

# The Oakdale Irrigation District

1205 East F Street  
Oakdale, CA 95361  
phone (209) 847-0341  
fax (209) 847-3468

## Letter of Transmittal

To: Mr. Jim Maughan  
State Water Resources  
Control Board  
1001 I Street, 15<sup>th</sup> Floor  
Sacramento, CA 95814

Attn: Mr. Jim Maughan  
Re: CEQA documentation  
for the new NPDES Aquatic  
Pesticide 2004 General Permit  
Exception

Date: January 28, 2004

Project: Aquatic Pesticide Application  
Program for Oakdale ID

We are sending you  herewith  delivered by hand  under separate cover  
via California Overnight the following items:

plans  prints  shop drawings  samples  specifications  
 estimates  copy of letter  other see below

COPIES	DATE OR NO.	DESCRIPTION
1		Notice of Compliance-State Clearinghouse Aquatic Pesticide Application Program for OID
1		Notice of Determination-State Clearinghouse Aquatic Pesticide Application Program for OID
1		Notice of Determination-Stanislaus County Clerk Aquatic Pesticide Application Program for OID
1		Notice of Determination-San Joaquin County Clerk Aquatic Pesticide Application Program for OID
1		Negative Declaration Aquatic Pesticide Application Program for OID
1		Notice of Intent Aquatic Pesticide Application Program for OID
1		Initial Study Aquatic Pesticide Application Program for OID

Remarks: If you have any questions or need any additional information, please  
contact me at (209) 847-0341 extension 220 or sdavis@oakdaleirrigation.com

Signed: Sally J. Davis  
Sally J. Davis

k:\eng\SALLY\FILES\MISC\TRANSMITTAL-SWRCB



Arnold  
Schwarzenegger  
Governor

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

RECEIVED  
JAN 21 2004  
OAKDALE IRRIGATION DISTRICT



Jan Boel  
Acting Deputy  
Director

January 20, 2004

Steve Knell  
Oakdale Irrigation District  
1205 East F Street  
Oakdale, CA 95361

Subject: Aquatic Pesticide Application Program for the Oakdale Irrigation District  
SCH#: 2003122090

Dear Steve Knell:

The State Clearinghouse submitted the above named Negative Declaration to selected state agencies for review. The review period closed on January 19, 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  
Director, State Clearinghouse

Document Details Report  
State Clearinghouse Data Base

**SCH#** 2003122090  
**Project Title** Aquatic Pesticide Application Program for the Oakdale Irrigation District  
**Lead Agency** Oakdale Irrigation District

**Type** Neg Negative Declaration

**Description** The Proposed project is the continuation of an aquatic pesticide application program by Oakdale Irrigation District since 1985. 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.

**Lead Agency Contact**

**Name** Steve Knell  
**Agency** Oakdale Irrigation District  
**Phone** 209.847.0341 **Fax**  
**email**  
**Address** 1205 East F Street  
**City** Oakdale **State** CA **Zip** 95361

**Project Location**

**County** San Joaquin, Stanislaus  
**City** Riverbank, Oakdale  
**Region**

**Cross Streets**

**Parcel No.**

<b>Township</b>	<b>Range</b>	<b>Section</b>	<b>Base</b>
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**Proximity to:**

**Highways** 108 and 120  
**Airports** Oakdale Municipal Airport  
**Railways** Sierra, BNSF  
**Waterways** San Joaquin, Stanislaus, and Tuolumne Rivers  
**Schools**  
**Land Use** Open Space, Agricultural Land / Urban/Developed and Agricultural Land Uses.

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

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

**Date Received** 12/19/2003 **Start of Review** 12/19/2003 **End of Review** 01/19/2004

# Notice of Determination

To: X Office of Planning and Research  
1400 Tenth Street, Room 121  
Sacramento, CA 95814

From: Oakdale Irrigation District  
1205 East F Street  
Oakdale, CA 95361

County Clerk of: San Joaquin \_\_\_\_\_ Stanislaus \_\_\_\_\_

Subject: Filing of Notice of Determination in compliance with Section 21108 or 21152 of the Public Resources Code.

---

**Project Title: Aquatic Pesticide Application Program for the Oakdale Irrigation District**

---

State Clearinghouse Number 2003122090  
(If submitted to Clearinghouse)

Lead Agency Contact Person  
Steve Knell, General Manager

Area Code/Telephone/Extension  
(209) 847-0341

---

**Project Location** (include county)

San Joaquin Valley in Stanislaus and San Joaquin Counties

**Project Description:**

The Proposed Project is the continuation of an aquatic pesticide application program by Oakdale Irrigation District since 1985. 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. Oakdale 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 the Oakdale Irrigation District  
*Lead Agency* *Responsible Agency*

has approved the above described project on January 20, 2004 and has made the following determinations regarding the above described project.

1. The project [ will  will not] have a significant effect on the environment.  
A Negative Declaration was prepared for this project pursuant to the provisions of CEQA.
2. An Environmental Impact Report was not prepared for this project pursuant to the provisions of CEQA.
3. Mitigation measures [ were  were not] made a condition of the approval of the project.
4. A Statement of Overriding Considerations [ was  was not] adopted for this project.

This is to certify that the Negative Declaration and supporting Initial Study with comments and record of project approval is available to the General Public at:

Oakdale Irrigation District, 1205 East F Street, Oakdale, CA 95361 (209) 847-0341

---

  
Signature: Steve Knell, P.E. Oakdale Irrigation District

January 20, 2004  
Date

General Manager  
Title

---

Date received for filing and posting at OPR: 12/19/2003

# Notice of Determination

To: Office of Planning and Research  
1400 Tenth Street, Room 121  
Sacramento, CA 95814

From: Oakdale Irrigation District  
1205 East F Street  
Oakdale, CA 95361

County Clerk of: San Joaquin  Stanislaus

Subject: Filing of Notice of Determination in compliance with Section 21108 or 21152 of the Public Resources Code.

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**Project Title: Aquatic Pesticide Application Program for the Oakdale Irrigation District**

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State Clearinghouse Number 2003122090  
(If submitted to Clearinghouse)

Lead Agency Contact Person  
Steve Knell, General Manager

Area Code/Telephone/Extension  
(209) 847-0341

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**Project Location** (include county)

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The Proposed Project is the continuation of an aquatic pesticide application program by Oakdale Irrigation District since 1985. 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. Oakdale 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.

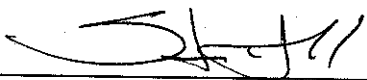
This is to advise that the Oakdale Irrigation District  
*Lead Agency* *Responsible Agency*

has approved the above described project on January 20, 2004 and has made the following determinations regarding the above described project.

1. The project [  will  will not ] have a significant effect on the environment.  
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2. An Environmental Impact Report was not prepared for this project pursuant to the provisions of CEQA.
3. Mitigation measures [  were  were not ] made a condition of the approval of the project.
4. A Statement of Overriding Considerations [  was  was not ] adopted for this project.

This is to certify that the Negative Declaration and supporting Initial Study with comments and record of project approval is available to the General Public at:

Oakdale Irrigation District, 1205 East F Street, Oakdale, CA 95361 (209) 847-0341

  
Signature: Steve Knell, P.E. Oakdale Irrigation District

January 20, 2004 General Manager  
Date Title

Date received for filing and posting at OPR: 12/19/2003

# Notice of Determination

To:        Office of Planning and Research  
1400 Tenth Street, Room 121  
Sacramento, CA 95814

From: Oakdale Irrigation District  
1205 East F Street  
Oakdale, CA 95361

  X   County Clerk of: San Joaquin   X   Stanislaus       

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**Project Title: Aquatic Pesticide Application Program for the Oakdale Irrigation District**

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State Clearinghouse Number 2003122090  
(If submitted to Clearinghouse)

Lead Agency Contact Person  
Steve Knell, General Manager

Area Code/Telephone/Extension  
(209) 847-0341

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**Project Location** (include county)

San Joaquin Valley in Stanislaus and San Joaquin Counties

**Project Description:**

The Proposed Project is the continuation of an aquatic pesticide application program by Oakdale Irrigation District since 1985. 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. Oakdale 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 the       Oakdale Irrigation District        
*Lead Agency* *Responsible Agency*

has approved the above described project on       January 20, 2004       and has made the following determinations regarding the above described project.

1. The project [  will  will not ] have a significant effect on the environment.  
A Negative Declaration was prepared for this project pursuant to the provisions of CEQA.
2. An Environmental Impact Report was not prepared for this project pursuant to the provisions of CEQA.
3. Mitigation measures [  were  were not ] made a condition of the approval of the project.
4. A Statement of Overriding Considerations [  was  was not ] adopted for this project.

This is to certify that the Negative Declaration and supporting Initial Study with comments and record of project approval is available to the General Public at:

      Oakdale Irrigation District, 1205 East F Street, Oakdale, CA 95361 (209) 847-0341      

---

*Signature:*       Steve Knell, P.E. Oakdale Irrigation District             January 20, 2004             General Manager        
*Date* *Title*

Date received for filing and posting at OPR: 12/19/2003

**EXHIBIT A  
NEGATIVE DECLARATION**

Pursuant to Section 21000 et. Seq. of the Public Resources Code, State of California, a Negative Declaration is adopted for the following project.

1. **Project Name:** **Aquatic Pesticide Application Program for the Oakdale Irrigation District**
2. **Location and Description:**

Cities: Project area includes the cities of Oakdale and Riverbank  
Counties: Stanislaus and San Joaquin

The Oakdale Irrigation District is located in the northeastern San Joaquin Valley which is located in southeastern San Joaquin County and eastern Stanislaus County with approximately 80 percent of the District in Stanislaus County and 20 percent of the District in San Joaquin County.

Cities: Project area includes cities of Oakdale and Riverbank

Counties: Stanislaus and San Joaquin

The Proposed Project is the continuation of an aquatic pesticide application program by Oakdale Irrigation District since 1985. 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.

Oakdale 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.

