application program implemented by Modesto Irrigation District since 1978. The program was previously regulated in 2002 and 2003 under the State Water Resources Control Board (SWRCB) Statewide General National Pollutant Discharge Elimination System (NPDES) Permit for Discharges of Aquatic Pesticides (Water Quality Order No. 2001-12-DWQ, General Permit No. CAG990003). The proposed program would occur under a new General Permit in 2004 and is expected to be equivalent to the current program. The proposed program would be implemented for a period of approximately 5 years, or for the term of the new General Permit.

Modesto Irrigation District applies aquatic pesticides to its irrigation conveyance system to control weeds and algae that interfere with irrigation conveyance and clog waterways and irrigation machinery. To conserve water and maximize the efficiency of irrigation, many landowners currently use sprinkler, drip, or micro-irrigation systems. These systems require irrigation water to be clean and free of vegetative debris that will clog machinery. Project features are discussed in detail in the Initial Study.

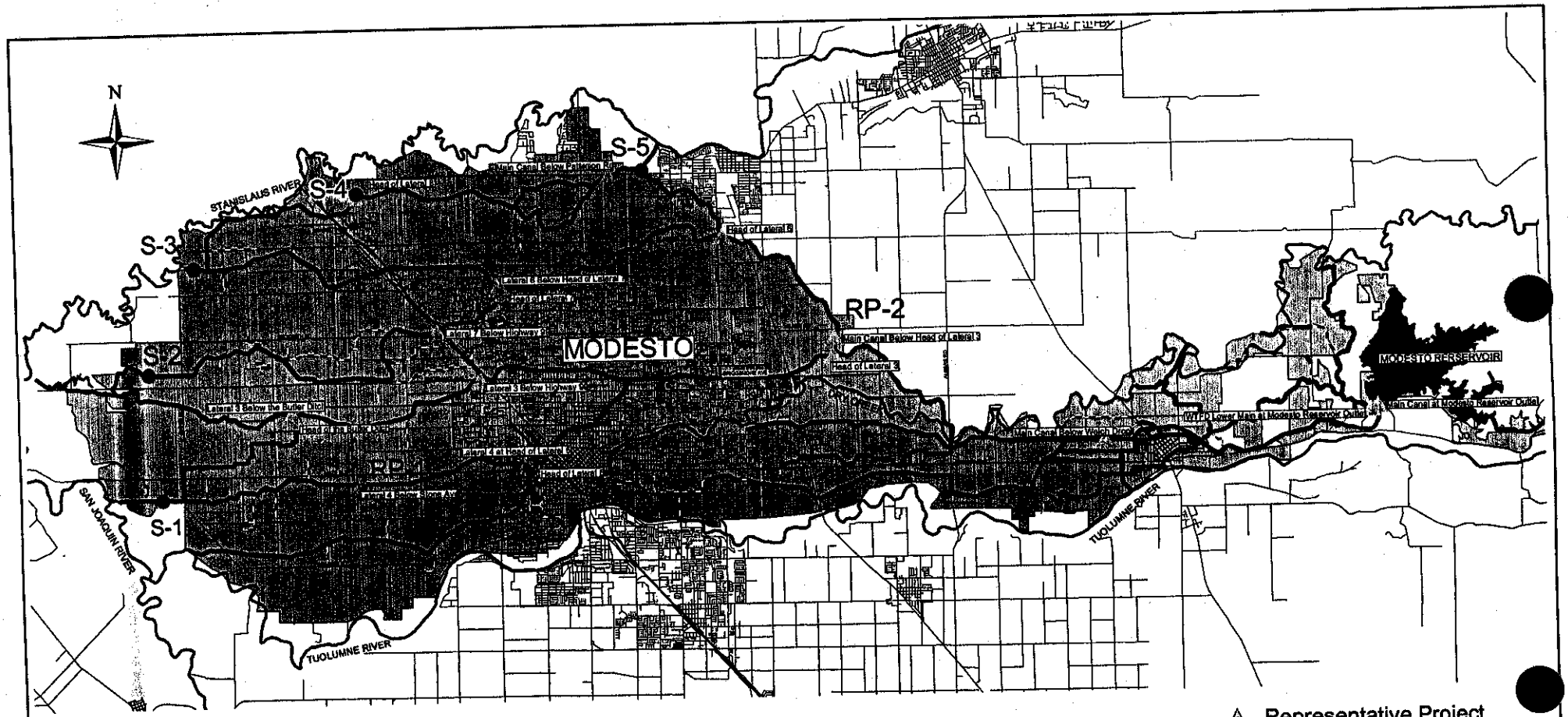
PROJECT LOCATION: San Joaquin Valley in central California, Modesto area, entirely within Stanislaus County. The project service area is shown in Figures 2-1 through 2-3 of the Initial Study, Figure 2-3 is attached.

PROJECT PROPONENT: Modesto Irrigation District

FINDING: By resolution duly adopted by the Board of Directors of the Modesto Irrigation District on December 16, 2003 said Board of Directors recited its finding that the Project will not have a significant effect on the environment.

INITIAL STUDY: A copy of the Initial Study may be examined at or obtained from the office of the Secretary of the Modesto Irrigation District, 1231 Eleventh Street, Modesto, California. The Initial Study for the Project, incorporated herein by reference, documents the reasons that support the foregoing finding.

DATED: December 16, 2003



Modesto Irrigation District
Magnacide Application Vicinity Map

February 26, 2002

Figure 2-3

DRAFT

AQUATIC PESTICIDE APPLICATION PROGRAM FOR THE MODESTO IRRIGATION DISTRICT

CEQA INITIAL STUDY

Prepared for
Modesto Irrigation District
1231 11th Street
Modesto, CA 95354

December 16, 2003

URS
URS Corporation
500 12th Street, Suite 200
Oakland, California 94607

26814421

Table of Contents

1 BACKGROUND 1

2 PROJECT DESCRIPTION 2
- 2.1 Project Objectives 2
- 2.2 Project Characteristics 2
  - 2.2.1 Project Location 2
  - 2.2.2 Project Features 6

3 ENVIRONMENTAL SETTING 12
- 3.1 Biological Resources 12
  - 3.1.1 Environmental Setting 12
  - 3.1.2 Special-Status Species 13
- 3.2 Hydrology and Water Quality 22
  - 3.2.1 Surface Water Hydrology 23
  - 3.2.2 Surface Water Quality in the San Joaquin River Basin 24
  - 3.2.3 Modesto Irrigation District Facilities 25

4 AGENCIES WHOSE APPROVAL IS REQUIRED (RESPONSIBLE, TRUSTEE, AND AGENCIES WITH JURISDICTION) 26

5 CONSISTENCY WITH EXISTING GENERAL PLAN, ZONING, AND OTHER APPLICABLE LAND USE CONTROLS 27

6 ENVIRONMENTAL REVIEW CHECKLIST 29
- 6.1 Aesthetics 29
- 6.2 Agricultural Resources 30
- 6.3 Air Quality 30
- 6.4 Biological Resources 32
- 6.5 Cultural Resources 34
- 6.6 Geology And Soils 35
- 6.7 Hazards And Hazardous Materials 36
- 6.8 Hydrology And Water 38
- 6.9 Land Use And Planning 41
- 6.10 Mineral Resources 42
- 6.11 Noise 42
- 6.12 Population And Housing 43
- 6.13 Public Services 44
- 6.14 Recreation 45
- 6.15 Transportation/Traffic 45
- 6.16 Utilities And Service Systems 47
- 6.17 Mandatory Findings of Significance 48

7 LIST OF PREPARERS 51

8 SUPPORTING INFORMATION SOURCES AND REFERENCES 53

9 ENVIRONMENTAL FACTORS POTENTIALLY AFFECTED 54

10 DETERMINATION 55

Tables

2-1	Water Bodies Treated with Magnacide H
2-2	Weed Growth Condition Chart for Temperatures above 60°F
3-1	Special-Status Species Known to Occur in the Project Area
3-2	Impaired Water Bodies and Listed Pollutants
5-1	County General Plan Summary
6-1	Beneficial Uses of Potentially Affected Water Bodies
7-1	District Personal Involved in Initial Study
7-2	URS Personal Involved in Initial Study

Figures

2-1	Map of San Joaquin Valley Area and Vicinity
2-2	Modesto Irrigation District Service Area and Facilities
2-3	Locations for Application of Magnacide H Modesto Irrigation District
6-1	Cummulative Analysis Study Area

Acronyms

BMPs	best management practices
CAC	County Agricultural Commissioner
CEQA	California Environmental Quality Act
cfs	cubic feet per second
CNDDB	California Natural Diversity Database
CNPS	California Native Plant Society
DDT	dichlorodiphenyltrichloroethane
DFG	California Department of Fish and Game
DPR	California Department of Pesticide Regulation
EC	electrical conductivity
ID	Irrigation District
NPDES	National Pollutant Discharge Elimination System
ppm	part(s) per million
Reclamation	Bureau of Reclamation
SWRCB	California State Water Resources Control Board
USFWS	U.S. Fish and Wildlife Service
WQOs	Water Quality Objectives

1 BACKGROUND

Project Title:	**Aquatic Pesticides Application Program**
Application Number:	Not applicable
Project Location:	Regional Location: San Joaquin Valley in central California District: The Proposed Project is located in the San Joaquin Valley in central California, entirely within Stanislaus County. The project service area is shown in Figure 2-1.
Assessor Parcel No.(s):	Not applicable
Project Sponsor's Name and Address:	Allen Short, General Manager Modesto Irrigation District 1231 Eleventh Street P.O. Box 4060 Modesto, California 95354
General Plan Designation:	The Stanislaus County General Plan (Land Use Element) applies to the District's entire service area (project site); therefore, all of the County's general plan land use designations are applicable. Where incorporated areas are included in the District, the cities of Modesto, Riverbank and Waterford Land use plans would apply and govern if there are any differences between the county and city general plans.
Zoning Designation:	Since the location of the Proposed Project is the entire service area of the Modesto Irrigation District, specific zoning designations are those contained in the Stanislaus County General Plan (Land Use Element) for unincorporated areas and the general/land use plans for the Cities of Modesto, Riverbank and Waterford for the incorporated areas.
Project Description:	The Proposed Project is the continuation of an aquatic pesticide application program implemented by Modesto Irrigation District since 1978. The program was previously regulated in 2002 and 2003 under the State Water Resources Control Board (SWRCB) Statewide General National Pollutant Discharge Elimination System (NPDES) Permit for Discharges of Aquatic Pesticides (Water Quality Order No. 2001-12-DWQ, General Permit No. CAG990003). The proposed program would occur under a new General Permit in 2004 and is expected to be equivalent to the current program. The proposed program would be implemented for a period of approximately 5 years, or for the term of the new General Permit. Modesto Irrigation District applies aquatic pesticides to its irrigation conveyance system to control weeds and algae that interfere with irrigation conveyance and clog waterways and irrigation machinery. To conserve water and maximize the efficiency of irrigation, many landowners currently use sprinkler, drip, or micro-irrigation systems. These systems require irrigation water to be clean and free of vegetative debris that will clog machinery.
Surrounding Land Uses:	Land use in the identified portion of the Tuolumne River watershed is primarily open space (foothill pasture) within the upper reaches and agriculture in the lower reaches. One large urban center, Modesto, and several rural communities are located within the watershed.

2 PROJECT DESCRIPTION

The Proposed Project is the continuation of an aquatic pesticide (Magnacide H) application program implemented by Modesto Irrigation District since 1978. The program was previously regulated in 2002 and 2003 under the State Water Resources Control Board (SWRCB) Statewide General National Pollutant Discharge Elimination System (NPDES) Permit for Discharges of Aquatic Pesticides (Water Quality Order No. 2001-12-DWQ, General Permit No. CAG990003). The proposed program would occur under a new General Permit in 2004 and is expected to be equivalent to the current program. The proposed program would be implemented for a period of approximately 5 years, or for the term of the new General Permit.

Modesto Irrigation District applies aquatic pesticides to its irrigation conveyance system to control weeds and algae that interfere with irrigation conveyance and clog waterways and irrigation machinery. To conserve water and maximize the efficiency of irrigation, many landowners currently use sprinkler, drip, or micro-irrigation systems. These systems require irrigation water to be clean and free of vegetative debris that will clog machinery.

2.1 PROJECT OBJECTIVES

The Modesto Irrigation District applies Magnacide H to its irrigation conveyance system to control weeds and algae that interfere with irrigation conveyance and clog waterways and irrigation machinery. Some of the most problematic weeds include American pondweed, yellow primrose, parrot's feather, and curly moss. To conserve water and maximize the efficiency of irrigation, many landowners currently use sprinkler, drip, or micro-irrigation systems. These systems require irrigation water to be clean and free of vegetative debris that will clog machinery.

2.2 PROJECT CHARACTERISTICS

2.2.1 Project Location

2.2.1.1 Regional Location

The Proposed Project is located in the San Joaquin Valley in central California, entirely within Stanislaus County. The project service area is shown in Figure 2-1.