3. **Project Sponsor:**

Oakdale Irrigation District  
1205 East F Street  
Oakdale, CA 95361

4. **Finding:** Based on the attached Initial Study (IS), the summary of comments and responses and text revisions, and with an opportunity for public comments at a meeting on January 20, 2004, it is my judgement that:

There is no substantial evidence that the Proposed Project may have a significant effect on the environment. There would be no new construction or alteration of facilities; no new irrigation of lands; and no substantial changes in the operation of the irrigation water conveyance or storage facilities. The proposed treatments are not likely to have a substantial adverse effect, either directly or through habitat modifications, on special-status species over existing conditions.



\_\_\_\_\_  
Steve Knell, General Manager  
Oakdale Irrigation District  
CEQA Lead Agency

Date: January 20, 2004

5. **Preparation and Public Review**

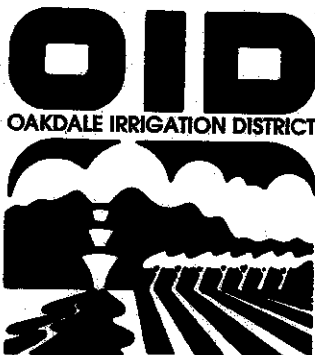
This Negative Declaration was prepared by the Oakdale Irrigation District. Copies may be obtained from Sally Davis at (209) 847-0341 ext 220 or at the address listed below:

Oakdale Irrigation District  
1205 East F Street  
Oakdale, CA 95361

Materials used in preparation of the Initial Study are available for review at this address from Monday through Friday, during the hours of 8:30 am to 4:00 pm.

**The public review period concluded on January 20, 2004 at the public meeting of the Board of Directors of the Oakdale Irrigation District. Comments were submitted to Steve Knell, General Manager, 1205 East F Street, CA 95361; fax (209) 847-3468. For questions, contact Mike Hanf or Sally Davis at (209) 847-0341. No additional public review is required.**





**Notice of Intent to Adopt a Negative Declaration for  
Aquatic Pesticide Application Program for the Oakdale Irrigation District**

The Oakdale Irrigation District proposes to continue its aquatic pesticide application program. Oakdale 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.

The Proposed Project is the continuation of an aquatic pesticide application program by Oakdale Irrigation District since 1985. 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.

The Proposed Project is located in the Oakdale Irrigation District, in the counties of Stanislaus and San Joaquin.

This proposed Negative Declaration was prepared by the Oakdale Irrigation District. Copies may be obtained at the following address: Oakdale Irrigation District, 1205 East F Street, Oakdale, CA 95361. Materials used in preparation of the Initial Study are available for review at this address during the following hours: Monday - Friday, 8:30 am to 4:00 pm. For questions, contact Sally J. Davis or Mike Hanf at (209) 847-0341.

**The public review period is from December 19, 2003 to January 20, 2004. The Board of Directors will also consider comments at its meeting on January 20, 2004. Final adoption of the Negative Declaration will be considered at the Board of Directors meeting on January 20, 2004. Please mail or fax your comments to Steve Knell, General Manager, 1205 East F Street, Oakdale, CA 95361; fax (209) 847-3468.**

Oakdale Irrigation District  
CEQA Aquatic Pesticide Mailing List 12/18/2003

Director  
State Clearinghouse  
Office of Planning and Research  
1400 10<sup>th</sup> Street  
Sacramento, CA 95814

California Department of Fish and Game  
Regional Manager, San Joaquin Valley  
and Southern Sierra Region  
1234 East Shaw Avenue  
Fresno, CA 93710

Director  
San Joaquin County Planning  
Department  
P.O. Box 1810  
Stockton, CA 95201

California Department of Fish and Game  
Regional Manager, Sacramento Valley  
and Central Sierra Region  
1701 Nimbus Road  
Rancho Cordova, CA 95670

San Joaquin County Clerk's Office  
P.O. Box 1968  
Stockton, CA 95202

San Joaquin Valley Unified Air Pollution  
Control District  
Northern Office  
4230 Kiernan Avenue, #130  
Modesto, CA 95356

San Joaquin County Agricultural  
Commissioner  
1868 E. Hazelton Avenue  
Stockton, CA 95202

California Department of Pesticide  
Regulation, Northern Region  
1001 I Street  
Sacramento, CA 95812

Director  
Stanislaus County Planning Department  
1010 10<sup>th</sup> Street  
Suite 3400, 3<sup>rd</sup> Floor  
Modesto, CA 95350

California Department of Pesticide  
Regulation, Central Region  
2895 N. Larkin Avenue, Suite B  
Fresno, CA 95327

Stanislaus County Clerk  
P.O. Box 1670  
Modesto, CA 95353

State Water Resources Control Board  
P.O. Box 2000  
Sacramento, CA 95812

Stanislaus County Agricultural  
Commissioner  
3800 Cornucopia Way, Suite B  
Modesto, CA 95358

Central Valley Regional Water Quality  
Control Board  
11020 Sun Center Drive, Suite 200  
Rancho Cordova, CA 95670-6114

National Resource Conservation  
Service  
Modesto Service Center  
3800 Cornucopia Way, Suite E  
Modesto, 95358 CA

CALFED Bay Delta Program  
1416 9<sup>th</sup> Street, Room 1155  
Sacramento, CA 95814

National Resource Conservation  
Service  
Stockton Service Center  
1222 Monaco Court, Suite 23  
Stockton, CA 95207

California Department of Water  
Resources  
P. O. Box 942836,  
Sacramento, CA 94236

Department of Fish and Game  
1416 Ninth Street  
Sacramento, California 95814

Steven Hallam, Community  
Development Director  
Community Development Department  
City of Oakdale  
455 South Fifth Avenue  
Oakdale, CA 95361

Oakdale Irrigation District  
CEQA Aquatic Pesticide Mailing List 12/18/2003

City of Riverbank  
Community Development Deptment  
6707 Third St.  
Riverbank, CA 95367

Robert Acker  
Merced Irrigation District  
P.O. Box 228  
Merced, CA 95344

US Army Corps of Engineers  
Regulatory Branch  
1325 J Street, Room 1480  
Sacramento, CA 95814

Greg Thompson  
Merced Irrigation District  
P.O. Box 228  
Merced, CA 95344

Mr. Michael Boots  
Policy Advisory, US EPA  
Water Management Division  
75 Hawthorne Street  
San Francisco, CA 94105

Walt Ward  
Modesto Irrigation District  
P.O. Box 4060  
Modesto, CA 95352

U.S. Fish and Wildlife  
2800 Cottage Way  
Sacramento, CA 95825

Joe Lima  
Modesto Irrigation District  
P.O. Box 4060  
Modesto, CA 95352

Bureau of Reclamation  
Central Valley Operations  
3310 El Camino, Suite 300  
Sacramento, CA 95821

Michael Niemi  
Modesto Irrigation District  
P.O. Box 4060  
Modesto, CA 95352

Reclamation Board  
1416 Ninth Street, Room 706  
Sacramento, CA 95814

Jim Atherstone  
South San Joaquin Irrigation District  
11011 East Highway 120  
Manteca, CA 95336

The Resources Agency  
1020 Ninth Street, 3<sup>rd</sup> Floor  
Sacramento, CA 95814

Mr. Robert Nees  
Assistant General Manager  
Turlock Irrigation District  
P.O. Box 949  
Turlock, CA 95381

California State Library, Government  
Publications  
P.O. Box 942837  
Sacramento, CA 94237-0001

Debra Liebersbach  
Turlock Irrigation District  
P.O. Box 949  
Turlock, CA 95381

Stockton-San Joaquin County Public  
Library  
605 North El Dorado Street  
Stockton, CA 95202

Stanislaus County Free Library  
1500 I Street  
Modesto, CA 95354

Susan Hootkins  
URS  
500 12<sup>th</sup> Street  
Oakland, CA 94607

**D R A F T**

**AQUATIC PESTICIDE  
APPLICATION PROGRAM FOR**

**THE  
OAKDALE  
IRRIGATION  
DISTRICT**

**CEQA INITIAL STUDY**

*Prepared for*  
Oakdale Irrigation District  
1205 East F Street  
Oakdale, CA 95361

December 18, 2003

**URS**

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

26814421

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**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
OID	Oakdale Irrigation District
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 1

## BACKGROUND

Project Title:	<b>Aquatic Pesticides Application Program</b>
Application Number:	Not applicable.
Project Location:	Regional Location: Geographically, the Oakdale Irrigation District is located in the northeastern San Joaquin Valley in southeastern San Joaquin County and eastern Stanislaus County, with approximately 80 percent of the District in Stanislaus County and 20 percent of the District in San Joaquin County.
Assessor Parcel No.(s):	Not applicable.
Project Sponsor's Name and Address:	<i>Steve Knell, General Manager Oakdale Irrigation District 1205 East F Street, Oakdale California, 95361</i>
General Plan Designation:	<i>Oakdale ID: Agriculture (Stanislaus County); Agricultural Exclusive, Public Domain, or Public Sites (Stanislaus County)</i>
Zoning Designation:	<i>Primarily Agricultural; A-2-10 through A-2-40</i>
Project Description:	<p>The Proposed Project is the continuation of an aquatic pesticide application program by Oakdale Irrigation District since 1985. 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.</p> <p>Oakdale 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.</p>
Surrounding Land Uses:	<i>Oakdale ID: Land use in the identified portion of the Stanislaus River watershed is primarily open space (foothill pasture) within the upper reaches and agriculture in the lower reaches. A few rural communities are located within the watershed, with the largest being the City of Oakdale.</i>



## 2 PROJECT DESCRIPTION

This section describes a proposed aquatic pesticide application program for the Oakdale Irrigation District. The District has been applying aquatic pesticides since 1985. 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 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. The No Project condition assumes that no chemical control measures will be implemented to manage aquatic plants and algae in District irrigation facilities, and this condition is likely to result in clogged irrigation equipment, economic losses, and safety issues.