2.2.1.2 District Location

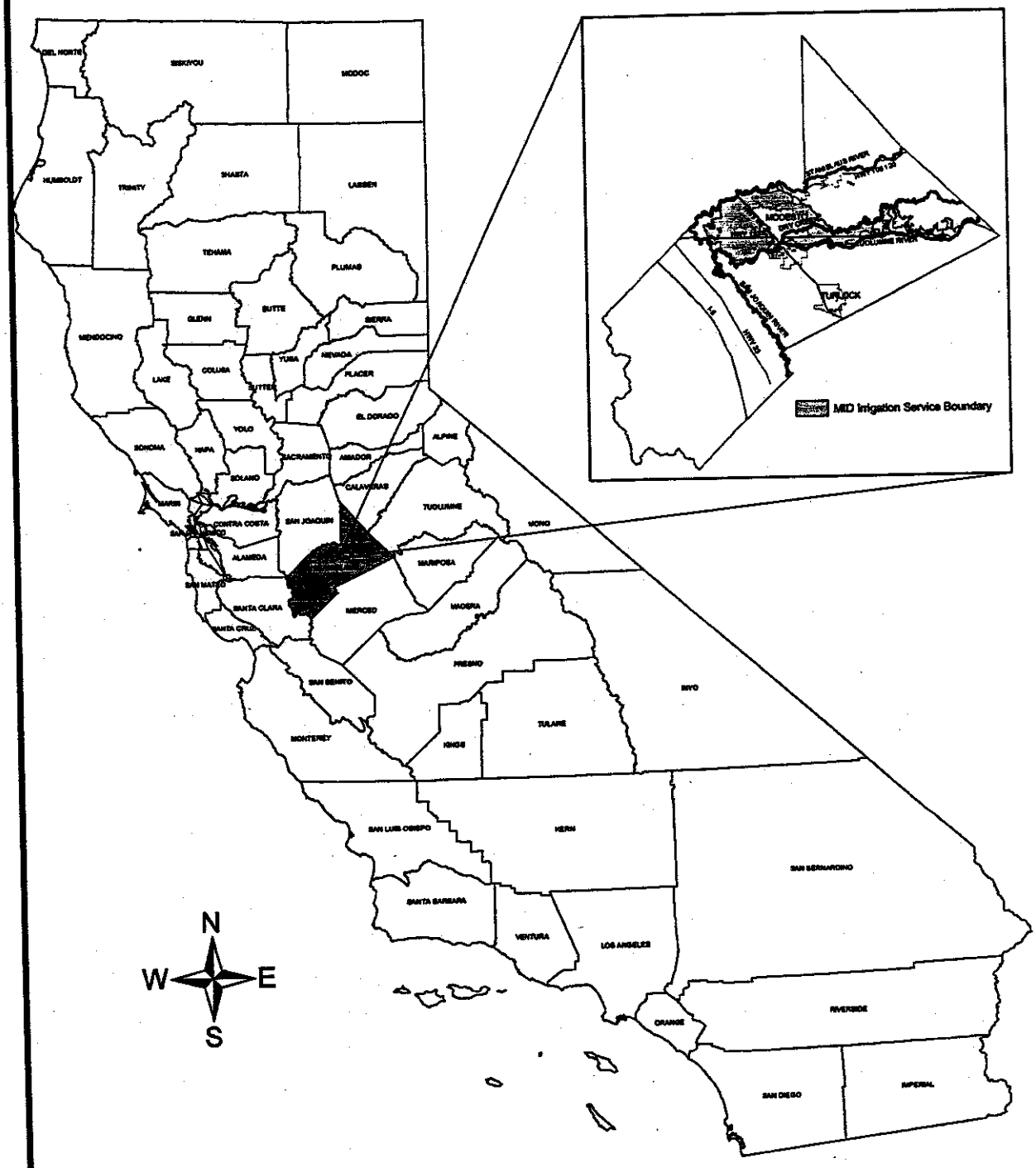
Modesto Irrigation District is located in Stanislaus County, and its service area is shown on Figure 2-2. The District encompasses about 101,700 acres of land between the Stanislaus River to the north, the Tuolumne River to the south and the San Joaquin River to the west. Approximately 60,500 acres of the District's 101,700 acres were irrigated in 2003.

The District's canal system begins at La Grange Dam on the Tuolumne River where water is diverted into the District's Upper Main Canal for conveyance to Modesto Reservoir, which acts as a canal regulating reservoir. From Modesto Reservoir, water is released into the Main Canal for distribution to downstream growers for irrigation purposes. The District has 142 miles of open channel, gravity-delivered canal facilities. Approximately 85 percent of the entire canal

system is concrete lined. The District's canal system, downstream of Modesto Reservoir, is 100 percent concrete lined, and the application of aquatic pesticide to the irrigation water only occurs in these "lower" reaches of the canal system (see Figure 2-2). In addition, the District has a total of 44 miles of cast-in-place concrete pipelines. Half of the District's irrigated acreage is served by Improvement Districts.

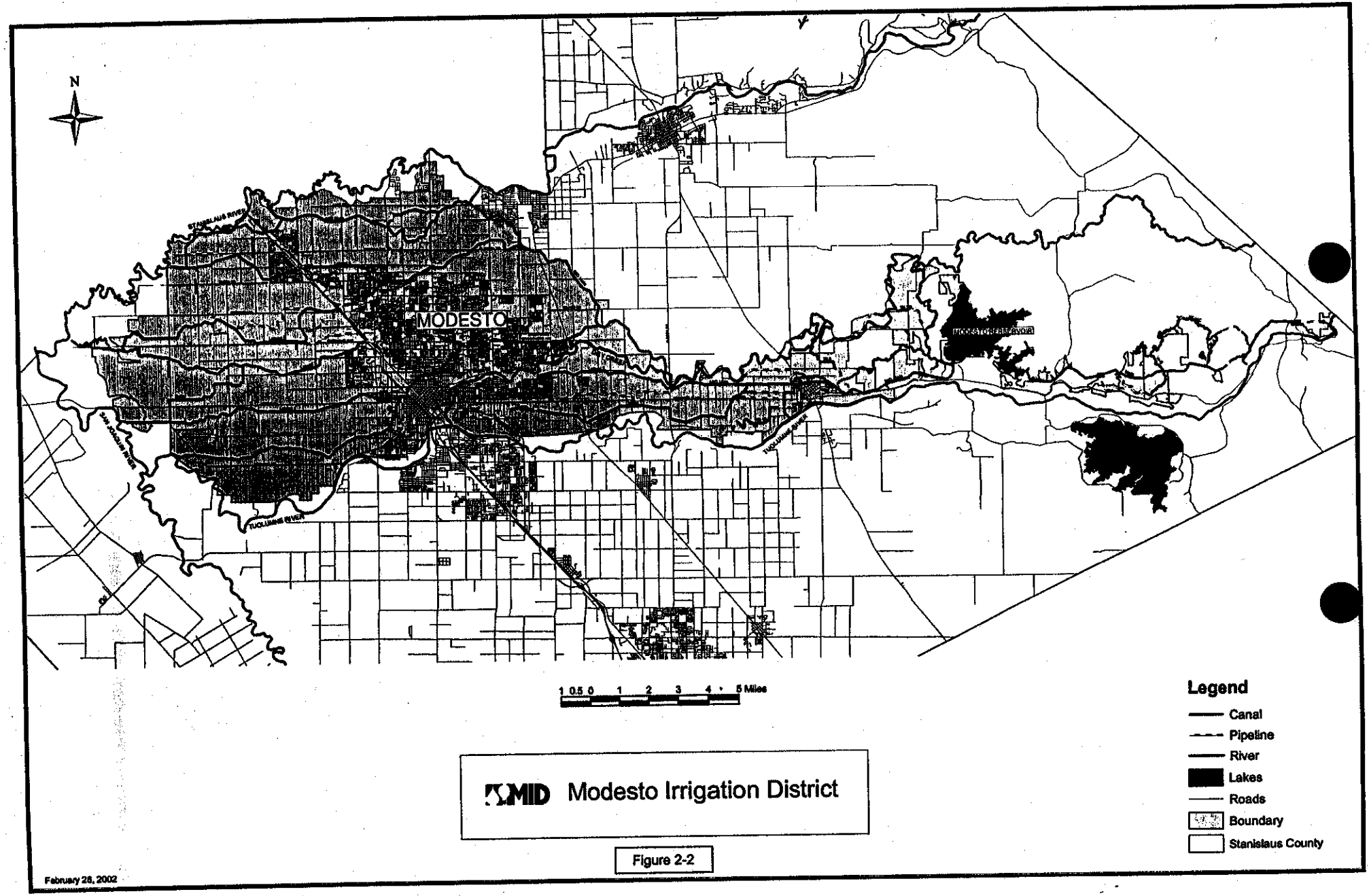
Due to the gravity delivery nature of the system, operational spills from the canal system occur into the San Joaquin River and three tributaries: Tuolumne River, Dry Creek, and Stanislaus River.

Modesto Irrigation District Vicinity Map



MID

Figure 2-1



MID Modesto Irrigation District

Figure 2-2

February 26, 2002

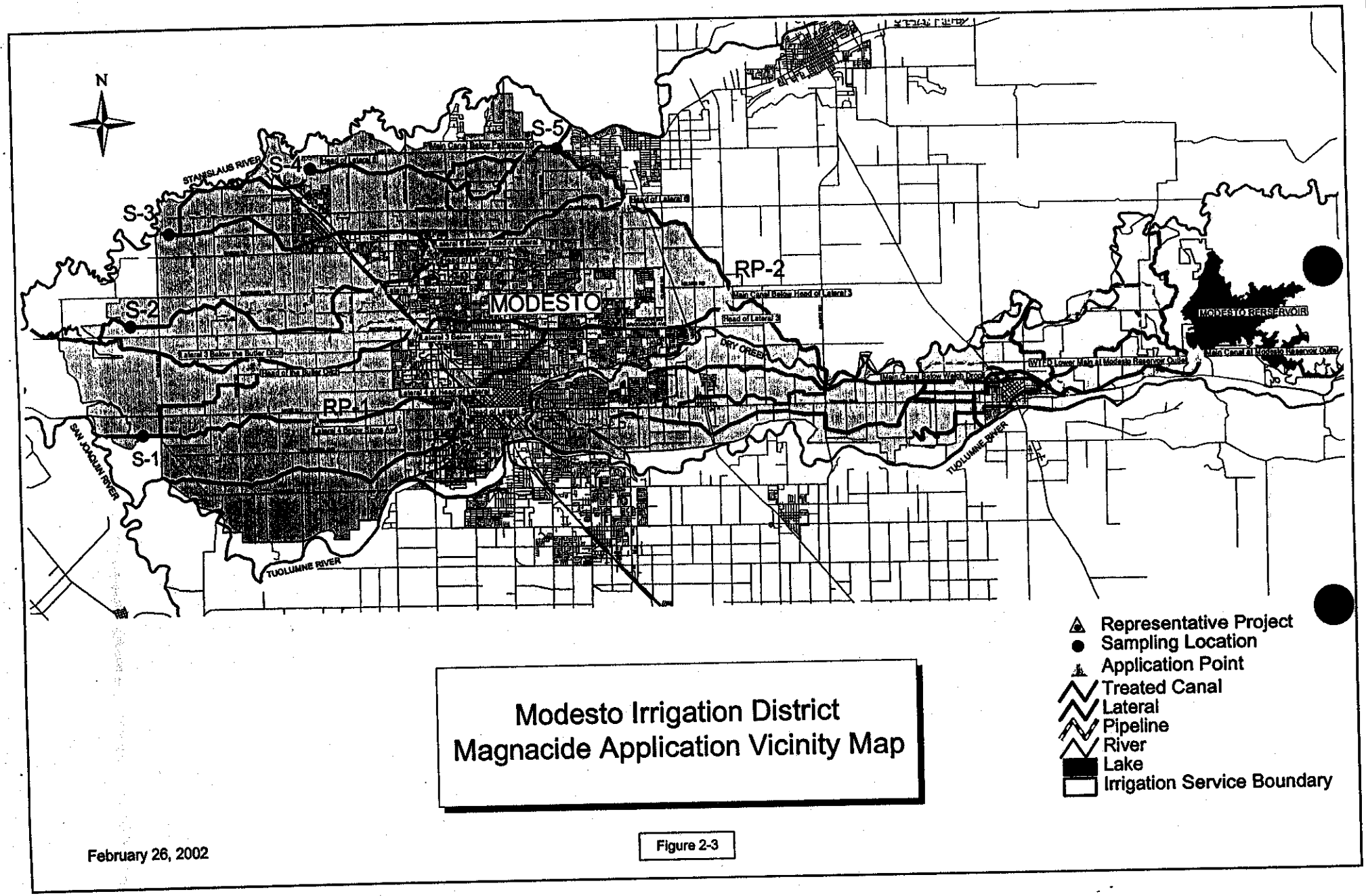
2.2.2 Project Features

2.2.2.1 Proposed Pesticide Application

Magnacide H, the only pesticide directly applied to surface water by the District, is registered for use in California as an aquatic pesticide. Before a pesticide can be used for a specific type of application in California, the Department of Pesticide Regulation (DPR) evaluates it thoroughly during the registration process to ensure that no unacceptable risk to human health or the environment exists. For a pesticide to be evaluated for registration, the applicant must submit data on the product's toxicology, fate and transport characteristics, hazards to non-target organisms, effects on fish and wildlife, degree of worker exposure, and chemistry. The California DPR sometimes denies registration to products approved by the United States Environmental Protection Agency based on stricter requirements, or may impose use restrictions and mitigation measures beyond those listed on labels.

Application of Magnacide H (acrolein) at Modesto Irrigation District begins about 3 weeks after the beginning of the irrigation season or when noticeable weeds are present. The District typically targets weeds when they are small since lower concentrations of pesticide can be used effectively. A 14-day schedule is normally used but irrigation schedules, flows, temperature, and weather may change the application practices along with visual observations of treatments to stay ahead of the weed growth. The application locations are provided on Figure 2-3.

Magnacide H is applied directly to the water in a particular section of canal by placing the application hose into the water of the canal, below a drop or at other turbulent locations to ensure thorough mixing. The Magnacide H is forced through the hose into the canal from the truck mounted tank by applying Nitrogen gas to the tank. The target concentration in the canal, typically 1 to 5 ppm, is obtained by use of the proper orifice and Nitrogen pressure.



Modesto Irrigation District
Magnacide Application Vicinity Map

February 26, 2002

Figure 2-3

Table 2-1
Water Bodies Treated with Magnacide H

Treated Water Bodies	Estimated Total Length Treated	Estimated Total Surface Area Treated	Estimated Typical Range of Flow Rates
Lined canals	125 miles	380 acres	25–500 cfs
Underground pipelines	42 miles	N/A	15–30 cfs

Determinations of Magnacide H applications are made in terms of rates (gallons/hour) based on site-specific information, such as flow, temperature, and weed condition. Weed condition is standardized in the label's application guide as shown in Table 2-2.