### 2.1 PROJECT OBJECTIVES

The Oakdale 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. Some of the most problematic weeds include American pondweed, yellow primrose, parrot's feather, and curly leaf pondweed. 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

Geographically, the Oakdale Irrigation District is located in the northeastern San Joaquin Valley which is part of the Great Central Valley of California. Politically, the District is located in southeastern San Joaquin County and eastern Stanislaus County with approximately 80 percent of the District in Stanislaus County and 20 percent of the District in San Joaquin County.

The Oakdale Irrigation District is also bounded by the Modesto Irrigation District to the south and west, south of the Stanislaus River and by the South San Joaquin Irrigation District to the west, north of the Stanislaus River. The Central San Joaquin Water Conservation District is north of the District.

#### 2.2.1.1 Regional Location

The Proposed Project is located in the San Joaquin Valley (Figure 2-1) in central California. The project area and vicinity are characterized in most part by the Stanislaus River, a tributary to the San Joaquin River and to a lesser extent, other tributaries. The major city within the Oakdale Irrigation District is the City of Oakdale and parts of the City of Riverbank.

#### 2.2.1.2 District Location

##### *Oakdale*

Oakdale Irrigation District is located in southeastern San Joaquin County and eastern Stanislaus County, with approximately 80 percent of the District in Stanislaus County (Figure 2-2). The

- 1 District encompasses roughly 72,345 acres, of which 55,425 acres are irrigated. The District  
2 maintains over 330 miles of laterals and pipelines, 110 miles of drains, and 40 miles of main  
3 canals. The North Main, north of the Stanislaus River, and the South Main, south of the  
4 Stanislaus River supply the lateral canals. The lateral canals and pipelines branch into sub-  
5 laterals with water deliveries to privately owned facilities. Approximately 15 percent of the  
6 District's facilities are lined ditches and cement pipelines with the remainder being dirt or clay  
7 lined ditches.
- 8 Each Main Canal has one regulating reservoir. Rodden Lake (Section 28, T1S, R11E), on the  
9 North Main, is approximately 27 surface acres. The Robert Van Lier Regulating Reservoir  
10 (Section 19, T2S, R11E) is located on the South Main Canal, one mile upstream from the  
11 intersection of Warnerville and Sterns roads. This reservoir covers approximately 26 surface  
12 acres and has a capacity of 280 acre-feet.

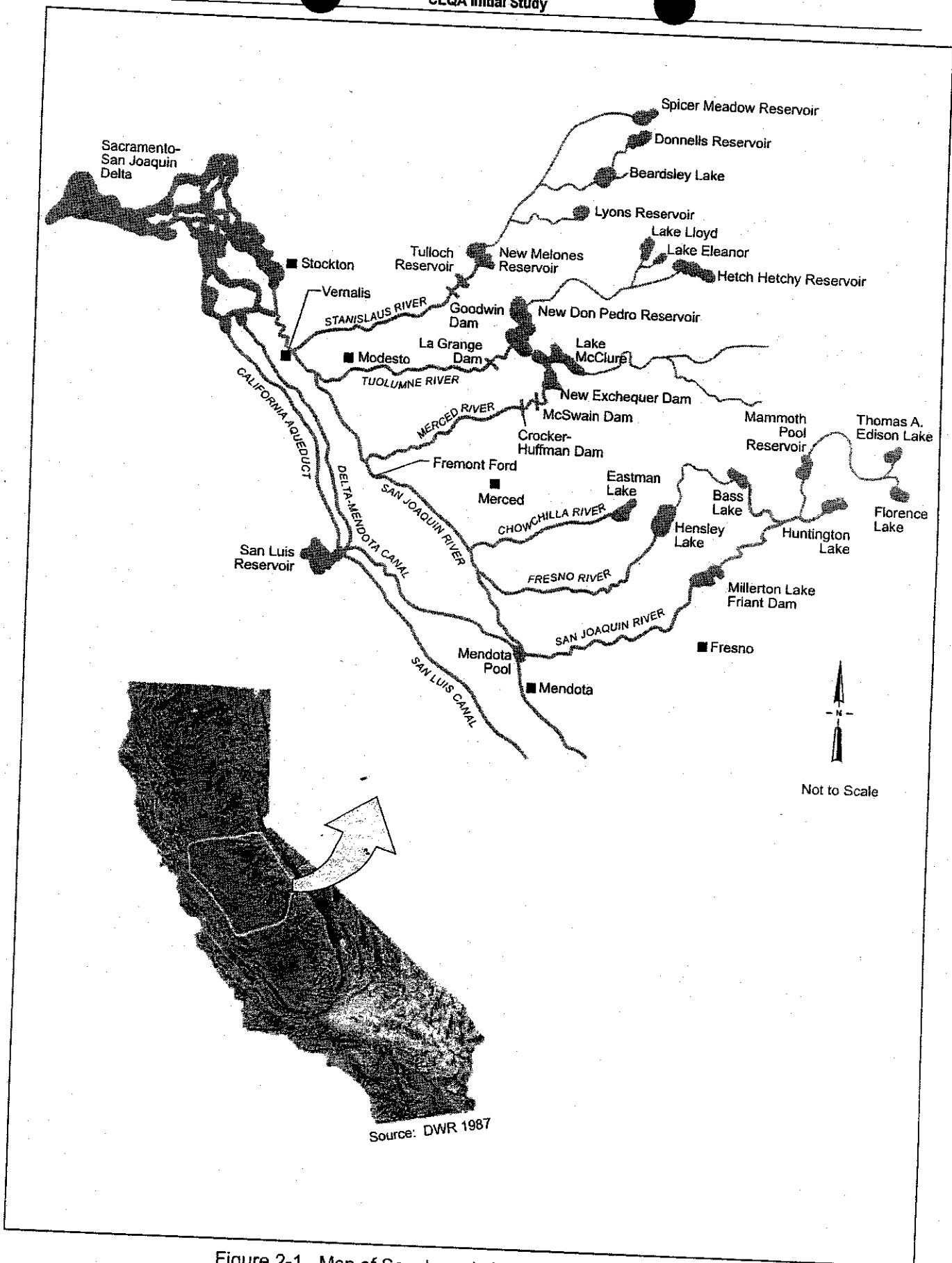
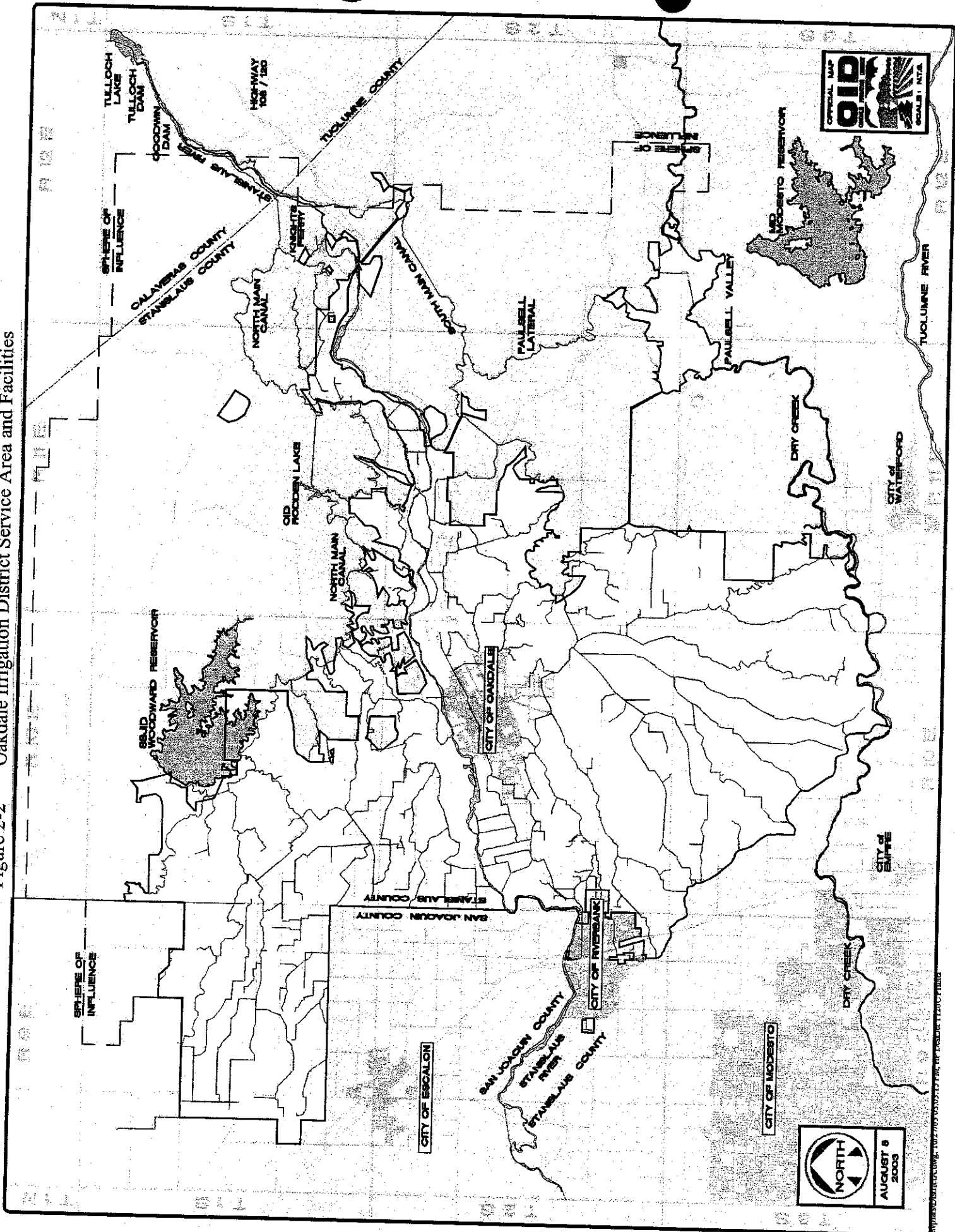


Figure 2-1. Map of San Joaquin Valley project area and vicinity

Figure 2-2 Oakdale Irrigation District Service Area and Facilities



1 **2.2.2 Project Features**

2 **2.2.2.1 Proposed Pesticide Application**

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

13 ***The Oakdale Irrigation Oakdale***

14 The District regularly applies the following aquatic pesticides to water distribution facilities:

- 15 • Magnacide H (acrolein)
- 16 • Rodeo/AquaMaster (glyphosate)
- 17 • Copper Sulfate (pentahydrate sulfuric acid, copper (2+), salt (li))
- 18 • Clearigate (copper as elemental)
- 19 • Magnacide H (acrolein)

20 The first application of Magnacide H is generally made during the first week of June. Timing is  
 21 dictated by aquatic weed and algae conditions. Generally, treatments are made when the weed  
 22 growth conditions of algae and pondweed are less than 12 inches long. This treatment condition  
 23 allows for a rate of 0.25 gallon/cfs and a lower concentration treatment. Currently, there are  
 24 nineteen application sites for Magnacide H. The application hose is placed downstream of the  
 25 headgate in turbulent water at the bottom of the canal to assure complete mixing. In all cases, the  
 26 applications are determined by need; applying visual observation and using the lowest  
 27 application rate at the lowest concentration, in a reasonable time frame for obtaining effective  
 28 control. By starting at the top of the system, control efforts downstream are often delayed due to  
 29 residual control. There is no set application schedule. Treatments are made on an as-needed  
 30 basis. The need for treatment is determined by means of visual inspection of the canal's length  
 31 and quality of irrigation water at downstream locations. Generally, repeated applications are  
 32 made approximately every 30 days, but may vary depending on need.

**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
Unlined main canals	6-12 miles	22 acres	250-485 cfs
Unlined canals	6 miles	12 acres	10-60 cfs
Robert Van Lier Regulating Reservoir		26 acres	

- 1 Application concentrations and rates are variable depending on conditions observed. Most  
 2 applications are made at the weed condition "B" rate of 0.25 gallon/cfs for a duration of 3 to 4  
 3 hours, which generally brings the ppm for these applications to between 2.0 and 7.8 ppm with  
 4 the maximum allowable ppm being 15.0 ppm.
- 5 Determinations of Magnacide H applications are made in terms of rates (gallons/hour) based on  
 6 site-specific information, such as flow, temperature, and weed condition. Weed condition is  
 7 standardized in the label's application guide as follows:

**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 (nonfloating) 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

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

15 *Rodeo/AquaMaster (glyphosate)*

- 16 Once the irrigation season has started, Rodeo/AquaMaster is used on an as-needed basis on the  
 17 ditch banks and occasionally on midstream vegetation. Need is determined by the spray  
 18 applicator, spot spraying only as needed. Rodeo/AquaMaster is usually applied at a rate of 2 to  
 19 2.5 quarts per acre. All facilities are checked and sprayed on a rotating as-needed basis, at least 2  
 20 times per season or more as problem areas are observed.

**Table 2-2  
 Water Bodies Treated with Rodeo/AquaMaster**

Treated Water Bodies	Estimated Total Length Treated	Estimated Total Area Treated	Estimated Typical Range of Flow Rates	Applied To Vegetation in Water?
Unlined Main Canals	30 miles	145.5 acres	250-485 cfs	No
Unlined canals	250 miles	364 acres	10-60 cfs	Spot Spray
Reservoirs	2 miles	8 acres	30-485	No
Drains	126 miles	290 acres	0-6 cfs	No

- 1 *Clearigate (elemental copper)*  
 2 Clearigate is applied by the District one time per season in one location. This application is made  
 3 approximately 60 feet downstream of the Frymire Lateral headgate (Section 20, T1S, R12E). The  
 4 Frymire Lateral normally flows at a rate of approximately 14 cfs. This flow is reduced to  
 5 approximately 7 cfs and the application of Clearigate takes place over a 4- to 5-hour period at a  
 6 rate of about 14 ounces/minute. All irrigators with the potential to spill to the Stanislaus River  
 7 are notified of the treatment, and the treated water is irrigated out into nonspill locations. The end  
 8 of the Frymire Lateral is closed off to receiving water, so that the Stanislaus River does not  
 9 receive any treated water.

**Table 2-3**  
**Water Bodies Treated with Clearigate**

Treated Water Bodies	Total Length Treated	Total Area Treated	Typical Flow Rates
Frymire Lateral	6790 feet	1.2 acres	14 cfs reduced to 7 cfs

- 10 *Copper Sulfate*  
 11 Copper sulfate is used in an as-needed basis at various locations. The rate of application is 2  
 12 pounds per cfs. Treated water is irrigated out and does not travel to the spills on these systems.  
 13 The method of application is the slug method and is done at a drop location where efficient  
 14 mixing of copper sulfate and the irrigation water occurs.

**Table 2-4**  
**Water Bodies Treated with Copper Sulfate**

Treated Water Bodies	Total Length Treated	Total Area Treated	Typical Flow Rates
Fairbanks Lateral	4 miles	4.8 acres	10-14 cfs
Tulloch Pipeline (24")	3.5 miles	NA	12 cfs

15 **2.2.2.2 Best Management Practices**

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

- 18 • Obtain an annual permit from the County Agricultural Commissioner (CAC) and submit a  
 19 Notice of Intent to the CAC 24 hours before applying a restricted pesticide.  
 20 • File a Notice of Intent form, including an annual application schedule, with Region 4 of the  
 21 California Department of Fish and Game (DFG). If a deviation of the schedule occurs or  
 22 another treatment site is identified, duly notify both the DFG and CAC offices at least 24  
 23 hours prior to treatment.  
 24 • Follow all pesticide label instructions.  
 25 • Environmental awareness training. District personnel review training prior to the application  
 26 of aquatic pesticides including the special-status species issues associated with water  
 27 conveyance facilities in Oakdale Irrigation District and the sensitivity of aquatic resources

1 that may receive discharges from these conveyance facilities as well as applicator safety,  
2 reviewing pesticide label instructions and operational issues.

- 3 • Comply with DPR and Department of Health Services regulations, and Use Permits issued by  
4 the CAC.
- 5 • Ensure that all personnel applying restricted aquatic pesticides are trained and licensed (State  
6 of California Qualified Applicator Certificates from DPR).
- 7 • Treat aquatic vegetation frequently when vegetation is small, to minimize buildup of  
8 vegetation and potential dissolved oxygen depletion due to decaying vegetation.
- 9 • Evaluate options for treatment (including nontoxic and less toxic alternatives).
- 10 • Verify need for treatment and suitability of the site for treatment prior to each application.

### 11 *Oakdale*

12 The following sections describe the specific BMPs utilized for each type of aquatic pesticide,  
13 including BMP checklists to be completed with each application project:

#### 14 *Magnacide H*

- 15 • Verify that gates at all potential release points downstream of the point of application are  
16 closed prior to treatment, and are kept closed until Magnacide H is no longer in the system.
- 17 • Prior to each treatment, make arrangements to irrigate out the treated water to appropriate  
18 sites. Verify that there will be no potential for crop damage, or for field runoff or drainage  
19 discharges to waters of the state (all irrigation water must be retained on site).
- 20 • If treated water is not irrigated out, hold water for a minimum of 6 days before releasing, per  
21 label instructions.
- 22 • Prior to opening gates, conduct the Magnacide H Baker Petrolite Field Test at potential  
23 release points.
- 24 • Complete a BMP checklist with each pesticide application.

#### 25 *Rodeo/AquaMaster*

- 26 • Apply only when wind speed is between 2 to 10 mph. If wind speed is above 10 mph,  
27 reschedule treatment.
- 28 • Set up equipment to produce a large droplet size to avoid pesticide drift.
- 29 • Design application schedule so that small areas are treated at one time, to avoid large  
30 amounts of decaying vegetation and potential depletion of dissolved oxygen.
- 31 • Apply pesticide starting at downstream end and traveling upstream, to avoid concentration of  
32 pesticide in water.
- 33 • When treating vegetation in water, consider treating the area in strips to avoid oxygen  
34 depletion due to decaying vegetation.
- 35 • When practical, reduce or eliminate the flow of water in the treatment area during  
36 application.



- 1 • Complete a BMP checklist with each pesticide application.

2 *Clearigate*

- 3 • Reduce flow if necessary, and verify flow of 6 to 8 cfs.  
 4 • Prior to each treatment, coordinate with ditchtender to shut any possible spill locations.  
 5 • Notify landowners with potential to spill treated water.  
 6 • Prior to treatment, arrange to have all treated water irrigated out and held on fields.  
 7 • Prior to increasing flow, check ppm.  
 8 • Complete a BMP checklist with each pesticide application.

9 *Copper Sulfate*

- 10 • Verify flow rate with ditchtender.  
 11 • Advise ditchtender of upcoming treatment.  
 12 • Verify that there is no potential for crop damage.  
 13 • Arrange to irrigate out all treated water.  
 14 • Check copper ppm before releasing any treated water.  
 15 • Complete a BMP checklist with each pesticide application.

16 **2.2.2.3 Monitoring and Reporting Program**

17 *Oakdale*

18 Oakdale Irrigation District has selected three representative monitoring projects for application  
 19 of Magnacide H, two for Rodeo/AquaMaster, 1 for Clearigate, and 2 for copper sulfate. Each of  
 20 these locations is monitored up to two times per year, during scheduled applications.

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

- 26 1. Document compliance with the requirements of the General Permit.  
 27 2. Support the development, implementation, and effectiveness evaluation of BMPs.  
 28 3. Demonstrate the full restoration of water quality and protection of beneficial uses for the  
 29 receiving waters following completion of resource or pest management projects.  
 30 4. Identify and characterize the aquatic pesticide application projects conducted by the  
 31 discharger.  
 32 5. Ensure that the plan provides for monitoring of projects that are representative of all  
 33 pesticides and all application methods used by the discharger.  
 34

1 The current General Permit is due to expire in January 2004, and it is expected that a new  
 2 General Permit will be issued. Monitoring and reporting requirements under the new General  
 3 Permit may be modified from current requirements, and if so, Oakdale Irrigation District's  
 4 monitoring program will be modified accordingly.