Table 2-2

Weed Growth Condition Chart for Temperatures above 60°F

Condition Code	Magnacide H gallon/cfs (Dosage)
A. Little algae and pondweed Less than 6 inches long	0.17
B. Algae (non-floating) and Pondweed less than 12 inches long	0.25
C. Algae (some floating) and Pondweed 12 to 24 inches long	0.50
D. Algae (some floating) and Mature pondweed (over 24 inches)	1.0
E. Choked Condition	1.5

The weed growth Condition Codes in the chart are used to describe the general treatment level. Each treatment requires that an application rate be determined. The rate (gallons/hour) to be applied to a canal depends on the condition dosage, temperature factor, canal rate of flow, and contact time. Equations and/or rate tables in the label instructions are used to determine the rate at the time of treatment. The resulting concentration in parts per million (ppm) is a function of the dosage and application time, and is another indicator of general treatment levels. Label instructions indicate that 15 ppm should not be exceeded by any combination of dosage and application time.

With the early season applications of Magnacide H, Modesto Irrigation District field operators are able to keep ahead of the weed growth. During these early applications, concentrations are normally kept at the lower ends of the label rates. In the canal reaches with higher flow rates and faster moving water, application concentrations are between 0.5 and 2 ppm. In slower moving reaches of the canal system, application rates increase to between 3 and 12 ppm. The application rates are also dependent on weed growth, temperature, and water flow rates.

2.2.2.2 Best Management Practices

The following general best management practices (BMPs) are utilized for all aquatic pesticide applications:

- Obtain an annual permit from the County Agricultural Commissioner (CAC) and submit a Notice of Intent to the CAC and the County 24 hours before applying a restricted pesticide.
- File a Notice of Intent form, including an annual application schedule, with Region 4 of the California Department of Fish and Game (DFG). If a deviation of the schedule occurs or another treatment site is identified, duly notify both the DFG and CAC offices at least 24 hours prior to treatment.
- Follow all pesticide label instructions.
- Comply with DPR and Department of Health Services regulations, and Use Permits issued by the CAC.
- Ensure that all personnel applying restricted aquatic herbicides are trained and licensed (State of California Qualified Applicator Certificates from DPR).
- Treat aquatic vegetation frequently when vegetation is small, to minimize buildup of vegetation and potential dissolved oxygen depletion due to decaying vegetation.
- Evaluate options to treatment (including nontoxic and less toxic alternatives).
- Verify need for treatment and suitability of the site for treatment prior to each application.
- Verify that gates at all potential release points downstream of the point of application are closed prior to treatment and are kept closed until Magnacide H is no longer in the system.
- Prior to each treatment, make arrangements to irrigate out the treated water to appropriate sites. Verify that there will be no potential for crop damage, or for field runoff or drainage discharges to waters of the state (all irrigation water must be retained on site).
- If treated water is not irrigated out, hold water for a minimum of 6 days before releasing, per label instructions.
- Prior to opening gates, conduct the Magnacide H Baker Petrolite Field Test at potential release points.
- Complete a BMP checklist with each pesticide application.

2.2.2.3 Monitoring and Reporting Program

The District has selected two representative water quality monitoring projects (RP-1 & RP-2) for the application of Magnacide H. Each project is monitored two times during the irrigation season: early season with high flows and late season with low flows. The representative projects were selected based on the following criteria:

- Representative Project No. 1 (Lateral 4) consists of an application point (below Stone Ave.) wherein a single lateral reach is treated with the closest proximity to receiving waters with designated beneficial uses (San Joaquin River). There are low flow rates in this canal reach so higher concentrations of acrolein are used due to high growth rate of aquatic weeds. All of the acrolein is irrigated out of the system prior to reaching the spill. Sampling point "S-1" is used with this project.
- Representative Project No. 2 (Main Canal) was chosen on the basis that it is upstream of other major division points in the canal conveyance system and is upstream of six other Magnacide H application points. The application point is into the Main Canal, immediately below the head of Lateral 3. There are generally high flow rates in this reach of the canal system and acrolein in applied at lower concentration levels. All of the acrolein is irrigated out of the system. Sampling points "S-2" thru "S-5" are used with this project.

This monitoring is conducted to comply with the existing SWRCB Statewide General NPDES Permit for Discharges of Aquatic Pesticides (General Permit). This permit specifies that monitoring must include at least one representative project for each aquatic pesticide applied. The current Monitoring and Reporting Program includes the following activities:

1. Document compliance with the requirements of the General Permit.
2. Support the development, implementation, and effectiveness evaluation of BMPs.
3. Demonstrate the full restoration of water quality and protection of beneficial uses for the receiving waters following completion of resource or pest management projects.
4. Identify and characterize the aquatic pesticide application projects conducted by the District.
5. Ensure that the plan provides for monitoring of projects that are representative of all pesticides and all application methods used by the District.

The current General Permit is due to expire in January 2004, and it is expected that a new General Permit will be issued. The District will modify its monitoring program to comply with the monitoring requirements of the new permit.

2.2.2.4 Alternatives to Proposed Project

The weed and algae control methods used by Modesto Irrigation District were selected based on many factors, including the following:

- Potential environmental impacts
- Effectiveness in controlling the targeted pests
- Cost-effectiveness
- Practicality of implementation in irrigation facilities

Modesto Irrigation District has experimented with various methods of weed control. Mechanical vegetation removal, such as raking and chaining, has been used in the past and is still used to a limited extent; however, it is significantly more costly (and often less effective) than herbicide use. In addition, mechanical vegetation removal often results in generation of high levels of turbidity in the water. When highly turbid water is released to natural water bodies, fish and other aquatic organisms may be adversely affected. Mechanical vegetation removal can result in sedimentation and clogging in irrigation equipment, as well as damage to the structural integrity of irrigation facilities, which can result in costly maintenance requirements.

Several other alternative control methods have been considered. For example, dyes that block ultraviolet light are sometimes used to control growth of aquatic weeds. However, it is usually not practical to use these materials in irrigation facilities because of the high flow rates required for water distribution. These dyes must remain in the water for long periods of time to be effective.

Manipulation of water level may also be an effective method of controlling aquatic vegetation. However, for this method to work, canals must be kept dry for a long enough period of time to completely kill the vegetation. During the irrigation season, this dry period is usually not feasible because water must be kept flowing in the canals.

Preventive maintenance is a constant process at Modesto Irrigation District. A large part of the off-season maintenance program (winter time) consists of sediment removal from the lined part of the canal system, which results in a decrease in aquatic weed growth and lessens the amount of herbicide needed.

As a result of the decision in Headwaters, Inc. v Talent Irrigation District, 243 F.3d 526 (9th Cir.2001), aquatic herbicides were not used at all in the Modesto Irrigation District canal system during the first half of the 2001 Irrigation Season. Mechanical and manual weed removal were the only viable options available to keep water running in the canal system. This alternative proved to be very expensive and ineffective, and the labor cost, materials cost, and waste of water were enormous. Many active irrigation customers were adversely affected because of the inability to control aquatic weeds and moss that fouled their irrigation sprinkler, drip, and micro-irrigation systems.

Environmental factors were considered in the selection of herbicides used by Modesto Irrigation District. Acrolein, the active ingredient in Magnacide H, degrades quickly and is registered with DPR for use as an aquatic pesticide.

3 ENVIRONMENTAL SETTING

The environmental setting for the Proposed Project is described herein, focusing on biological and hydrologic resources contained within the District (project area) and vicinity that could be affected by the use of the proposed materials in the District's facilities.

3.1 BIOLOGICAL RESOURCES

This section describes the environmental setting for biological resources in the Proposed Project vicinity. The Proposed Project is located in the San Joaquin Valley in central California. This area overlaps a mix of habitat types defined by the DFG's Wildlife Habitat Relationship system. These habitat types include "natural habitat types" such as riverine, annual grasslands, valley foothill riparian, and valley oak woodland. Agricultural development of the San Joaquin Valley over the past century has resulted in the conversion of natural habitat types to developed habitat types such as irrigated hayfields, irrigated grain and seed crops, dryland grain and seed crops, evergreen orchards, deciduous orchards, rice, vineyard, pasture and urban (DFG 2002).

3.1.1 Environmental Setting

Most of the uplands within the project area have been converted to commercial agricultural production supplied by irrigation water. These converted habitat types can support a wide variety of wildlife species depending upon specific regional characteristics (adjacent habitat types) and management practices. For example, irrigated hayfield habitat usually consists of a monoculture field of alfalfa or grass hay types that rotates back to bare ground directly after harvest. Alfalfa usually exists unplowed for approximately 3 years and is typically followed by a cereal grain crop, tomatoes, or potatoes for 1 to 4 years followed by another alfalfa crop. This habitat type can provide high quality seasonal resources for Botta's pocket gopher (*Thomomys bottae*), mourning dove (*Zenaida macroura*), gray fox (*Urocyon cinereoargenteus)*, gopher snake (*Pituophis melanoleucus*), California king snake (*Lampropeltis gentulus californiae*), American kestrel (*Falco sparverius*), barn owl (*Tyto alba*), sandhill crane (*Grus Canadensis*), and San Joaquin pocket mouse (*Perognathus inornatus inoratus*). However, where harvesting is constant in the irrigated hayfield, reproduction value for ground-nesting species is reduced to zero (DFG 2002).

Similarly, wildlife occurring in deciduous orchard habitat (consisting of single-species crops such as almond, apple, apricot, cherry, fig, nectarine, peach, pear, pecan, pistachio, prune, and walnut) will vary based upon the tree type, pruning methods, and harvest timing. Generally, orchards provide habitats for species that forage on cultivated nuts and fruit and utilizing cover from adjacent habitat types. Typical wildlife found in deciduous orchards are the American crow (*Corvus brachyrhynchos*), northern flicker (*Colaptes auratus*), California ground squirrel (*Spermophilus beecheyi*), western scrub jay (*Aphelocoma californica*), black-tailed hare (*Lepus californicus*), and Virginia opossum (*Didelphis virginiana*).

Riparian forest habitats in the project area are characterized by willow (*Salix spp.*), cottonwood (*Populus fremontii*), alder (*Alnus rhombifolia*), and Oregon ash (*Fraxinus latifolia*). Valley oak (*Quercus lobata*) is common above the active river floodplains. Forests along river and stream corridors provide cover for a number of common animal species, such as raccoons (*Procyon*

lotor), bobcats (*Lynx rufus*), black-tailed deer (*Odocoileus hemionus*), mink (*Mustela vison*), bullfrogs (*Rana catesbeiana*), red-tailed hawks (*Buteo jamaicensis*), red-shouldered hawks (*Buteo lineatus*), belted kingfishers (*Ceryle alcyon*), and black phoebes (*Sayornis nigricans*). The nearshore waters of creeks and streams within riparian habitats provide invertebrate forage for avian species including the black-necked stilt (*Himantopus mexicanus*), common merganser (*Mergus merganser americanus*), mallard (*Anas platyrhnchos*), great blue heron (*Ardea herodias*), black rail (*Laterallus jamaicensis*), snowy egret (*Egretta thula*), common snipe (*Gallinago gallinago*) and killdeer (*Charadrius vociferus*).

3.1.2 Special-Status Species

Table 3-1 presents the special-status species that are known to occur in the project area vicinity (CNDDB 2003) even though not observed within District canals. These species are listed, proposed, or candidates under the federal or California Endangered Species Acts or designated as "species of concern" by the U.S. Fish and Wildlife Service (USFWS) or the DFG, or included on the California Native Plant Society (CNPS) inventory of rare, threatened, or endangered plants (CNPS 2001).

Table 3-1
Special-Status Species Known to Occur in the Project Area[1]

Scientific Name/Common Name	Federal Status[2]	State Status[2]	DFG[3]/ CNPS/ R-E-D[4]	Potential to Utilize Aquatic Habitat Associated With Water Conveyance Facilities
AMPHIBIANS				
Ambystoma californiense California tiger salamander	Proposed Threatened	--	SC	No
Spea (=Scaphiopus) hammondii western spadefoot	Species of Concern	--	SC	No
Rana aurora draytonii California red-legged frog	Threatened	--	SC	No
Rana boylii foothill yellow-legged frog	Species of Concern	--	SC	No
BIRDS				
Egretta thula snowy egret	Species of Concern	--	--	No
Botaurus lentiginosus American bittern	Migratory Nongame Birds of Management Concern	--	--	No
Branta canadensis leucopareia Aleutian Canada goose	Species of Concern	--	--	No
Circus cyaneus northern harrier	--	--	SC	No
Buteo swainsoni Swainson's hawk	Species of Concern	Threatened	--	No
Falco mexicanus prairie falcon	--	--	SC	No

Table 3-1
Special-Status Species Known to Occur in the Project Area[1]

Scientific Name/Common Name	Federal Status[2]	State Status[2]	DFG[3]/ CNPS/ R-E-D[4]	Potential to Utilize Aquatic Habitat Associated With Water Conveyance Facilities
Coturnicops noveboracensis yellow rail	--	--	SC	No
Laterallus jamaicensis coturniculus California black rail	Species of Concern	Threatened	--	No
Charadrius montanus mountain plover	--	--	SC	No
Coccyzus americanus occidentalis western yellow-billed cuckoo	Candidate	Endangered	--	No
Athene cunicularia burrowing owl	Species of Concern	--	SC	No
Eremophila alpestris actia California horned lark	--	--	SC	No
Icteria virens yellow-breasted chat	--	--	SC	No
Agelaius tricolor tricolored blackbird	Species of Concern	--	SC	Yes
FISH				
Oncorhynchus tshawytscha Central Valley Fall-Run Chinook Salmon	Candidate	--	--	No
Oncorhynchus mykiss Central Valley Steelhead	Threatened	--	SC	No
Lampetra ayresi river lamprey	Species of Concern	--	SC	No
Lampetra tridentata Pacific lamprey	Species of Concern	--	SC	No
Lampetra hubbsi Kern brook lamprey	Species of Concern	--	SC	Yes
Lavinia symmetricus ssp. 2 San Joaquin roach	--	--	SC	Yes
Mylopharodon conocephalus hardhead	--	--	SC	Yes
Pogonichthys macrolepidotus Sacramento splittail	--	--	SC	No
MAMMALS				
Myotis yumanensis Yuma myotis	Species of Concern	--	--	No
Corynorhinus townsendii townsendii Townsend's western big-eared bat	Species of Concern	--	SC	No
Antrozous pallidus pallid bat	--	--	SC	No
Eumops perotis californicus western mastiff bat	Species of Concern	--	SC	No
Sylvilagus bachmani riparius riparian brush rabbit	Endangered	Endangered	--	No