#### 5 **2.2.2.4 Alternatives to Proposed Project**

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

- 8 • Potential environmental impacts
- 9 • Effectiveness in controlling the targeted pests
- 10 • Cost-effectiveness
- 11 • Practicality of implementation in irrigation facilities

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

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

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

#### 29 ***Oakdale***

30 Environmental factors were considered in the selection of aquatic pesticides used by Oakdale  
 31 Irrigation District. Acrolein, the active ingredient in Magnacide H, degrades quickly. Glyphosate,  
 32 the active ingredient in Rodeo/AquaMaster, is quickly bound to soil and sediment and remains  
 33 immobilized until degradation takes place. Copper, the active ingredient in Clearigate and copper  
 34 sulfate, does not remain in the water column for long periods of time because it precipitates and  
 35 settles out. All pesticides applied to surface water are registered with DPR for use as aquatic  
 36 pesticides. Some limited mechanical control measures are used when circumstances make it  
 37 unsafe to apply chemicals due to closeness of treatment to possible beneficial water or  
 38 uncontrollability of treated water.

### 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 clover 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 inornatus*). 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 columbianus*), mink (*Mustela vison*), bullfrogs (*Rana catesbeiana*), red-tailed hawks (*Buteo jamaicensis*), red-

1 shouldered hawks (*Buteo lineatus*), belted kingfishers (*Ceryle alcyon*), and black phoebes  
 2 (*Sayornis nigricans*). The nearshore waters of creeks and streams within riparian habitats provide  
 3 invertebrate forage for avian species including the black-necked stilt (*Himantopus mexicanus*),  
 4 common merganser (*Mergus merganser americanus*), mallard (*Anas platyrhynchos*), great blue  
 5 heron (*Ardea herodias*), black rail (*Laterallus jamaicensis*), snowy egret (*Egretta thula*),  
 6 common snipe (*Gallinago gallinago*) and killdeer (*Charadrius vociferus*).

### 7 3.1.2 Special-Status Species

8 Table 3-1 presents the special-status species that are known to occur in the project area vicinity  
 9 (CNDDDB 2003). These species are listed, proposed, or candidates under the federal or California  
 10 Endangered Species Acts or designated as "species of concern" by the U.S. Fish and Wildlife  
 11 Service (USFWS) or the DFG, or included on the California Native Plant Society (CNPS)  
 12 inventory of rare, threatened, or endangered plants (CNPS 2001).

Table 3-1  
 Special-Status Species Known to Occur in the Project Area<sup>1</sup>

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

Table 3-1  
Special-Status Species Known to Occur in the Project Area<sup>1</sup>

Scientific Name/Common Name	Federal Status <sup>2</sup>	State Status <sup>2</sup>	DFG <sup>3</sup> / CNPS/ R-E-D <sup>4</sup>	Potential to Utilize Aquatic Habitat Associated With OID Water Conveyance Facilities
mountain plover				
<i>Coccyzus americanus occidentalis</i> western yellow-billed cuckoo	Candidate	Endangered	--	No
<i>Athene cunicularia</i> burrowing owl	Species of Concern	--	SC	No
<i>Eremophila alpestris actia</i> California horned lark	--	--	SC	No
<i>Icteria virens</i> yellow-breasted chat	--	--	SC	No
<i>Agelaius tricolor</i> tricolored blackbird	Species of Concern	--	SC	Yes
<b>FISH</b>				
<i>Oncorhynchus tshawytscha</i> Central Valley Fall-Run Chinook Salmon	Candidate	--	--	No
<i>Oncorhynchus mykiss</i> Central Valley Steelhead	Threatened	--	SC	No
<i>Lampetra ayresi</i> river lamprey	Species of Concern	--	SC	No
<i>Lampetra tridentata</i> Pacific lamprey	Species of Concern	--	SC	No
<i>Lampetra hubbsi</i> Kern brook lamprey	Species of Concern	--	SC	No
<i>Lavinia symmetricus ssp. 1</i> San Joaquin roach	--	--	SC	Yes
<i>Mylopharodon conocephalus</i> hardhead	--	--	SC	No
<i>Pogonichthys macrolepidotus</i> Sacramento splittail	--	--	SC	No
<b>MAMMALS</b>				
<i>Myotis yumanensis</i> Yuma myotis	Species of Concern	--	--	No
<i>Corynorhinus townsendii townsendii</i> Townsend's western big-eared bat	Species of Concern	--	SC	No
<i>Antrozous pallidus</i> pallid bat	--	--	SC	No
<i>Eumops perotis californicus</i> western mastiff bat	Species of Concern	--	SC	No
<i>Sylvilagus bachmani riparius</i> riparian brush rabbit	Endangered	Endangered	--	No
<i>Ammospermophilus nelsoni</i> San Joaquin antelope squirrel	Species of Concern	Threatened	--	No
<i>Perognathus inornatus inornatus</i> San Joaquin pocket mouse	Species of Concern	--	--	No
<i>Dipodomys heermanni dixonii</i> Merced kangaroo rat	Species of Concern	--	--	No

**Table 3-1  
Special-Status Species Known to Occur in the Project Area<sup>1</sup>**

Scientific Name/Common Name	Federal Status <sup>2</sup>	State Status <sup>2</sup>	DFG <sup>3</sup> / CNPS/ R-E-D <sup>4</sup>	Potential to Utilize Aquatic Habitat Associated With OID Water Conveyance Facilities
<i>Dipodomys ingens</i> giant kangaroo rat	Endangered	Endangered	--	No
<i>Neotoma fuscipes riparia</i> riparian (=San Joaquin Valley) woodrat	Endangered	--	SC	No
<i>Vulpes macrotis mutica</i> San Joaquin kit fox	Endangered	Threatened	--	No
<b>REPTILES</b>				
<i>Emys (=Clemmys) marmorata</i> western pond turtle	Species of Concern	--	FP	Yes
<i>Anniella pulchra pulchra</i> silvery legless lizard	Species of Concern	--	SC	No
<i>Gambelia sila</i> blunt-nosed leopard lizard	Endangered	Endangered	--	No
<i>Phrynosoma coronatum (frontale)</i> Coast (California) horned lizard	Species of Concern	--	SC	No
<i>Masticophis flagellum ruddocki</i> San Joaquin whipsnake	Species of Concern	--	SC	No
<i>Thamnophis gigas</i> giant garter snake	Threatened	Threatened	--	Yes
<b>INVERTEBRATES</b>				
<i>Branchinecta conservatio</i> Conservancy fairy shrimp	Endangered	--	--	No
<i>Branchinecta longiantenna</i> longhorn fairy shrimp	Endangered	--	--	No
<i>Branchinecta lynchi</i> vernal pool fairy shrimp	Threatened	--	--	No
<i>Branchinecta mesovallensis</i> midvalley fairy shrimp	Species of Concern	--	--	No
<i>Lindleriella occidentalis</i> California lindleriella	Species of Concern	--	--	No
<i>Lepidurus packardi</i> vernal pool tadpole shrimp	Endangered	--	--	No
<i>Desmocerus californicus dimorphus</i> valley elderberry longhorn beetle	Threatened	--	--	No
<i>Lytta moesta</i> Moestan blister beetle	Species of Concern	--	--	No
<i>Lytta molesta</i> molestan blister beetle	Species of Concern	--	--	No
<i>Eucerceris ruficeps</i> redheaded sphecid wasp	--	--	--	No
<b>PLANTS</b>				
<i>Eryngium racemosum</i> Delta button-celery	Species of Concern	Endangered	1B/2-3-3	No
<i>Eryngium spinosepalum</i> spiny-sepaled button-celery	Species of Concern	--	1B/3-2-3	No

**Table 3-1  
Special-Status Species Known to Occur in the Project Area<sup>1</sup>**

Scientific Name/Common Name	Federal Status <sup>2</sup>	State Status <sup>2</sup>	DFG <sup>3</sup> / CNPS/ R-E-D <sup>4</sup>	Potential to Utilize Aquatic Habitat Associated With OID Water Conveyance Facilities
<i>Lilaeopsis masonii</i> Mason's lilaeopsis	Species of Concern	Rare	1B/2-3-3	No
<i>Lomatium observatorium</i> Mt. Hamilton lomatium	Species of Concern	--	1B/3-2-3	No
<i>Aster lentus</i> Suisun Marsh aster	Species of Concern	--	1B/2-2-3	No
<i>Blepharizonia plumosa</i> ssp. <i>Plumosa</i> big tarplant	Species of Concern	--	1B/3-3-3	No
<i>Calycadenia hooveri</i> Hoover's calycadenia	Species of Concern	--	1B/2-1-3	No
<i>Cirsium fontinale</i> var. <i>campylon</i> Mt. Hamilton thistle	Species of Concern	--	1B/2-2-3	No
<i>Cirsium crassicaule</i> slough thistle	Species of Concern	--	1B/3-3-3	No
<i>Coreopsis hamiltonii</i> Mt. Hamilton coreopsis	Species of Concern	--	1B/3-2-3	No
<i>Madia radiata</i> showy madia	Species of Concern	--	1B/2-3-3	No
<i>Pseudobahia bahifolia</i> Hartweg's golden sunburst	Endangered	Endangered	1B/2-3-3	No
<i>Senecio aphanactis</i> rayless ragwort	--	--	2/3-2-1	No
<i>Trichocoronis wrightii</i> var. <i>wrightii</i> Wright's trichocoronis	--	--	2/3-3-1	No
<i>Amsinckia grandiflora</i> large-flowered fiddleneck	Endangered	Endangered	1B/3-3-3	No
<i>Plagiobothrys uncinatus</i> hooked popcorn-flower	Species of Concern	--	1B/2-2-3	No
<i>Streptanthus insignis</i> ssp. <i>Lyonii</i> Arburua Ranch jewel-flower	Species of Concern	--	1B/3-2-3	No
<i>Tropidocarpum capparideum</i> caper-fruited tropidocarpum	Species of Concern	--	1A/ *	No
<i>Campanula sharsmithiae</i> Sharsmith's harebell	Species of Concern	--	1B/3-2-3	No
<i>Downingia pusilla</i> dwarf downingia	--	--	2/1-2-1	No
<i>Legenere limosa</i> legenere	Species of Concern	--	1B/2-3-3	No
<i>Atriplex cordulata</i> heartscale	Species of Concern	--	1B/2-2-3	No
<i>Atriplex coronata</i> var. <i>notatior</i> San Jacinto Valley crownscale	Endangered	--	1B/3-3-3	No
<i>Atriplex joaquiniana</i> San Joaquin saltbush	Species of Concern	--	1B/2-2-3	No
<i>Atriplex vallicola</i> Lost Hills crownscale	Species of Concern	--	1B/2-2-3	No