Table 3-1
Special-Status Species Known to Occur in the Project Area[1]

Scientific Name/Common Name	Federal Status[2]	State Status[2]	DFG[3]/ CNPS/ R-E-D[4]	Potential to Utilize Aquatic Habitat Associated With Water Conveyance Facilities
Ammospermophilus nelsoni San Joaquin antelope squirrel	Species of Concern	Threatened	--	No
Perognathus inornatus inornatus San Joaquin pocket mouse	Species of Concern	--	--	No
Dipodomys heermanni dixoni Merced kangaroo rat	Species of Concern	--	--	No
Dipodomys ingens giant kangaroo rat	Endangered	Endangered	--	No
Neotoma fuscipes riparia riparian (=San Joaquin Valley) woodrat	Endangered	--	SC	No
Vulpes macrotis mutica San Joaquin kit fox	Endangered	Threatened	--	No
REPTILES				
Emys (=Clemmys) marmorata marmorata western pond turtle	Species of Concern	--	SC FP	Yes
Anniella pulchra pulchra silvery legless lizard	Species of Concern	--	SC	No
Gambelia sila blunt-nosed leopard lizard	Endangered	Endangered	--	No
Phrynosoma coronatum (frontale) Coast (California) horned lizard	Species of Concern	--	SC	No
Masticophis flagellum ruddocki San Joaquin whipsnake	Species of Concern	--	SC	No
Thamnophis gigas giant garter snake	Threatened	Threatened	--	Yes
INVERTEBRATES				
Branchinecta conservatio Conservancy fairy shrimp	Endangered	--	--	No
Branchinecta longiantenna longhorn fairy shrimp	Endangered	--	--	No
Branchinecta lynchi vernal pool fairy shrimp	Threatened	--	--	No
Branchinecta mesovallensis midvalley fairy shrimp	Species of Concern	--	--	No
Linderiella occidentalis California linderiella	Species of Concern	--	--	No
Lepidurus packardi vernal pool tadpole shrimp	Endangered	--	--	No
Desmocerus californicus dimorphus valley elderberry longhorn beetle	Threatened	--	--	No
Lytta moesta Moestan blister beetle	Species of Concern	--	--	No
Lytta molesta	Species of	--	--	No

Table 3-1
Special-Status Species Known to Occur in the Project Area[1]

Scientific Name/Common Name	Federal Status[2]	State Status[2]	DFG[3]/ CNPS/ R-E-D[4]	Potential to Utilize Aquatic Habitat Associated With Water Conveyance Facilities
molestan blister beetle	Concern			
Eucerceris ruficeps redheaded sphecid wasp	--	--	--	No
PLANTS				
Eryngium racemosum Delta button-celery	Species of Concern	Endangered	1B/2-3-3	No
Eryngium spinosepalum spiny-sepaled button-celery	Species of Concern	--	1B/3-2-3	No
Lilaeopsis masonii Mason's lilaeopsis	Species of Concern	Rare	1B/2-3-3	No
Lomatium observatorium Mt. Hamilton lomatium	Species of Concern	--	1B/3-2-3	No
Aster lentus Suisun Marsh aster	Species of Concern	--	1B/2-2-3	No
Blepharizonia plumosa ssp. *Plumosa* big tarplant	Species of Concern	--	1B/3-3-3	No
Calycadenia hooveri Hoover's calycadenia	Species of Concern	--	1B/2-1-3	No
Cirsium fontinale var. *campylon* Mt. Hamilton thistle	Species of Concern	--	1B/2-2-3	No
Cirsium crassicaule slough thistle	Species of Concern	--	1B/3-3-3	No
Coreopsis hamiltonii Mt. Hamilton coreopsis	Species of Concern	--	1B/3-2-3	No
Madia radiata showy madia	Species of Concern	--	1B/2-3-3	No
Pseudobahia bahiifolia Hartweg's golden sunburst	Endangered	Endangered	1B/2-3-3	No
Senecio aphanactis rayless ragwort	--	--	2/3-2-1	No
Trichocoronis wrightii var. *wrightii* Wright's trichocoronis	--	--	2/3-3-1	No
Amsinckia grandiflora large-flowered fiddleneck	Endangered	Endangered	1B/3-3-3	No
Plagiobothrys uncinatus hooked popcorn-flower	Species of Concern	--	1B/2-2-3	No
Streptanthus insignis ssp. *Lyonii* Arburua Ranch jewel-flower	Species of Concern	--	1B/3-2-3	No
Tropidocarpum capparideum caper-fruited tropidocarpum	Species of Concern	--	1A/ *	No
Campanula sharsmithiae Sharsmith's harebell	Species of Concern	--	1B/3-2-3	No
Downingia pusilla dwarf downingia	--	--	2/1-2-1	No
Legenere limosa	Species of	--	1B/2-3-3	No

Table 3-1
Special-Status Species Known to Occur in the Project Area[1]

Scientific Name/Common Name	Federal Status[2]	State Status[2]	DFG[3]/ CNPS/ R-E-D[4]	Potential to Utilize Aquatic Habitat Associated With Water Conveyance Facilities
legenere	Concern			
Atriplex cordulata heartscale	Species of Concern	--	1B/2-2-3	No
Atriplex coronata var. *notatior* San Jacinto Valley crownscale	Endangered	--	1B/3-3-3	No
Atriplex joaquiniana San Joaquin saltbush	Species of Concern	--	1B/2-2-3	No
Atriplex vallicola Lost Hills crownscale	Species of Concern	--	1B/2-2-3	No
Atriplex depressa brittlescale	Species of Concern	--	1B/2-2-3	No
Atriplex minuscula lesser saltscale	Species of Concern	--	1B/3-3-3	No
Atriplex persistens vernal pool smallscale	Species of Concern	--	1B/2-2-3	No
Atriplex subtilis subtle orache	Species of Concern	--	1B/2-2-3	No
Chamaesyce hooveri Hoover's spurge	Threatened	--	1B/3-2-3	No
Astragalus tener var. *tener* alkali milk-vetch	Species of Concern	--	1B/3-2-3	No
Lathyrus jepsonii var. *jepsonii* Delta tule pea	Species of Concern	--	1B/2-2-3	No
Lotus rubriflorus red-flowered lotus	Species of Concern	--	1B/3-3-3	No
Erodium macrophyllum round-leaved filaree	--	--	2/2-3-1	No
Phacelia ciliata var. *opaca* Merced phacelia	Species of Concern	--	1B/3-1-3	No
Phacelia phacelioides Mt. Diablo phacelia	Species of Concern	--	1B/3-2-3	No
Monardella leucocephala Merced monardella	Species of Concern	--	1A/ *	No
Scutellaria galericulata marsh skullcap	--	--	2/2-2-1	No
Scutellaria lateriflora blue skullcap	--	--	2/3-2-1	No
Hesperolinon sp. *nov.* *"serpentinum"* Napa western flax	Species of Concern	--	1B/3-2-3	No
Hibiscus lasiocarpus rose-mallow	--	--	2/2-2-1	No
Malacothamnus hallii Hall's bush mallow	Species of Concern	--	1B/3-2-3	No
Clarkia rostrata beaked clarkia	Species of Concern	--	1B/2-1-3	No

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Special-Status Species Known to Occur in the Project Area[1]

Scientific Name/Common Name	Federal Status[2]	State Status[2]	DFG[3]/ CNPS/ R-E-D[4]	Potential to Utilize Aquatic Habitat Associated With Water Conveyance Facilities
Eschscholzia rhombipetala diamond-petaled California poppy	Species of Concern	--	1B/3-3-3	No
Navarretia nigelliformis ssp. *Radians* shining navarretia	--	--	1B/2-2-3	No
Navarretia prostrata prostrate navarretia	Species of Concern	--	1B/2-3-3	No
Navarretia myersii ssp. *Myersii* pincushion navarretia	Species of Concern	--	1B/3-3-3	No
Delphinium californicum ssp. *Interius* Hospital Canyon larkspur	Species of Concern	--	1B/3-2-3	No
Delphinium recurvatum recurved larkspur	Species of Concern	--	1B/2-2-3	No
Castilleja campestris ssp. *Succulenta* succulent owl's-clover	Threatened	Endangered	1B/2-2-3	No
Cordylanthus mollis ssp. *Hispidus* hispid bird's-beak	Species of Concern	--	1B/2-3-3	No
Cordylanthus palmatus palmate-bracted bird's-beak	Endangered	Endangered	1B/3-3-3	No
Gratiola *heterosepala* Boggs Lake hedge-hyssop	Species of Concern	Endangered	1B/1-2-2	No
Limosella subulata Delta mudwort	--	--	2/2-3-1	No
Sagittaria sanfordii Sanford's arrowhead	Species of Concern	--	1B/2-2-3	Yes
Carex comosa bristly sedge	--	--	2/3-3-1	No
Eleocharis quadrangulata four-angled spikerush	--	--	2/3-2-1	No
Allium sharsmithiae Sharsmith's onion	Species of Concern	--	1B/2-1-3	No
Fritillaria falcata talus fritillary	Species of Concern	--	1B/3-2-3	No
Agrostis hendersonii Henderson's bent grass	Species of Concern	--	3/3-2-2	No
Neostapfia colusana Colusa grass	Threatened	Endangered	1B/2-3-3	No
Orcuttia pilosa hairy orcutt grass	Endangered	Endangered	1B/2-3-3	No
Orcuttia inaequalis San Joaquin Valley orcutt grass	Threatened	Endangered	1B/2-3-3	No
Tuctoria greenei Greene's tuctoria	Endangered	Rare	1B/2-3-3	No
Potamogeton filiformis slender-leaved pondweed	--	--	2/3-2-1	Yes

Table 3-1
Special-Status Species Known to Occur in the Project Area[1]

Scientific Name/Common Name	Federal Status[2]	State Status[2]	DFG[3]/ CNPS/ R-E-D[4]	Potential to Utilize Aquatic Habitat Associated With Water Conveyance Facilities

Notes:
[1] Occurrences documented in the California Natural Diversity Data Base (CNDDB) for San Joaquin, Stanislaus and Merced counties (DFG 2003).
[2] Federal and state status designations as published in DFG (2003).
[3] DFG status abbreviations:
SC – species of special concern
FP – fully protected species under the California Fish and Game Code (no take allowed)
[4] California Native Plant Society (CNPS) and R-E-D status abbreviations:
1A – List 1A (plants presumed extinct)
1B –List 1B (plants rare or threatened in California and elsewhere)
2 – List 2 (plants rare or threatened in California but more common elsewhere)
3 – List 3 (plants that require additional information)
4 – List 4 (plants of limited distribution)
R-E-D indicates level of rarity, endangerment, and distribution: a 3 in each category indicates a species that has a high level of rarity, endangerment, or limited distribution, while a 1 in each category indicates a lower level of rarity, endangerment, or a more widespread distribution. The CNPS does not provide R-E-D codes for species presumed to be extinct (List 1A).

Application of the proposed aquatic pesticides to irrigation conveyance systems could potentially affect eight special-status species that utilize aquatic habitats in the project area.

- Tricolored blackbird (*Agelaius tricolor*)
- Kern brook lamprey (*Lampetra hubbsi*)
- San Joaquin roach (*Lavinia symmetricus* ssp. 1)
- Hardhead (Mylopharodon conocephalus)
- Northwestern pond turtle (*Emys* [=*Clemmys*] *marmorata marmorata*)
- Giant garter snake (*Thamnophis gigas*)
- Sanford's arrowhead (*Sagittaria sanfordii*)
- Slender-leaved pondweed (*Potamogeton filiformis*)

Special-status terrestrial species that could be affected by the Proposed Project are those that utilize the water systems for foraging, movement, or breeding. Potential effects could include direct exposure to various chemical compounds or indirect effects associated with physical disturbance and/or disruption of food web dynamics. The eight special-status species potentially affected by the Proposed Project are described below:

- **Tricolored blackbird.** The tricolored blackbird is nearly endemic to California. This species historically nested throughout the Central Valley and along the coast from Sonoma County to Mexico. California's population of tricolored blackbirds has been reduced by an estimated 64 percent from its historic numbers due to the loss of freshwater wetland habitat, human disturbance, and competition for nesting space with red-winged blackbirds (San Francisco Estuary Project 1992).

  This species nests in dense colonies in thick stands of cattails or tules, and in other areas with a permanent water source (San Francisco Estuary Project 1992). Tricolored blackbirds have also been observed nesting in riparian vegetation such as willows, thistles, blackberry, and wild rose plants, when freshwater emergent vegetation is not available. Nesting season occurs between March 1 and August 30. Nest sites are generally in close proximity to foraging areas, which often include flooded rice fields, pond margins, and other grassy sites (San Francisco Estuary Project 1992).

  Neither District canals nor adjacent canal banks provide suitable nesting habitat for this species, and no nests of this species have been observed in such areas.

- **Kern brook lamprey.** This nonparasitic, nonanadromous lamprey occurs in the southern San Joaquin drainage and in the Kings River. Like the other species of lamprey, ammocetes of this species are filter feeders. Adults, however, do not feed, they simply metamorphose, spawn, and die. The ammocete usually remains buried in the soft substrate of backwater pools or low-flow areas in the rivers it lives in, with only its mouth exposed for filter feeding. After some number of years the ammocetes metamorphose into the adult form, and probably require coarse gravel/rubble substrate for spawning.

  District canals do not provide adequate habitat for this species as the water velocities are high and sediment accumulation is low; no populations of this species have been observed in District canals.