**Table 3-1  
Special-Status Species Known to Occur in the Project Area<sup>1</sup>**

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<i>Atriplex depressa</i> brittlescale	Species of Concern	--	1B/2-2-3	No
<i>Atriplex minuscula</i> lesser saltscale	Species of Concern	--	1B/3-3-3	No
<i>Atriplex persistens</i> vernal pool smallscale	Species of Concern	--	1B/2-2-3	No
<i>Atriplex subtilis</i> subtle orache	Species of Concern	--	1B/2-2-3	No
<i>Chamaesyce hooveri</i> Hoover's spurge	Threatened	--	1B/3-2-3	No
<i>Astragalus tener</i> var. <i>tener</i> alkali milk-vetch	Species of Concern	--	1B/3-2-3	No
<i>Lathyrus jepsonii</i> var. <i>jepsonii</i> Delta tule pea	Species of Concern	--	1B/2-2-3	No
<i>Lotus rubriflorus</i> red-flowered lotus	Species of Concern	--	1B/3-3-3	No
<i>Erodium macrophyllum</i> round-leaved filaree	--	--	2/2-3-1	No
<i>Phacelia ciliata</i> var. <i>opaca</i> Merced phacelia	Species of Concern	--	1B/3-1-3	No
<i>Phacelia phacelioides</i> Mt. Diablo phacelia	Species of Concern	--	1B/3-2-3	No
<i>Monardella leucocephala</i> Merced monardella	Species of Concern	--	1A/ *	No
<i>Scutellaria galericulata</i> marsh skullcap	--	--	2/2-2-1	No
<i>Scutellaria lateriflora</i> blue skullcap	--	--	2/3-2-1	No
<i>Hesperolinon</i> sp. nov. " <i>serpentinum</i> " Napa western flax	Species of Concern	--	1B/3-2-3	No
<i>Hibiscus lasiocarpus</i> rose-mallow	--	--	2/2-2-1	No
<i>Malacothamnus hallii</i> Hall's bush mallow	Species of Concern	--	1B/3-2-3	No
<i>Clarkia rostrata</i> beaked clarkia	Species of Concern	--	1B/2-1-3	No
<i>Eschscholzia rhombipetala</i> diamond-petaled California poppy	Species of Concern	--	1B/3-3-3	No
<i>Navarretia nigelliformis</i> ssp. <i>Radians</i> shining navarretia	--	--	1B/2-2-3	No
<i>Navarretia prostrata</i> prostrate navarretia	Species of Concern	--	1B/2-3-3	No
<i>Navarretia myersii</i> ssp. <i>Myersii</i> pincushion navarretia	Species of Concern	--	1B/3-3-3	No
<i>Delphinium californicum</i> ssp. <i>Interius</i> Hospital Canyon larkspur	Species of Concern	--	1B/3-2-3	No



**Table 3-1  
Special-Status Species Known to Occur in the Project Area<sup>1</sup>**

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

## Notes:

<sup>1</sup> Occurrences documented in the California Natural Diversity Data Base (CNDDB) for San Joaquin, Stanislaus and Merced counties (DFG 2003).

<sup>2</sup> Federal and state status designations as published in DFG (2003).

<sup>3</sup> DFG status abbreviations:

SC – species of special concern

FP – fully protected species under the California Fish and Game Code (no take allowed)

<sup>4</sup> 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).

1 Application of the proposed aquatic pesticides to irrigation conveyance systems would  
2 potentially affect six special-status species that utilize aquatic habitats associated with these  
3 facilities:

- 4 • Tricolored blackbird (*Agelaius tricolor*)
- 5 • San Joaquin roach (*Lavinia symmetricus* ssp. 1)
- 6 • Western pond turtle (*Emys [=Clemmys] marmorata*)
- 7 • Giant garter snake (*Thamnophis gigas*)
- 8 • Sanford's arrowhead (*Sagittaria sanfordii*)
- 9 • Slender-leaved pondweed (*Potamogeton filiformis*)

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

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

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

- 28 • **San Joaquin roach.** A subspecies of the California roach, the San Joaquin roach's range is  
29 limited to the San Joaquin river system and inhabits headwater pools, creeks, and small to  
30 medium streams with rocky substrates. Known as a habitat generalist, it is usually found in  
31 small, warm, intermittent tributaries to larger streams, but also can occur in cold trout  
32 streams, human-modified habitats, and in the main channels of rivers. Dense populations are  
33 often found in isolated, well-shaded pools. The San Joaquin roach is capable of withstanding  
34 extreme environmental conditions, and is most abundant in pools and slow waters of the low  
35 to mid-elevation streams with high pH, conductivity, and temperature and with little cover or  
36 canopy. Spawning occurs in shallow, flowing areas with a substrate of small rocks. Adhesive  
37 eggs stick to rocks. Newly hatched fry stay in rock crevices or vegetation until large enough  
38 to move around actively (NatureServe 2003).

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

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

21 Giant garter snakes are historically known from the central and western portions of the San  
 22 Joaquin Valley. An aquatic garter snake (*T. couchii* or *T. gigas*) has never been collected  
 23 from the eastern San Joaquin Valley, between the Sierra Nevada foothills and the marshes on  
 24 the Valley floor (Hansen 1980). It has been suggested that the ranges of these two species  
 25 were once divided by extensive riparian forests that occurred along the river corridors of  
 26 streams that flowed from the foothills of the Sierra Nevada mountains to the San Joaquin  
 27 River (Hansen 1980; USFWS 1999). Between the foothills of the Sierra, and the marshes  
 28 and sloughs that typified the habitats of the bottomlands of the San Joaquin Valley, river  
 29 corridors were shaded by dense riparian forests. These shaded river corridors lacked suitable  
 30 basking sites for aquatic garter snakes, and prey items may also have been less abundant than  
 31 in sloughs and marshes of the bottomland regions. This type of riparian habitat is not  
 32 suitable for giant garter snakes (Brode 1988). Consequently, habitats suitable for aquatic  
 33 garter snakes (including the giant garter snake) appear to be absent from the eastern portions  
 34 of San Joaquin, Stanislaus, and Merced counties.

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

43 • **Slender-leaved pondweed.** Slender-leaved pondweed is included on CNPS List 2. This  
 44 perennial herb in the pondweed family (*Potamogetonaceae*) is widely distributed in the

1 northern hemisphere but is rare in California. Slender-leaved pondweed has submersed stems  
 2 and leaves less than 6 inches long and less than 0.12 inch wide. This pondweed species  
 3 typically occupies the shallow-water zones of lakes and drainage channels in the San Joaquin  
 4 Valley, Sierra Nevada, San Francisco Bay, and Modoc Plateau regions of California (DFG  
 5 2003).

## 6 **3.2 HYDROLOGY AND WATER QUALITY**

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

### 18 **3.2.1 Surface Water Hydrology**

#### 19 **3.2.1.1 San Joaquin River**

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

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

#### 36 **3.2.1.2 Stanislaus River**

37 The Stanislaus River drains a watershed of approximately 900 square miles, and produces an  
 38 average unimpaired runoff of approximately 1.056 million acre-feet. Flows in the lower  
 39 Stanislaus River are controlled by releases from the New Melones Reservoir, which has a  
 40 capacity of 2.4 million acre-feet, and is operated by the Bureau of Reclamation (Reclamation) as  
 41 part of the Central Valley Project. The main water diversion point on the Stanislaus River is

1 Goodwin Dam, which provides for delivery to Oakdale and South San Joaquin irrigation  
2 districts.

### 3 3.2.1.3 Tuolumne River

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

### 11 3.2.2 Surface Water Quality in the San Joaquin River Basin

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

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

24 As the San Joaquin River progresses downstream from Fremont Ford, water quality generally  
25 improves at successive confluences, specifically at those with the Merced, Tuolumne, and  
26 Stanislaus rivers. In the relatively long reach between the Merced and Tuolumne rivers, however,  
27 mineral concentrations tend to increase due to agricultural drainwater return flows, other  
28 wastewaters, and groundwater discharging into the river (DWR 1965 as cited in Reclamation  
29 2000).

30 Section 303(d) of the Clean Water Act requires states to identify and include on the 303(d) list  
31 water bodies that are threatened or are not meeting water quality standards despite controls on  
32 point source discharges. Pollutants listed for water bodies within the San Joaquin River Basin  
33 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
Lone Tree Creek	Ammonia	Dairies
	Biological Oxygen Demand	Dairies
	EC	Dairies
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
Stanislaus River, Lower	Diazinon	Agriculture
	Group A Pesticides	Agriculture
	Mercury	Resource Extraction
	Unknown Toxicity	Source Unknown
Tuolumne River, Lower (Don Pedro Reservoir to San Joaquin River)	Diazinon	Agriculture
	Group A Pesticides	Agriculture
	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

- 1 **3.2.3 Oakdale Irrigation District Facilities**
- 2 The Oakdale Irrigation District's water conveyance facilities are described in Section 2.2.1.2 of
- 3 this Initial Study. Water leaving the Oakdale Irrigation District is discharged into the Stanislaus
- 4 River, Lone Tree Creek, and Dry Creek, a tributary to the Tuolumne River. The Stanislaus
- 5 River, Lone Tree Creek and the Tuolumne rivers are tributaries to the San Joaquin River. Water
- 6 bodies that are treated with pesticides or may be affected by pesticides are listed in
- 7 Section 2.2.2.1.