- **San Joaquin roach.** A subspecies of the California roach, the San Joaquin roach's range is limited to the San Joaquin river system and inhabits headwater pools, creeks, and small to medium streams with rocky substrates. Known as a habitat generalist, it is usually found in small, warm, intermittent tributaries to larger streams, but also can occur in cold trout streams, human-modified habitats, and in the main channels of rivers. Dense populations are often found in isolated, well-shaded pools. The San Joaquin roach is capable of withstanding extreme environmental conditions, and is most abundant in pools and slow waters of the low to mid-elevation streams with high pH, conductivity, and temperature and with little cover or canopy. Spawning occurs in shallow, flowing areas with a substrate of small rocks. Adhesive eggs stick to rocks. Newly hatched fry stay in

rock crevices or vegetation until large enough to move around actively (NatureServe 2003).

District canals do not provide suitable habitat for this species, and no populations of this species have been observed in District canals.

- **Hardhead.** The hardhead is a freshwater fish native to California with a distribution limited to the Sacramento-San Joaquin and Russian river systems. Usually found in water systems with clear, deep pools with sand-gravel-boulder bottoms and slow water velocity. Spawning occurs as early as May and June in the valley and may extend to August in the foothill regions of the upper San Joaquin River. Spawning substrate may include sand, gravel, and decomposed granite areas. Juvenile hardhead inhabit both shallow regions and deeper lakes and reservoirs, and may be also be found in various temperature gradients such as Millerton Lake. Juvenile hardhead feed on plankton and cladocerans and on insects and small snails. They also take filamentous algae in the intermittent pools of upper San Joaquin River, particularly in the fall months. Hardhead reach maturity at the end of their second year (UC Berkeley 2003).

  District canals do not provide suitable habitat for this species, and no populations of this species have been observed in District canals.

- **Western pond turtle.** (DFG species of concern). The western pond turtle is a freshwater turtle with a carapace that measures 4 to 8 inches in diameter when fully grown. Typically associated with calm waters such as streams, pools, and irrigation canals with vegetated banks and containing basking areas with downed logs or large rocks. Food consists mainly of animal matter such as aquatic invertebrates, small amphibians, and fish, but can also include aquatic plants. When disturbed, the western pond turtle usually retreats into the nearest waterway. Females lay 5 to 11 eggs between May and August, in buried nests in sunny, sandy areas near water. Hatching time is approximately 73 to 80 days. Juveniles will remain in the nest until the following spring. (DFG 2002)

  District canals do not provide the preferred habitat of this turtle, vegetated banks with logs or rocks for basking. No populations of this species have been observed in District canals.

- **Giant garter snake.** The giant garter snake is considered one of the largest garter snakes reaching lengths of approximately 63 inches and weighing up to 1.5 pounds. The giant garter snake typically inhabits agricultural wetlands and other waterways such as irrigation and drainage canals, sloughs, ponds, small lakes, low gradient streams, and adjacent uplands in the Central Valley. Its food consists primarily of small fish, amphibians, and amphibian larvae. The giant garter snake dens in small mammal burrows and other soil crevices above prevailing flood elevations throughout its winter dormancy period. Giant garter snakes typically select burrows with sunny exposure along south- and west-facing slopes. When disturbed, the giant garter snake usually retreats into the nearest waterway. Its breeding season extends through March and April, and females give birth to live young from late July through early September (USFWS 2003; DFG 2002).

Giant garter snakes are historically known from the central and western portions of the San Joaquin Valley. An aquatic garter snake (*T. couchii* or *T. gigas*) has never been collected from the eastern San Joaquin Valley, between the Sierra Nevada foothills and the marshes on the Valley floor (Hansen 1980). It has been suggested that the ranges of these two species were once divided by extensive riparian forests that occurred along the river corridors of streams that flowed from the foothills of the Sierra Nevada mountains to the San Joaquin River (Hansen 1980; USFWS 1999). Between the foothills of the Sierra, and the marshes and sloughs that typified the habitats of the bottomlands of the San Joaquin Valley, river corridors were shaded by dense riparian forests. These shaded river corridors lacked suitable basking sites for aquatic garter snakes, and prey items may also have been less abundant than in sloughs and marshes of the bottomland regions.

This type of riparian habitat is not suitable for giant garter snakes (Brode 1988). Consequently, habitats suitable for aquatic garter snakes (including the giant garter snake) appear to be absent from the eastern portions of San Joaquin, Stanislaus, and Merced counties.

- **Sanford's arrowhead.** Sanford's arrowhead is included on CNPS List 1B and it is designated a species of concern by the USFWS. This perennial herb in the water plantain family (*Alismataceae*) is widely distributed in California from Del Norte County on the north coast to Ventura and Orange counties in Southern California. However, this species is now extirpated from Southern California and many parts of the Central Valley. Typical habitat is shallow freshwater marsh at elevations between 0 and 2,000 feet and many of the existing occurrences of Sanford's arrowhead are documented from irrigation channels and drainage ditches. This species blooms from May to October.

  District canals are concrete lined and are operated with a minimum of two to three feet of moving water which is not the preferred habitat of this plant. No populations of this species have been observed in District canals.

- **Slender-Leaved Pondweed.** Slender-leaved pondweed is included on CNPS List 2. This perennial herb in the pondweed family (*Potamogetonaceae*) is widely distributed in the northern hemisphere but is rare in California. Slender-leaved pondweed has submersed stems and leaves less than 6 inches long and less than 0.12 inch wide. This pondweed species typically occupies the shallow-water zones of lakes and drainage channels in the San Joaquin Valley, Sierra Nevada, San Francisco Bay, and Modoc Plateau regions of California (DFG 2003).

  District canals are concrete lined and are operated with a minimum of two to three feet of water depth which is not the preferred shallow water habitat of this species. No populations of this species have been observed in District canals.

3.2 HYDROLOGY AND WATER QUALITY

This section describes the environmental setting for water resources in the Proposed Project vicinity. The San Joaquin River Basin is contained within the southern portion of the Central Valley of California. The basin extends approximately 250 miles north to south, encompasses about 32,000 square miles, and is bounded by the Sierra Nevada mountains on the east and the Diablo Range on the west. Extensive water supply, hydroelectric, and flood-control efforts during the past century have resulted in the construction of dams and reservoirs that now control the flow on nearly all major streams in the San Joaquin River Basin. The primary sources of surface water to the San Joaquin River Basin are rivers that drain the western slope of the Sierra Nevada. Each of these rivers, the San Joaquin, Merced, Tuolumne, Stanislaus, Calaveras, Mokelumne, and Cosumnes, drains large areas of high-elevation watershed that supply snowmelt runoff during the late spring and early summer months.

3.2.1 Surface Water Hydrology

3.2.1.1 San Joaquin River

The San Joaquin River originates in the Sierra Nevada at an elevation above 10,000 feet and flows into the San Joaquin Valley at Friant Dam. Along the valley floor, the San Joaquin River receives additional flow from the Merced, Tuolumne, and Stanislaus rivers. Flows in the upper San Joaquin River are regulated by the Central Valley Project's Friant Dam, which was completed in 1941 to store and divert water to the Madera and Friant-Kern canals for irrigation and municipal and industrial water supplies in the eastern portion of the San Joaquin Valley. Releases from Friant Dam are generally limited to those required to satisfy downstream water rights. Millerton Lake, formed by Friant Dam, has a capacity of 520,000 acre-feet.

The lower San Joaquin River is the section of river from the confluence with the Merced River (below Fremont Ford) to Vernalis, which is generally considered the southern limit of the Sacramento-San Joaquin River Delta (Delta). It is characterized by the combination of flows from tributary streams, major rivers, groundwater accretions, and agricultural drainwater. The drainage area of the San Joaquin River above Vernalis is approximately 13,356 square miles. However, little water is contributed from the upper San Joaquin River, except during flood events. Therefore, flows in the lower San Joaquin River are primarily governed by the tributary inflows from the Merced, Tuolumne, and Stanislaus rivers.

3.2.1.2 Merced River

The Merced River drains an area of approximately 1,273 square miles east of the San Joaquin River, and produces an average unimpaired runoff of approximately 1 million acre-feet. The major water supply reservoir on the river is Lake McClure, with a capacity of 1,024,000 acre-feet. It is formed by New Exchequer Dam, completed in 1967, which regulates releases to the lower Merced River. New Exchequer Dam is owned and operated by the Merced Irrigation District for power production, irrigation, and flood control. The Modesto Irrigation District does not have any facilities that discharge water to the Merced River or its tributaries.

3.2.1.3 Tuolumne River

The Tuolumne River drains a watershed of approximately 1,540 square miles, and produces an average annual unimpaired runoff of approximately 1.8 million acre-feet. Flows in the lower portion of the Tuolumne River are controlled primarily by the operation of New Don Pedro Dam, which was constructed in 1971 jointly by the Turlock Irrigation District and Modesto Irrigation District with participation by the City and County of San Francisco. The 2.03-million-acre-foot reservoir stores water for irrigation, hydroelectric generation, fish and wildlife enhancement, recreation, and flood-control purposes.

3.2.1.4 Stanislaus River

The Stanislaus River drains a watershed of approximately 900 square miles, and produces an average unimpaired runoff of approximately 1.056 million acre-feet. Flows in the lower Stanislaus River are controlled by releases from the New Melones Reservoir, which has a capacity of 2.4 million acre-feet, and is operated by the Bureau of Reclamation (Reclamation) as part of the Central Valley Project. The main water diversion point on the Stanislaus River is Goodwin Dam, which provides for delivery to Oakdale and South San Joaquin irrigation districts.

3.2.2 Surface Water Quality in the San Joaquin River Basin

Surface water quality in the San Joaquin River Basin is affected by several factors, including natural runoff, agricultural return flows, biostimulation, construction, logging, grazing, operations of flow-regulating facilities, urbanization, and recreation. In addition, irrigated crops grown in the western portion of the San Joaquin Valley have accelerated the leaching of minerals from soils, altering water quality conditions in the San Joaquin River system.

Water quality in the San Joaquin River varies considerably along the stream's length. In the reaches above Millerton Lake, water quality is generally excellent. However, several reaches of the river below Friant Dam are often dry due to groundwater percolation. From Salt Slough to Fremont Ford, most of the flow in the river is derived from water deliveries to the wildlife refuges and irrigation return flows and discharges (e.g., Grassland Bypass Project) carried by Salt and Mud sloughs. This reach of the San Joaquin River typically has the poorest water quality of any reach of the river.

As the San Joaquin River progresses downstream from Fremont Ford, water quality generally improves at successive confluences, specifically at those with the Merced, Tuolumne, and Stanislaus rivers. In the relatively long reach between the Merced and Tuolumne rivers, however, mineral concentrations tend to increase due to agricultural drainwater return flows, other wastewaters, and groundwater discharging into the river (DWR 1965 as cited in Reclamation 2000).

Section 303(d) of the Clean Water Act requires states to identify and include on the 303(d) list water bodies that are threatened or are not meeting water quality standards despite controls on point source discharges. Pollutants listed for water bodies within the San Joaquin River Basin and downstream of aquatic pesticide treatment areas are shown in Table 3-2.

Table 3-2
Impaired Water Bodies and Listed Pollutants

Water Body	Pollutant/Stressor	Potential Source
Tuolumne River, Lower (Don Pedro Reservoir to San Joaquin River)	Diazinon	Agriculture
	Group A Pesticides	Agriculture
	Unknown Toxicity	Source Unknown
Stanislaus River, Lower	Diazinon	Agriculture
	Group A Pesticides	Agriculture
	Mercury	Resource Extraction
	Unknown Toxicity	Source Unknown
San Joaquin River (Merced River to South Delta Boundary	Boron	Agriculture
	Chlorpyrifos	Agriculture
	DDT	Agriculture
	Diazinon	Agriculture
	EC	Agriculture
	Group A Pesticides	Agriculture
	Mercury	Resource Extraction
	Unknown Toxicity	Source Unknown

Source: Central Valley Regional Water Quality Control Board. 2002. Clean Water Act Section 303(d) list of water quality limited segments. Approved by U.S. Environmental Protection Agency in July 2003.
EC = electrical conductivity, DDT = dichlorodiphenyltrichloroethane

3.2.3 Modesto Irrigation District Facilities

The Modesto Irrigation District's water conveyance facilities are described in Section 2.2.1.2 of this Initial Study. Water leaving the Modesto Irrigation District is discharged into the Tuolumne River, Dry Creek (tributary to the Tuolumne), Stanislaus River and San Joaquin River. The District does not use any natural water bodies as conveyance facilities nor does the District treat any natural water bodies with aquatic herbicides. Water bodies that are treated with pesticides or may be affected by pesticides are listed in Table 2-1 of Section 2.2.2.1.

4 AGENCIES WHOSE APPROVAL IS REQUIRED (RESPONSIBLE, TRUSTEE, AND AGENCIES WITH JURISDICTION)

Beginning in 2002, application of aquatic pesticides by public entities has been regulated under the SWRCB Statewide General NPDES Permit for Discharges of Aquatic Pesticides (Water Quality Order No. 2001-12-DWQ, General Permit No. CAG990003). Dischargers eligible for coverage under this General Permit are public entities that conduct resource or pest management control measures, including local, state, and federal agencies responsible for control of algae, aquatic weeds, and other organisms that adversely impact operation and use of drinking water reservoirs, water conveyance facilities, irrigation canals, and natural water bodies. This permit is scheduled to expire in January 2004, and the continuing pesticide application program would occur under a new General Permit. The SWRCB requires California Environmental Quality Act (CEQA) documentation to be complete before a discharger can be covered under the new General Permit.

In addition to compliance with the General Permit, the aquatic pesticide programs are also regulated under a Memorandum of Understanding that involves the U.S. Environmental Protection Agency, DPR, and CACs. Under this Memorandum of Understanding, the DPR and the CACs work together to regulate pesticide use throughout California. Irrigation districts must obtain State of California Qualified Applicator Certificates from DPR for all applicator personnel applying restricted chemicals. Districts are also required to obtain an annual permit from the CAC and must submit a written Notice of Intent to the CAC and the County 24 hours before applying a restricted pesticide. In addition, irrigation districts are required to file Notice of Intent forms with the DFG annually. Each CAC is required to inspect 5 percent of its cases. Monthly use reports must be submitted to the CAC and must include monthly totals for chemical use. The CAC forwards these forms to the DPR, which manages a database of chemical applications. The General Permit supplements these existing regulatory programs with additional requirements that are regulated and managed by the SWRCB and the Regional Water Quality Control Board.