1 **4 AGENCIES WHOSE APPROVAL IS REQUIRED (RESPONSIBLE, TRUSTEE, AND**  
2 **AGENCIES WITH JURISDICTION)**

3 Application of aquatic pesticides by public entities is currently regulated in 2002 and 2003 under  
4 the SWRCB Statewide General NPDES Permit for Discharges of Aquatic Pesticides (Water  
5 Quality Order No. 2001-12-DWQ, General Permit No. CAG990003). Dischargers eligible for  
6 coverage under this General Permit are public entities that conduct resource or pest management  
7 control measures, including local, state, and federal agencies responsible for control of algae,  
8 aquatic weeds, and other organisms that adversely impact operation and use of drinking water  
9 reservoirs, water conveyance facilities, irrigation canals, and natural water bodies. This permit is  
10 set to expire in January 2004, and the proposed pesticide application program would occur under  
11 a new General Permit. The SWRCB requires California Environmental Quality Act (CEQA)  
12 documentation to be complete before a discharger can be covered under the new General Permit.

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

1 **5** **CONSISTENCY WITH EXISTING GENERAL PLAN, ZONING, AND OTHER APPLICABLE**  
 2 **LAND USE CONTROLS**

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

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

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

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

**Table 5-1**  
**County General Plan Policy Summary**

County	Goals and Objectives
San Joaquin	<ul style="list-style-type: none"> <li>• Preserve open-space land for the continuation of commercial, agricultural, and productive uses, the enjoyment of scenic beauty and recreation, the protection and use of natural resources, and for protection from natural hazards.</li> <li>• Ensure adequate quantity and quality of water resources for municipal and industrial uses, agriculture, recreation, and fish and wildlife.</li> <li>• Recognize the surface waters of San Joaquin County as resources of state and national significance for which environmental and scenic values must be protected.</li> <li>• Protect and improve the county's vegetation, fish, and wildlife resources.</li> <li>• Provide undeveloped open space for nature study, protection of endangered species, and preservation of wildlife habitat.</li> </ul>



**Table 5-1  
County General Plan Policy Summary**

County	Goals and Objectives
Stanislaus	<ul style="list-style-type: none"> <li>• Conserve water resources and protect water quality in the county.</li> <li>• Provide for the long-term conservation and use of agricultural lands.</li> <li>• Protect fish and wildlife species in the county.</li> <li>• Protect the natural resources that sustain agriculture in the county.</li> </ul>

Sources: San Joaquin County 1992; Stanislaus County 1994.

- 1 The Proposed Project is consistent with the policies above. Because land uses would not be  
 2 physically altered, local zoning and related land use controls are not an issue. Furthermore, it  
 3 would not directly or indirectly result in the following actions:
- 4 • Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance  
 5 (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and  
 6 Monitoring Program of the California Resources Agency, to nonagricultural use.
  - 7 • Conflict with existing zoning for agricultural use, or a Williamson Act contract.
  - 8 • Involve other changes in the existing environment which, due to their location or nature,  
 9 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.

1 **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?				✓

2 **Discussion:**

- 3 a. The Proposed Project consists of the application of aquatic pesticides to the irrigation  
 4 conveyance system and does not include any alterations to Prime Farmland, Unique  
 5 Farmland, or Farmland of Statewide Importance.
- 6 b. The application of aquatic pesticides to irrigation conveyance systems does not conflict with  
 7 any zoning of lands for agricultural use or Williamson Act contracts because no change in  
 8 land use occurs.
- 9 c. The application of aquatic pesticides to irrigation conveyance systems occurs primarily on  
 10 lands that are currently in agricultural use and would not result in the conversion of the lands  
 11 to nonagricultural uses.

12 **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 exceed quantitative thresholds for ozone precursors)?				✓

Would the project:	Potentially Significant Impact	Less-Than-Significant with Mitigation Incorporation	Less-Than-Significant Impact	No Impact
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<sub>10</sub> 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. All the aquatic pesticides except Rodeo/AquaMaster are applied directly to the water and would not be airborne; therefore, no impacts would occur to air quality standards. The application of Rodeo/AquaMaster to canal banks is by spray rig or could be by backpack sprayer. BMPs for Rodeo/AquaMaster application include applying Rodeo/AquaMaster only when wind speeds are between 2 to 10 mph, and the application equipment is to be set up to produce a large droplet size to avoid pesticide drift. Thus, with the use of BMPs for the application of Rodeo/AquaMaster, impacts on air quality due to the application of aquatic pesticides would not be significant.

c. Because all the aquatic pesticides except Rodeo/AquaMaster are applied directly to the water, no increases in airborne pollutants would occur. Again, the application of Rodeo/AquaMaster would follow BMPs and would not result in a net cumulative increase of air pollutants.

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. As agricultural areas convert to residential uses, irrigation conveyance systems are generally piped as part of the development process. 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).

1 e. Magnacide H can have an odor at the point of application and for a distance of approximately  
 2 100 yards downstream of the application point. The odor would be temporary, typically  
 3 lasting one to three hours, from start to end of the application. The odor would not be  
 4 detectible at distances over approximately 100 yards from the point of application. The  
 5 accumulation of aquatic vegetation can often create smells that may be objectionable.  
 6 Aquatic pesticide application is designed to remove existing vegetation that clogs irrigation  
 7 water conveyance systems. Removal of this vegetation would be beneficial or help to  
 8 minimize some objectionable odors that could be associated with water conveyance systems.  
 9 The application sites for Magnacide H are located in rural areas away from substantial  
 10 numbers of people.

11 **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?			✓	

12

13 **Discussion:**

14 a. Table 3-1 identifies special-status species that potentially utilize aquatic habitats associated  
 15 with water conveyance facilities in the Oakdale Irrigation District. Application of aquatic  
 16 pesticides could adversely affect six special-status species if these species are present in  
 17 conveyance facilities where the treatments are applied. Potential effects for wildlife species  
 18 could include loss of foraging or breeding habitat due to removal of aquatic vegetation,  
 19 disturbance of nesting or breeding habitat during application of the treatments, or mortality

1 and/or reduced survival of individuals caused by exposure to toxic concentrations of  
2 chemicals associated with the treatments. Potential effects for special-status plants could  
3 include mortality of plant populations and the loss of habitat. The two special-status plant  
4 species that could be present would be extremely vulnerable to the proposed applications, but  
5 these species are unlikely to occur in most of the water conveyance facilities proposed for  
6 treatment.

7 Under the Proposed Project, pesticide application procedures in Oakdale Irrigation District  
8 would be essentially equivalent to practices that have occurred for the past 18 years. During  
9 the past 2 years, under the General Permit, water quality monitoring has been conducted as  
10 discussed in Section 2.2.2.3 and BMPs implemented as required by the existing General  
11 Permit (existing conditions). Oakdale Irrigation District complies with label instructions and  
12 does not release treated water from irrigation facilities while the aquatic pesticide remains in  
13 the water. When applying aquatic pesticides directly to the water, Oakdale Irrigation District  
14 uses the practice of closing all gates at potential release points before, during and after  
15 application to ensure that streams or wetlands are not affected. District personnel review  
16 training prior to the application of aquatic pesticides including environmental awareness of  
17 the special-status species issues associated with water conveyance facilities in Oakdale  
18 Irrigation District and the sensitivity of aquatic resources that receive discharges from these  
19 conveyance facilities.

20 When Rodeo/AquaMaster is applied to vegetation in drains that discharge to natural water  
21 bodies, there is not always a mechanism to control flow out of the drains. However, the  
22 active ingredient (glyphosate) is not mobile or highly toxic and, therefore, unlikely to impact  
23 the environment and the application is made to the vegetation not the water.

24 Glyphosate is a nonselective herbicide, meaning that it kills all vascular plants  
25 indiscriminately, rather than selectively affecting certain types of plants, such as grasses or  
26 broad-leaf herbs. Plants vary in their sensitivity to glyphosate exposure, mostly by variation  
27 in how easily it is absorbed and internally transported by plant tissues. Its action is systemic,  
28 meaning that it is transported within plant tissues from surfaces it contacts to affect remote  
29 parts of the plant, such as roots and rhizomes. Despite its high toxicity to plants, it is  
30 relatively low in toxicity to animals due to its chemical nature and the physiological basis for  
31 its activity. Glyphosate is chemically similar to certain types of amino acids (components of  
32 proteins) found in plants, but not in animals. When glyphosate interacts with the  
33 physiological processes of manufacturing proteins in plants, it profoundly disrupts all protein  
34 synthesis. Proteins are essential to all physiological processes in plants and, thus, glyphosate  
35 exposure is generally highly lethal to plants. Glyphosate does not poison protein synthesis in  
36 animals, because it does not act as an analogue of amino acids metabolized in animals.  
37 Glyphosate does have other effects on animals, however, and so do some of the additives  
38 included with it in spray mixes. Glyphosate is an acid, like amino acids, but is most  
39 commonly used in salt form (isopropylamine salt), which is soluble in water. Its chemical  
40 name is N-(phosphonomethyl) glycine. The overall effect of glyphosate solutions depends on  
41 both the active ingredient and the surfactant. The only formulations of glyphosate currently  
42 approved for use in aquatic habitats omit surfactants. Certain surfactants approved for use in  
43 aquatic habitats must be added to aquatic-approved glyphosate formulations.  
44