5 CONSISTENCY WITH EXISTING GENERAL PLAN, ZONING, AND OTHER APPLICABLE LAND USE CONTROLS

Land uses along the San Joaquin River consist primarily of rural residential and agricultural areas until the river enters the Delta near the community of Vernalis, below the confluence with the Stanislaus River. Predominant land use within the Stanislaus County portion of the Stanislaus River watershed is agriculture. As the Stanislaus River passes through the city of Oakdale, land uses consist of urban uses including commercial and residential. Land use in the Tuolumne River watershed is primarily agriculture. Urban land uses in the lower reaches of the Tuolumne River watershed include the city of Modesto and the communities of Waterford and Ceres.

The Proposed Project directly affects the District's water conveyance facilities, thereby indirectly affecting the beneficiaries of the water, primarily agricultural land uses, and adjacent water and land habitats within the watershed of the Tuolumne Stanislaus and San Joaquin Rivers. To the extent that water resources and habitats could be affected by the application of aquatic pesticides, local general plan policies are of interest.

Each county and city in California is required by Section 65300 of the California Government Code to have a comprehensive, long-term general plan for the physical development of the county or city. Mandatory elements of the general plan that have bearing on the Proposed Project are land use, agriculture, fish and wildlife habitat, water resources, and conservation. This section summarizes key goals and policies contained in the existing general plan for the county in which the Proposed Project is located. Since the Proposed Project does not involve urban development, the key issue is whether the application of aquatic pesticides to District conveyance facilities is consistent with county policies for resource conservation and the support of agriculture.

The goals and policies of each county relevant to the Proposed Project are summarized in Table 5-1.

Table 5-1
County General Plan Policy Summary

County	Goals and Objectives
Stanislaus	Conserve water resources and protect water quality in the county. Provide for the long-term conservation and use of agricultural lands. Protect fish and wildlife species in the county. Protect the natural resources that sustain agriculture in the county.
Sources: Stanislaus County 1994.	

The Proposed Project is consistent with the policies above. Because land uses would not be physically altered, local zoning and related land use controls are not an issue. Furthermore, it would not directly or indirectly result in the following actions:

- Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to nonagricultural use.
- Conflict with existing zoning for agricultural use, or a Williamson Act contract.
- Involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland, to nonagricultural use.

6 ENVIRONMENTAL REVIEW CHECKLIST

The following environmental review uses the Environmental Checklist Form contained in the CEQA Guidelines, Appendix G, October 26, 1998. A brief explanation or reference for all answers follows each environmental question. Additional information for other issues not on the checklist is provided as appropriate. The evaluation of environmental impacts takes account of the whole action involved, including off-site as well as on-site, cumulative as well as project-level, and indirect as well as direct impacts. No construction impacts occur, but operational impacts are considered.

6.1 AESTHETICS

Would the project:	Potentially Significant Impact	Less-Than-Significant with Mitigation Incorporation	Less-Than-Significant Impact	No Impact
a. Have a substantial adverse effect on a scenic vista?				✓
b. Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway?				✓
c. Substantially degrade the existing visual character or quality of the site and its surroundings?				✓
d. Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area?				✓

Discussion:

a. The Proposed Project consists of the application of aquatic pesticides to the irrigation water conveyance system and does not include any actions at scenic vistas. Therefore, the Proposed Project would not have any impact on scenic vistas.

b. The application of aquatic pesticides to irrigation conveyance systems does not affect any scenic views, vistas, or scenic highways.

c. The application of aquatic pesticides would remove aquatic vegetation from irrigation conveyance systems, including encroaching vegetation on canal banks. This removal would allow the water to flow more freely, and as such, would be more pleasing in visual character. This impact, while beneficial, is not significant.

d. The application of aquatic pesticides would occur during daylight hours and would not create a new source of substantial light or glare or affect nighttime views in the area.

6.2 AGRICULTURAL RESOURCES

Would the project:	Potentially Significant Impact	Less-Than-Significant with Mitigation Incorporation	Less-Than-Significant Impact	No Impact
a. Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to nonagricultural use?				✓
b. Conflict with existing zoning for agricultural use, or a Williamson Act contract?				✓
c. Involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland, to nonagricultural use?				✓

Discussion:

a. The Proposed Project consists of the application of aquatic pesticides to the irrigation conveyance system and does not include any alterations to Prime Farmland, Unique Farmland, or Farmland of Statewide Importance.

b. The application of aquatic pesticides to irrigation conveyance systems does not conflict with any zoning of lands for agricultural use or Williamson Act contracts because no change in land use occurs.

c. The application of aquatic pesticides to irrigation conveyance systems occurs primarily on lands that are currently in agricultural use and would not result in the conversion of the lands to nonagricultural uses.

6.3 AIR QUALITY

Would the project:	Potentially Significant Impact	Less-Than-Significant with Mitigation Incorporation	Less-Than-Significant Impact	No Impact
a. Conflict with or obstruct implementation of the applicable air quality plan?				✓
b. Violate any air quality standard or contribute substantially to an existing or projected air quality violation?				✓
c. Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is nonattainment under an applicable federal or state ambient air quality standard (including releasing emissions that				✓

Would the project:	Potentially Significant Impact	Less-Than-Significant with Mitigation Incorporation	Less-Than-Significant Impact	No Impact
exceed quantitative thresholds for ozone precursors)?				
d. Expose sensitive receptors to substantial pollutant concentrations?				✓
e. Create objectionable odors affecting a substantial number of people?				✓

Discussion:

a. Air quality in the San Joaquin Valley is not dominated by emissions from one large urban area. Instead, a number of moderately sized urban areas are located throughout the valley. On-road vehicles are the largest contributor to carbon monoxide emissions as well as a large contributor to nitrogen oxide. PM_{10} emissions primarily result from paved and unpaved roads, agricultural operations, and waste burning.

Both the state and federal governments have established health-based Ambient Air Quality Standards for the following six air pollutants: ozone, particulate matter, carbon monoxide, nitrogen dioxide, sulfur dioxide, and lead. The State of California has also established standards for hydrogen sulfide, sulfates, and visibility-reducing particles.

The pesticides that would be used are all registered for use in California as aquatic pesticides. The DPR evaluates the pesticide, including fate and transport characteristics of the pesticide in water, soil, and air, to ensure that no unacceptable risk to the environment occurs when used as instructed. The application of aquatic pesticides would be temporary in nature and would not affect any of the pollutants measured for air quality in the San Joaquin Valley; therefore, no conflict or obstruction of the applicable air quality plan would occur.

b. Magnacide is applied directly to the water and would not be airborne; therefore, impacts on air quality due to the application of the aquatic pesticide would not be significant.

c. Because the aquatic pesticide is applied directly to the water, no increases in airborne pollutants would occur.

d. The irrigation conveyance systems treated with aquatic pesticides are typically located in undeveloped areas away from population centers or sensitive land uses such as residential, community care, and schools. Thus, sensitive receptors would not be exposed to substantial concentrations of the chemicals. Some of these materials could be very toxic if inhaled at high concentrations (especially Magnacide H).

e. Aquatic pesticide application is designed to remove existing vegetation that clogs irrigation water conveyance systems. The accumulation of this vegetation can often create smells that may be objectionable. However, these irrigation conveyance systems are typically located in rural areas away from substantial numbers of people. Removal of this vegetation would be beneficial or help to minimize some objectionable odors.

Magnacide-H does have an objectionable odor, but the odor is temporary, lasting only during the application period and is only detectable for a distance of approximately 100 yards from the application point.

6.4 BIOLOGICAL RESOURCES

Would the project:	Potentially Significant Impact	Less-Than-Significant with Mitigation Incorporation	Less-Than-Significant Impact	No Impact
a. Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special-status species in local or regional plans, policies, or regulations, or by the DFG or USFWS?			✓	
b. Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations, or by the DFG or USFWS?			✓	
c. Have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the Clean Water Act (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?			✓	
d. Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites?			✓	
e. Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?				✓
f. Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan?				✓

Discussion:

a. Table 3-1 identifies special-status species that potentially utilize aquatic habitats in the general Project area. Application of aquatic pesticides could adversely affect eight special-status species if these species are present in conveyance facilities where the treatments are applied. Potential effects for wildlife species could include loss of foraging or breeding habitat due to removal of aquatic vegetation, disturbance of nesting or breeding habitat during application of the treatments, or mortality and/or reduced survival of individuals caused by exposure to toxic concentrations of chemicals associated with the treatments. Potential effects for special-status plants could include mortality of plant populations and the loss of habitat. The two special-status plant species that could be present would be extremely vulnerable to the proposed applications, but these species have not been observed and are unlikely to occur in the water conveyance facilities proposed for treatment.

   Under the Proposed Project, pesticide application procedures in the Modesto Irrigation District would be essentially equivalent to practices that have occurred for the past 2 years during which time water quality monitoring has been conducted and BMPs implemented as required by the existing General Permit (existing conditions). The Modesto Irrigation District complies with label instructions and does not release treated water from irrigation facilities while the pesticide remains in the water. When applying herbicides directly to the water, Modesto Irrigation District uses the practice of closing all gates at potential release points during and after application to ensure that streams or wetlands are not affected. No impacts to special-status species are known to have occurred due to pesticide use by the Modesto Irrigation District and are not expected to occur in the future. Therefore, the proposed treatments are not likely to have a substantial adverse impact, either directly or through habitat modifications, on the special-status species identified in Table 3-1.

b. The water conveyance facilities proposed for treatment with aquatic pesticides have very limited riparian habitat because the facilities are lined with concrete and maintained to reduce obstructions to water flow. Therefore, the Proposed Project would not have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations or by the DFG or USFWS. The Modesto Irrigation District implements operational procedures that prevent treated water from entering natural streams, wetlands, or other natural aquatic habitats

c. As described for item "b" above, the Proposed Project would not have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the Clean Water Act through direct removal, filling, hydrological interruption, or other means.

d. The Proposed Project would not interfere with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites. The Modesto Irrigation District implements operational procedures that prevent treated water from entering natural streams, wetlands, or other natural aquatic habitats that support native resident or migratory fish and wildlife species.

e. The Proposed Project does not conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance. The Modesto Irrigation District's aquatic pesticide program complies with the local policies and ordinances intended to protect biological resources.

f. The Proposed Project does not conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan.

6.5 CULTURAL RESOURCES

Would the project:	Potentially Significant Impact	Less-Than-Significant with Mitigation Incorporation	Less-Than-Significant Impact	No Impact
a. Cause a substantial adverse change in the significance of a historical resource as defined in 15064.5?				✓
b. Cause a substantial adverse change in the significance of an archaeological resource pursuant to 15064.5?				✓
c. Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?				✓
d. Disturb any human remains, including those interred outside of formal cemeteries?				✓

Discussion:

a. The application of aquatic pesticide is into irrigation water conveyances that are man-made. Although some of these structures may be more than 50 years old, the application does not involve any physical disturbance of them so no impacts would occur to historical resources.

b. Application of the aquatic pesticide does not involve any physical disturbance of the irrigation water conveyance system so no impacts would occur to archeological resources.

c. The aquatic pesticide application does not involve any digging or other physical disturbance of the irrigation water conveyance system.

d. Application of aquatic pesticide is into irrigation water conveyances that are man-made. Again, the application would not involve any digging or physical disturbances, so it would not disturb human remains.

6.6 GEOLOGY AND SOILS

Would the project:	Potentially Significant Impact	Less-Than-Significant with Mitigation Incorporation	Less-Than-Significant Impact	No Impact
a. Expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving:				
i. Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault? Refer to Division of Mines and Geology Special Publication 42.				✓
ii. Strong seismic ground shaking?				✓
iii. Seismic-related ground failure, including liquefaction?				✓
iv. Landslides?				✓
b. Result in substantial soil erosion or the loss of topsoil?				✓
c. Be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction, or collapse?				✓
d. Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial risks to life or property?				✓
e. Have soils incapable of adequately supporting the use of septic tanks or alternative wastewater disposal systems where sewers are not available for the disposal of wastewater?				✓

Discussion:

a. Application of the aquatic pesticides does not involve any physical disturbance of the irrigation water conveyance system, so no impacts would occur from rupture of a known earthquake fault, strong ground shaking, ground failure, or landslides as a result of the Proposed Project.

b. Application of the aquatic pesticides does not involve any digging or other physical disturbance of the irrigation water conveyance system, so no soil erosion or loss of topsoil would occur.

c. The Proposed Project does not involve any digging or other physical disturbance of the irrigation water conveyance system, and the affected canals and reservoirs have been in place for many years. Application of the aquatic pesticides would not result in on- or off-site landslides, lateral spreading, subsidence, liquefaction, or collapse.

d. The Proposed Project includes canals and reservoirs that have been in place for many years and does not include any construction. Thus, no activities on expansive soils could be a risk to life or property.

e. The Proposed Project does not include the need for septic tanks or other wastewater disposal systems.

6.7 HAZARDS AND HAZARDOUS MATERIALS

Would the project:	Potentially Significant Impact	Less-Than-Significant with Mitigation Incorporation	Less-Than-Significant Impact	No Impact
a. Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?			✓	
b. Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment?			✓	
c. Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within ¼ mile of an existing or proposed school?			✓	
d. Be located on a site that is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment?				✓
e. For a project located within an airport land use plan or, where such a plan has not been adopted, within 2 miles of a public airport or public use airport, would the project result in a safety hazard for people residing or working in the project area?				✓
f. For a project within the vicinity of a private airstrip, would the project result in a safety hazard for people residing or working in the project area?				✓

Would the project:	Potentially Significant Impact	Less-Than-Significant with Mitigation Incorporation	Less-Than-Significant Impact	No Impact
g. Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?				✓
h. Expose people or structures to a significant risk of loss, injury, or death involving wildland fires, including where wildlands are adjacent to urbanized areas or where residences are intermixed with wildlands?				✓

Discussion:

a. Magnacide is registered for use in California as an aquatic pesticide. The DPR evaluates the pesticide to ensure that no unacceptable risk occurs to the environment. Although Magnacide H is an acutely toxic and hazardous material, standard practices will be used to ensure that risks to human health and the environment are avoided or minimized. Because the pesticide has been approved for use as an aquatic pesticide, Department of Transportation (DOT) requirements will be followed during transport, and BMPs are utilized during application, no significant hazard would occur to the public or the environment in its routine transport or use.

b. BMPs are required with the use of this pesticide. All personnel applying the restricted aquatic herbicide must be trained and licensed. However, the possibility exists that an accidental spill of the pesticide that would be hazardous could occur. It is unlikely that trained personnel would cause an accidental spill. Therefore, a spill is considered an infrequent/rare event and a less-than-significant impact. A spill would most likely affect primarily the personnel applying or handling the material rather than the environment or the community. Since the start of Magnacide use in 1978, the District has not experienced any spills.

c. The application of the aquatic pesticide could occur within ¼ mile of a school. Access to District facilities are signed for no trespassing and trained District personnel are at the application location during the entire application period. Any person approaching an application area is immediately asked to leave the area.

d. The irrigation water conveyance systems that receive the aquatic pesticides are not hazardous materials sites. All release points for the irrigation water would be closed prior to treatment, and the treated water would be either applied to selected agricultural crops or held according to the required time on the pesticide label.

e. The application of the aquatic pesticide does not involve any land use changes, construction of buildings, or use of equipment that would interfere with operations of any public airport. It does not create habitat that would attract birds and would not contribute to any bird-aircraft strike hazard.

f. The application of these aquatic pesticides would not affect any private airstrips for the same reasons identified in item "e" above.

g. The Proposed Project involves application of aquatic pesticides to irrigation water conveyance systems at points that are generaly located in undeveloped or rural areas. As such, no construction or obstruction of roads would impair or physically interfere with any emergency response or evacuation plans.

h. The irrigation water conveyance systems are primarily located in agricultural areas and are not adjacent to, or mixed with, wildlands where wildfires could occur.

6.8 HYDROLOGY AND WATER

Would the project:	Potentially Significant Impact	Less-Than-Significant with Mitigation Incorporation	Less-Than-Significant Impact	No Impact
a. Violate any water quality standards or waste discharge requirements?			✓	
b. Substantially deplete groundwater supplies or interfere substantially with groundwater recharge such that a net deficit would occur in aquifer volume or a lowering of the local groundwater table level (e.g., the production rate of pre-existing nearby wells would drop to a level that would not support existing land uses or planned uses for which permits have been granted)?				✓
c. Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, in a manner that would result in substantial on- or off-site erosion or siltation?				✓
d. Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, or substantially increase the rate or amount of surface runoff in a manner that would result in on- or off-site flooding?				✓
e. Create or contribute runoff water that would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff?				✓
f. Otherwise substantially degrade water quality?				✓
g. Place housing within a 100-year flood hazard area as mapped on a federal Flood Hazard Boundary or Flood Insurance Rate				✓

Would the project:	Potentially Significant Impact	Less-Than-Significant with Mitigation Incorporation	Less-Than-Significant Impact	No Impact
Map or other flood hazard delineation map?				
h. Place structures that would impede or redirect flood flows within a 100-year flood hazard area?				✓
i. Expose people or structures to a significant risk of loss, injury, or death involving flooding, including flooding as a result of the failure of a levee or dam?				✓
j. Inundation by seiche, tsunami, or mudflow?				✓

Discussion:

a. Treated waters in District canals do not have officially designated beneficial uses, as listed in the Water Quality Control Plan (Basin Plan) prepared by the California Regional Water Quality Control Board, Central Valley Region (1998). In general, potential impacts to water quality would only occur if treated water is released to a water body that has designated beneficial uses. No waste discharge requirements exist for application of aquatic pesticides.

During application of pesticides, precautions are taken to prevent the release of treated water to natural water bodies with designated beneficial uses. Table 6-1 identifies beneficial uses of water bodies that could potentially receive treated water if a release occurred.

Table 6-1
Beneficial Uses of Potentially Affected Water Bodies

Potentially Affected Water Bodies	Treated directly?	Number of potential release locations	Estimate range of flow rates	Designated beneficial uses
Dry Creek	No	2	3 – 15 cfs	Not Applicable
Tuolumne River	No	3	3 – 25 cfs	MUN, POW, REC-1, REC-2, FW Habitat – Warm, FW Habitat – Cold, MIG – Cold, SPWN, WILD
Stanislaus River	No	4	3 – 25 cfs	MUN, POW, REC-1, REC-2, FW Habitat – Warm, FW Habitat – Cold, MIG – Cold, SPWN, WILD
San Joaquin River	No	1	2 – 25 cfs	MUN, POW, REC-1, REC-2, FW Habitat – Warm, FW Habitat – Cold, MIG – Cold, SPWN, WILD

Modesto Irrigation District complies with label instructions and does not release treated water from irrigation facilities while the pesticide remains in the water. When applying herbicides directly to the water, Modesto Irrigation District uses the practice of closing all gates at potential release points during and after application to ensure that beneficial uses are not impacted. No impacts to water quality are known to have occurred due to pesticide use by the Modesto Irrigation District and are not expected to occur in the future.

Magnacide H

Magnacide H is applied only to irrigation canals with no designated beneficial uses. When Magnacide H is applied to irrigation canals, the main concern would be impacts to water quality due to release of the treated water from the canals. During all applications, release gates are kept closed until Magnacide H is no longer in the system.

Water Quality Monitoring

During the irrigation seasons of 2002 and 2003, water quality samples were collected at discharge locations before the gates were opened and water was released to water bodies with designated beneficial uses. Pesticide application projects selected for water quality monitoring are representative of typical application procedures conducted by Modesto Irrigation District. Individual sampling locations were chosen to represent worst case conditions (i.e., those potential release points where pesticide concentration is expected to be highest). If existing monitoring data indicated that WQO exceedances have occurred in the past, potentially significant impacts to water quality might be expected to occur in the future.

Laboratory results showed the presence of Magnacide in only one of 14 samples collected during 2003 and none of the samples collected during 2002. The sample collected on September 17, 2003 from location S-4 showed the presence of 35 ug/L acrolein. S-4 is located near the spill of the Main Canal, below the head of Lateral 8. 21 warm

This is the first sample collected during the two-year project that was positive for acrolein. At this time, the District is unsure of the cause of this result. There are several possible causes of this result:

- Field cross contamination
- Laboratory error
- Over dosing of Magnacide during treatment

In any case, Magnacide was not released from the District canals because the spill gates remained closed.

In comparison to No Project conditions, water quality would not be significantly impacted because existing monitoring data indicate that pesticide applications will not result in exceedances of applicable WQOs.

Under the Proposed Project, pesticide application procedures would be essentially equivalent to practices that have occurred for the past 2 years during which time monitoring has been conducted and BMPs implemented as required by the existing General Permit (existing

conditions). Therefore, no change to water quality is expected as compared to Existing Conditions.

b. The Proposed Project will not alter groundwater recharge or supplies.

c. The Proposed Project will not alter existing drainage patterns or stream or river courses.

d. The Proposed Project will not alter existing drainage patterns or stream or river courses because existing facilities are not being structurally modified.

e. The Proposed Project will not affect quantity or quality of surface water runoff.

f. Potential effects to water quality are discussed under item (a).

g. The Proposed Project will not create housing or change delineation of flood hazard areas.

h. The Proposed Project will not involve creation of new structures.

i. The Proposed Project will have no effect on the integrity of any levee or dam, and will have no effect on flood flows.

j. The Proposed Project will have no effect on water flows.

6.9 LAND USE AND PLANNING

Would the project:	Potentially Significant Impact	Less-Than-Significant with Mitigation Incorporation	Less-Than-Significant Impact	No Impact
a. Physically divide an established community?				✓
b. Conflict with any applicable land use plan, policy, or regulation of an agency with jurisdiction over the project (including, but not limited to, the general plan, specific plan, local coastal program, or zoning ordinance) adopted for the purpose of avoiding or mitigating an environmental effect?				✓
c. Conflict with any applicable habitat conservation plan or natural community conservation plan?				✓

Discussion:

a. The Proposed Project does not involve any construction, and as such, would not divide an established community.

b. The objective of the Proposed Project is to control weeds and algae that interfere with irrigation conveyance. Agricultural land uses are all part of the county's land use goals and objectives (see Section 5). The Proposed Project would not change the land use in the county.

c. The irrigation water conveyance systems are primarily located in agricultural areas with agricultural land uses. The application of aquatic pesticides to control weeds and algae would not be in conflict with habitat conservation plans or natural community conservation plans.

6.10 MINERAL RESOURCES

Would the project:	Potentially Significant Impact	Less-Than-Significant with Mitigation Incorporation	Less-Than-Significant Impact	No Impact
a. Result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state?				✓
b. Result in the loss of availability of a locally important mineral resource recovery site delineated on a local general plan, specific plan, or other land use plan?				✓

Discussion:

a. Because the application of aquatic pesticides would be to existing irrigation water conveyance systems and no change in land use or stream flow would occur, no loss of known mineral resources would occur from excavation/construction activity or erosion.

b. The Proposed Project would not involve any change in land use as specified by any local general plan, specific plan, or other land use plan.

6.11 NOISE

Would the project result in:	Potentially Significant Impact	Less-Than-Significant with Mitigation Incorporation	Less-Than-Significant Impact	No Impact
a. Exposure of persons to or generation of noise levels in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?				✓
b. Exposure of persons to or generation of excessive groundborne vibration or groundborne noise levels?				✓
c. A substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project?				✓
d. A substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project?				✓

Would the project result in:	Potentially Significant Impact	Less-Than-Significant with Mitigation Incorporation	Less-Than-Significant Impact	No Impact
e. For a project located within an airport land use plan or, where such a plan has not been adopted, within 2 miles of a public airport or public use airport, would the project expose people residing or working in the project area to excessive noise levels?				✓
f. For a project within the vicinity of a private airstrip, would the project expose people residing or working in the project area to excessive noise levels?				✓

Discussion:

a. The application of aquatic pesticides would occur in remote locations in agricultural areas. Existing noise from pumps or tractors may occur in the vicinity of the application site, but the application activity would not cause discernable increases over this background level. Application of the pesticides is either by backpack sprayer or is applied directly to the water without the use of noisy equipment. Consequently, the Proposed Project would not generate noise levels in excess of established standards.

b. No groundborne vibration or groundborne noise would be generated by the Proposed Project because application of the pesticides is either by backpack sprayer or is applied directly to the water without the use of noisy equipment.

c. The application of the aquatic pesticides is a periodic event that occurs on an as-needed basis or as a preventative measure at the beginning of the irrigation season.

d. The application of the aquatic pesticides is a temporary event but because the irrigation water conveyance systems are primarily located in agricultural areas, existing background noise from pumping or tractor use could occur. No increase in ambient noise would occur as a result of the Proposed Project.

e. The application of these aquatic pesticides does not involve land use changes, construction of buildings, or use of equipment that would interfere with operations of any public airport.

f. The application of these aquatic pesticides would not affect any private airstrip for the same reasons identified in item e above.

6.12 POPULATION AND HOUSING

Would the project:	Potentially Significant Impact	Less-Than-Significant with Mitigation Incorporation	Less-Than-Significant Impact	No Impact
a. Induce substantial population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure)?				✓
b. Displace substantial numbers of existing housing, necessitating the construction of replacement housing elsewhere?				✓
c. Displace substantial numbers of people, necessitating the construction of replacement housing elsewhere?				✓

Discussion:

a. The Proposed Project does not expand water supply or conveyance systems to serve urban development. The application of aquatic pesticides is to control weeds and algae primarily for agricultural irrigation purposes. Therefore, it would not induce substantial population growth.

b. No building or other construction activities would be part of the Proposed Project, so no displacement of existing housing or construction of replacement housing would occur.

c. The Proposed Project would not involve any changes in land use or construction that would displace substantial numbers of people.

6.13 PUBLIC SERVICES

Would the project:	Potentially Significant Impact	Less-Than-Significant with Mitigation Incorporation	Less-Than-Significant Impact	No Impact
a. Result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, to maintain acceptable service ratios, response times or other performance objectives for any of the following public services:				
Fire protection?				✓
Police protection?				✓
Schools?				✓
Parks?				✓
Other public facilities?				✓

Discussion:

a. No building or other construction activities would be part of the Proposed Project, so no alteration of existing government facilities or need for new government facilities would occur. With no new development being proposed, no impacts would occur to the response times or other performance objectives for fire protection, police protection, schools, parks, or other public facilities.

6.14 RECREATION

Would the project:	Potentially Significant Impact	Less-Than-Significant with Mitigation Incorporation	Less-Than-Significant Impact	No Impact
a. Increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated?				✓
b. Include recreational facilities or require the construction or expansion of recreational facilities that might have an adverse physical effect on the environment?				✓

Discussion:

a. No increase in population growth would occur as a result of the Proposed Project. Therefore, no increase in the use of existing recreational facilities would occur.

b. The Proposed Project includes the application of aquatic pesticides to irrigation water conveyance systems and would not include the need for construction of or expansion of recreational facilities.

6.15 TRANSPORTATION/TRAFFIC

Would the project:	Potentially Significant Impact	Less-Than-Significant with Mitigation Incorporation	Less-Than-Significant Impact	No Impact
a. Cause an increase in traffic that is substantial in relation to the existing traffic load and capacity of the street system (i.e., result in a substantial increase in either the number of vehicle trips, the volume to capacity ratio on roads, or congestion at intersections)?				✓
b. Exceed, either individually or cumulatively, a level-of-service standard established by the county congestion management agency for designated roads or highways?				✓
c. Result in a change in air traffic patterns, including either an increase in traffic levels or a change in location that results in substantial safety risks?				✓
d. Substantially increase hazards due to a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?				✓
e. Result in inadequate emergency access?				✓
f. Result in inadequate parking capacity?				✓
g. Conflict with adopted policies, plans, or programs supporting alternative transportation (e.g., bus turnouts, bicycle racks)?				✓

Discussion:

a. No increase in population growth would occur as a result of the Proposed Project. Therefore, no increase in existing traffic load or capacity would occur. The Modesto Irrigation District would use two to three District vehicles on county roads primarily during noncommute hours.

b. Because no increase in traffic would occur, no exceedence of service standard levels for designated roads or highways would occur as a result of the Proposed Project.

c. No change in air traffic would be associated with the Proposed Project.

d. The Proposed Project would occur in agricultural areas and would involve the periodic application of aquatic pesticides. No changes in design features of roads would be a part of the Proposed Project. The applicators of the aquatic pesticides utilize two to three vehicles and would be careful to avoid any encounters with farm equipment.

e. The application of aquatic pesticides would occur in agricultural areas and, as such, would not interfere with emergency access.

f. No parking would be required with the periodic application of aquatic pesticides because this event would be temporary, and transportation to and from the irrigation water conveyance systems would involve temporary parking primarily on District property.

g. No conflict would occur with programs supporting alternative transportation because the Proposed Project would involve periodic trips to the irrigation water conveyance systems to apply the pesticides.

6.16 UTILITIES AND SERVICE SYSTEMS

Would the project:	Potentially Significant Impact	Less-Than-Significant with Mitigation Incorporation	Less-Than-Significant Impact	No Impact
a. Exceed wastewater treatment requirements of the applicable Regional Water Quality Control Board?				✓
b. Require or result in the construction of new water or wastewater treatment facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?				✓
c. Require or result in the construction of new stormwater drainage facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?				✓
d. Have sufficient water supplies available to serve the project from existing entitlements and resources, or are new or expanded entitlements needed?				✓
e. Result in a determination by the wastewater treatment provider that serves or may serve the project that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments?				✓
f. Be served by a landfill with sufficient permitted capacity to accommodate the project's solid waste disposal needs?				✓

Would the project:	Potentially Significant Impact	Less-Than-Significant with Mitigation Incorporation	Less-Than-Significant Impact	No Impact
g. Comply with federal, state, and local statutes and regulations related to solid waste?				✓

Discussion:

a. All release points for the irrigation water would be closed prior to treatment, and the treated water would be either applied to pre-approved fields or held according to the required time on the pesticide label. No wastewater would be generated by the Proposed Project.

b. Because the treated irrigation water would be either applied to pre-approved fields or held in place according to the required time on the pesticide label, no wastewater would be generated nor would construction of water or wastewater facilities be needed.

c. The treated irrigation water would be either applied to selected agricultural crops or held in place according to the required time on the pesticide label. Therefore, construction of new stormwater facilities would not be needed.

d. No additional water supplies would be needed to apply the aquatic pesticides to the irrigation water conveyance systems.

e. No wastewater would be generated by the Proposed Project. Therefore, a wastewater treatment provider would not be required.

f. No solid waste would be generated in the application of aquatic pesticides to the irrigation water conveyance systems; therefore, no landfill would be needed.

g. No solid waste would be generated in the application of aquatic pesticides to the irrigation water conveyance systems.

6.17 MANDATORY FINDINGS OF SIGNIFICANCE

Would the project:	Potentially Significant Impact	Less-Than-Significant with Mitigation Incorporation	Less-Than-Significant Impact	No Impact
a. Does the project have the potential to degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, reduce the number or restrict the range of a rare or endangered plant or animal, or eliminate important examples of the major periods of California history or prehistory?			✓	
b. Does the project have impacts that are individually limited, but cumulatively considerable? ("Cumulatively considerable" means that the incremental effects of a project are considerable when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects)?			✓	
c. Does the project have environmental effects that will cause substantial adverse effects on human beings, either directly or indirectly?			✓	

Discussion:

a. The Proposed Project would not result in increased use of aquatic pesticides compared to historical usage and is not expected to result in increased concentrations of these chemicals in the treated water conveyance facilities. The temporary applications of herbicide to irrigation system facilities does not require any physical alteration or construction of any facilities at the point of application or elsewhere. Aquatic species and their habitats would only be affected temporarily during pesticide application. The Modesto Irrigation District does not release treated water from irrigation facilities while the herbicide remains active. Therefore, the Proposed Project would not degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, reduce the number or restrict the range of a rare or endangered plant or animal, or eliminate important examples of the major periods of California history or prehistory.

b. At least five districts in the project area and vicinity have used and are proposing to continue to use aquatic pesticides as shown on Figure 6-1, Cumulative Analysis Study Area.

When combined with similar activities of these five districts (including the project proponents) and potentially other districts in the project area,[1] the Proposed Project would not be expected to result in cumulatively considerable impacts to water quality. The relevant water bodies listed in Table 3-2 (Impaired Water Bodies and Listed Pollutants) are currently not listed as impaired for any of the chemicals applied under the Proposed Project. In addition, the use of these chemicals is not expected to increase over historical usage and is not expected to result in increased concentrations in these water bodies.

The Proposed Project is not expected to result in cumulatively considerable impacts to sensitive biological resources when combined with similar activities of the five districts (including the project proponents) within the Cumulative Analysis Study Area. As discussed above for water quality, the use of these chemicals is not expected to increase over historical usage and is not expected to result in increased concentrations in the treated water bodies. The aquatic pesticides applied to the water conveyance facilities do not remain active beyond the treatment areas and do not bioaccumulate in higher levels of the food chain. Therefore, no cumulative toxicity effects are anticipated for special-status species or other wildlife populations. Although special status species or other native fish species may occupy some of the treated water conveyance facilities, the cumulative effect of aquatic pesticide applications within the five districts is not expected to degrade habitat or result in increased mortality of these species compared to existing conditions.

c. As discussed in Sections 6.3 (d) and Section 6.7, no substantial adverse effects on humans would be expected to result from the Proposed Project. Implementation of BMPs and DOT transport requirements are sufficient to substantially avoid adverse effects to humans.

[1] URS has contacted the SWRCB to obtain list of districts in the San Joaquin River Basin that have permits to apply aquatic pesticides. However, the list of dischargers supplied does not contain information on the chemicals applied by the dischargers.

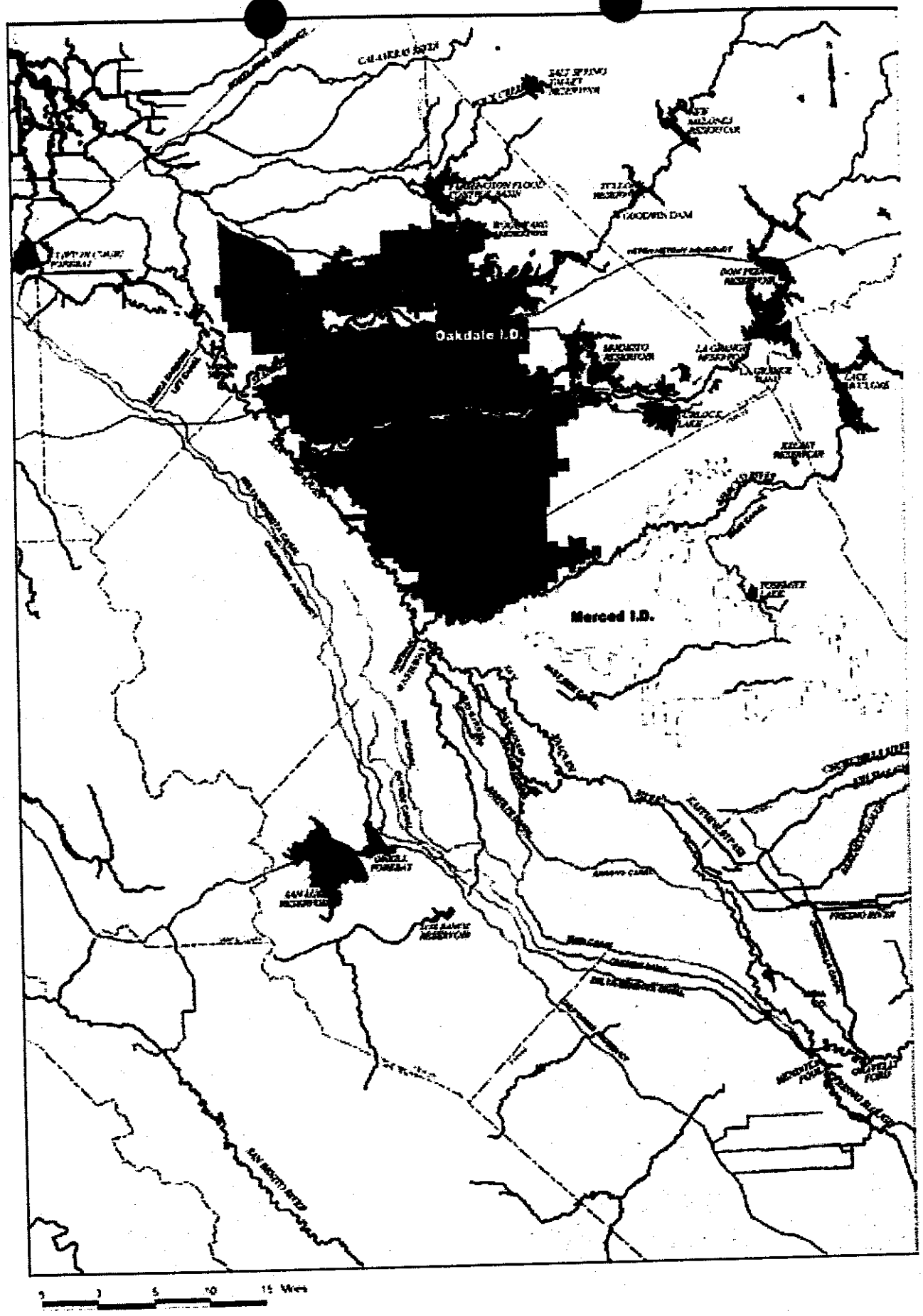

Figure 6-1 Cumulative Analysis Study Area

7 LIST OF PREPARERS

Modesto Irrigation District personnel directly involved in the preparation of this Initial Study are shown in Table 7-1. Technical and support personnel from URS Corporation who were involved in document preparation are listed in Table 7-2.

Table 7-1
District Personal Involved in Initial Study

Preparers	Degree(s)/Years of Experience	Experience and Expertise	Role in Preparation
Allen Short	BS, Biology MS, Public Administration 25 years	Water Quality Water Rights	General Manager
Walter Ward	BS, Geology 20 years	Water Supply Resource Management	Project Manager, Assistant General Manager
Joe Lima	BS, Agricultural Engineering 30 years	Water Supply Water Use	Water Use Manager
Tim Ford	B.S. Wildlife & Fisheries Biology A.S. Biological Sciences 25 years	Aquatic Biology	Biological Resources
Karleen Ashby	B.A., Certified Environmental Compliance Manager 8 years	CEQA	CEQA Compliance
Michael Niemi	BS, Geology 7 years	Hydrology and Water Quality, Permitting, Monitoring	Water Resources Specialist

Table 7-2
URS Corporation Personal Involved in Initial Study

Preparers	Degree(s)/Years of Experience	Experience and Expertise	Role in Preparation
Hootkins, S.	MUP, Urban and Regional Planning BA, Human Biology 30 years	CEQA Compliance	Project Manager, Senior Environmental Planner
Hunt, L.	MS, Environmental Engineering BS, Environmental Systems Engineering 8 years	Hydrology and Water Quality, Permitting, Monitoring	Environmental Risk Assessor

Leach, S.	MA, Vegetation Ecology BS, Physical Geography 11 years	Biological Resources	Lead, Biological Resources
Weinberg, D.	BA, Biological Sciences 12 years	Biological Resources	Biological Resources
Davidson, S.	BS, Forest Management Science 20 years	Other Impacts	Resource Planner
Dillon, R.	MA, Medieval History and Literature BA, History 20 years	Technical Editing, Report Production	Technical Editor
Goss, F.	23 years	Report Production	Graphic Artist

8 SUPPORTING INFORMATION SOURCES AND REFERENCES

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9 ENVIRONMENTAL FACTORS POTENTIALLY AFFECTED

None of the environmental factors listed below would be potentially affected by the Proposed Project as indicated by the checklist on the preceding pages in Section 6.

☐ Aesthetics	☐ Agriculture Resources	☐ Air Quality
☐ Biological Resources	☐ Cultural Resources	☐ Geology /Soils
☐ Hazards & Hazardous Materials	☐ Hydrology / Water Quality	☐ Land Use / Planning
☐ Mineral Resources	☐ Noise	☐ Population / Housing
☐ Public Services	☐ Recreation	☐ Transportation/Traffic
☐ Utilities / Service Systems	☐ Mandatory Findings of Significance	

10 DETERMINATION

On the basis of the information available to it in the record and the boxes checked in Section 6 of this Initial Study, the Modesto Irrigation District finds:

- ☒ I find that the Proposed Project COULD NOT have a significant effect on the environment, and a NEGATIVE DECLARATION will be prepared.
- ☐ I find that although the Proposed Project could have a significant effect on the environment, a significant effect would not occur in this case because revisions in the project have been made by or agreed to by the project proponent. A MITIGATED NEGATIVE DECLARATION will be prepared.
- ☐ I find that the Proposed Project MAY have a significant effect on the environment, and an ENVIRONMENTAL IMPACT REPORT is required.
- ☐ I find that the Proposed Project MAY have a "potentially significant impact" or "potentially significant unless mitigated" impact on the environment, but at least one effect (a) has been adequately analyzed in an earlier document pursuant to applicable legal standards and (b) has been addressed by mitigation measures based on the earlier analysis as described on attached sheets. An ENVIRONMENTAL IMPACT REPORT is required, but it must analyze only the effects that remain to be addressed.
- ☐ I find that although the Proposed Project could have a significant effect on the environment, because all potentially significant effects (a) have been analyzed adequately in an earlier ENVIRONMENTAL IMPACT REPORT or NEGATIVE DECLARATION pursuant to applicable standards and (b) have been avoided or mitigated pursuant to that earlier ENVIRONMENTAL IMPACT REPORT or NEGATIVE DECLARATION, including revisions or mitigation measures that are imposed upon the Proposed Project, nothing further is required.

This disposition constitutes the official action of the Modesto Irrigation District.

Allen Short — 12-16-93

Allen Short, General Manager
Modesto Irrigation District

Date