1 One ecologically significant feature of glyphosate is that it is strongly adsorbed by organic  
 2 matter and fine sediment, such as clay or silt. Sediment films on plant surfaces strongly  
 3 interfere with uptake and activity of glyphosate. In its chemically bound, adsorbed state  
 4 glyphosate is chemically intact, but physiologically inactive. Actual decomposition of  
 5 glyphosate in the soil or sediment is distinct from its inactivation by adsorption. Glyphosate  
 6 also desorbs (releases) from soil particles, but its strong affinity for fine mineral and organic  
 7 particles maintains the predominantly bound, inactivated form (EXTOXNET; Ebasco 1993;  
 8 Giesy et al. 2000).  
 9

10 The primary breakdown product of glyphosate is aminophosphoric acid (AMPA), which is  
 11 generally reported to be nontoxic to animals (EXTOXNET; Ebasco 1993). Glyphosate is  
 12 decomposed by microbial activity in the soil. The reported rates of glyphosate decomposition  
 13 and persistence in soil vary a great deal: most studies suggest rapid decomposition, while  
 14 others detect persistence in the soil for more than a year (Ebasco 1993). Rates of  
 15 decomposition by soil microbes vary with factors such as temperature, oxygen, and pH.  
 16 Glyphosate may be used as a food substrate by bacteria and can stimulate bacterial activity. It  
 17 has been found to kill or inhibit the growth of some soil fungi in pure cultures, however.  
 18 Little is known about how glyphosate affects the microflora in realistic soil environments,  
 19 where important interactions such as soil adsorption can occur (Ebasco 1993).  
 20

21 No impacts to special-status species are known to have occurred due to pesticide use by  
 22 Oakdale Irrigation District and are not expected to occur in the future. Therefore, the  
 23 proposed treatments are not likely to have a substantial adverse impact, either directly or  
 24 through habitat modifications, on the special-status species identified in Table 3-1.

25 Riparian habitats do not exist on the water conveyance facilities treated with aquatic  
 26 pesticides. The facilities are lined with concrete or maintained to reduce obstructions to water  
 27 flow. Therefore, the Proposed Project would not have a substantial adverse effect on any  
 28 riparian habitat or other sensitive natural community identified in local or regional plans,  
 29 policies, regulations or by the DFG or USFWS. Oakdale Irrigation District implements  
 30 operational procedures that prevent treated water from entering natural streams, wetlands, or  
 31 other natural aquatic habitats including vernal pools. Vernal pools are seasonal in nature and  
 32 aquatic pesticide use does not begin until June when most but the deepest vernal pools would  
 33 be dry. Vernal pools would not be located in any areas targeted for aquatic pesticide use.

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

37 c. The Proposed Project would not interfere substantially with the movement of any native  
 38 resident or migratory fish or wildlife species or with established native resident or migratory  
 39 wildlife corridors, or impede the use of native wildlife nursery sites. Oakdale Irrigation  
 40 District implements operational procedures that prevent aquatic pesticide from entering  
 41 natural streams, wetlands, or other natural aquatic habitats that support native resident or  
 42 migratory fish and wildlife species.

43 d. The Proposed Project does not conflict with any local policies or ordinances protecting  
 44 biological resources, such as a tree preservation policy or ordinance. Oakdale Irrigation

- 1 District's aquatic pesticide program complies with the local policies and ordinances intended  
 2 to protect biological resources.
- 3 e. The Proposed Project does not conflict with the provisions of an adopted Habitat  
 4 Conservation Plan, Natural Community Conservation Plan, or other approved local, regional,  
 5 or state habitat conservation plan.

6 **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?				✓

7 **Discussion:**

- 8 a. The application of aquatic pesticides is typically in irrigation water conveyances that are  
 9 primarily man-made. Although some of these structures may be more than 50 years old, the  
 10 application does not involve any physical disturbance of them so no impacts would occur to  
 11 historical resources.
- 12 b. Application of the aquatic pesticides does not involve any physical disturbance of the  
 13 irrigation water conveyance system so no impacts would occur to archeological resources.
- 14 c. The aquatic pesticide application does not involve any digging or other physical disturbance  
 15 of the irrigation water conveyance system.
- 16 d. Application of aquatic pesticides is typically in irrigation water conveyances that are  
 17 primarily man-made. Again, the application would not involve any digging or physical  
 18 disturbances, so it would not disturb human remains.

19 **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				



Would the project:	Potentially Significant Impact	Less-Than-Significant with Mitigation Incorporation	Less-Than-Significant Impact	No Impact
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?				✓

1 **Discussion:**

- 2 a. Application of the aquatic pesticides does not involve any physical disturbance of the  
3 irrigation water conveyance system, so no impacts would occur from rupture of a known  
4 earthquake fault, strong ground shaking, ground failure, or landslides as a result of the  
5 Proposed Project.
- 6 b. Application of the aquatic pesticides does not involve any digging or other physical  
7 disturbance of the irrigation water conveyance system, so no soil erosion or loss of topsoil  
8 would occur. Use of aquatic pesticides reduces the need to implement mechanical cleaning  
9 measures. As a result, the use of aquatic pesticides can be a benefit by reducing the digging  
10 or other physical disturbance associated with mechanical cleaning methods.
- 11 c. The Proposed Project does not involve any digging or other physical disturbance of the  
12 irrigation water conveyance system, and the affected canals and reservoirs have been in place

- 1 for many years. Application of the aquatic pesticides would not result in on- or off-site  
 2 landslides, lateral spreading, subsidence, liquefaction, or collapse.
- 3 d. The Proposed Project includes canals and reservoirs that have been in place for many years  
 4 and does not include any construction. Thus, no activities on expansive soils could be a risk  
 5 to life or property.
- 6 e. The Proposed Project does not include the need for septic tanks or other wastewater disposal  
 7 systems.

8 **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?				✓
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				✓

Would the project:	Potentially Significant Impact	Less-Than-Significant with Mitigation Incorporation	Less-Than-Significant Impact	No Impact
adjacent to urbanized areas or where residences are intermixed with wildlands?				

**Discussion:**

- 1 a. The pesticides that would be used are all registered for use in California as aquatic pesticides. 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 pesticides have been approved for use as aquatic pesticides, Department of Transportation (DOT) requirements will be followed during transport, and BMPs are required during application, no significant hazard would occur to the public or the environment in their routine transport, use, or disposal. In addition, no significant spills, impacts, or injuries are known to have occurred during past use of these pesticides by Oakdale Irrigation District
- 2 b. BMPs are required with the use of any of these pesticides. All personnel applying the restricted aquatic pesticides must be trained and licensed. However, the possibility exists that an accidental spill of the pesticides 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.
- 3 c. The application of the aquatic pesticide Rodeo/AquaMaster occurs within ¼ mile of a school. The school yard is fenced, and from approximately June to September, no students are present. The first application of aquatic pesticides does not begin until June and irrigation season can end about the middle of October, if not sooner. The District will utilize the BMP for the specific product and will not apply the product when students are present outdoors. In other instances, water conveyances may pass schools, but by this point, the aquatic pesticides will be diluted and the irrigation water conveyance systems are piped. No incidents of vandalism have occurred in the past in these locations, so the access limitations are effective and would prevent access during the brief, temporary periods when the materials are applied and active. No application points of Magnacide H are located with ¼ mile of a school.
- 4 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 with Magnacide H, and the treated water would be either applied to pre-approved fields or held according to the required time on the pesticide label. BMPs for the application of Rodeo/AquaMaster include starting downstream and spraying upstream to avoid concentrations of the pesticide in water and any Rodeo/AquaMaster applied on land is quickly adsorbed into the soil.

- 1 e. The application of these aquatic pesticides does not involve any land use changes,  
 2 construction of buildings, or use of equipment that would interfere with operations of any  
 3 public airport. Neither spraying or the application of aquatic pesticides will reduce visibility.  
 4 It does not create habitat that would attract birds and would not contribute to any bird aircraft  
 5 strike hazard. The Oakdale Municipal Airport, a public airport is located within two miles of  
 6 the Robert Van Lier Regulationg Reservoir. As a condition of approval for the Robert Van  
 7 Lier Regulating Reservoir, the Federal Aviation Administration requested that no habitat that  
 8 would attract birds be allowed to develop and contribute to any bird aircraft strike hazard.
- 9 f. A small, private airstrip is in the vicinity of Oakdale Irrigation District water conveyance  
 10 facilities, but the business located at the private airstrip is for agricultural spraying. The  
 11 application of these aquatic pesticides does not involve any land use changes, construction of  
 12 buildings, or use of equipment that would interfere with operations of any private airport nor  
 13 will spraying or the application of aquatic pesticides reduce visibility.
- 14 g. The Proposed Project involves application of aquatic pesticides to irrigation water  
 15 conveyance systems. The application of aquatic pesticides is generally done via the banks of  
 16 the irrigation water conveyance systems or other convenient locations safely out of the public  
 17 roadway. As such, no construction or obstruction of roads would impair or physically  
 18 interfere with any emergency response or evacuation plans.
- 19 h. The irrigation water conveyance systems are primarily located in agricultural areas adjacent  
 20 to irrigated fields. In locations where the Oakdale Irrigation District water conveyance  
 21 facilities are located where wildfires could occur, vehicular access is in many cases  
 22 restricted. As a part of standard operating procedure, all vehicles carry implements which  
 23 could be used to put out fires that could be started and those facilities are not located adjacent  
 24 to urbanized areas where residences are not intermixed with wildlands.

25 **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				✓

Would the project:	Potentially Significant Impact	Less-Than-Significant with Mitigation Incorporation	Less-Than-Significant Impact	No Impact
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 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:**

None of the Oakdale Irrigation District irrigation conveyance facilities that are treated with aquatic pesticides are officially designated on the list of the Water Quality Control Plan (Basin Plan) prepared by the California Regional Water Quality Control Board, Central Valley Region (1998) as having beneficial uses. In general, potential impacts to water quality would only occur if treated water is released to a water body that has designated beneficial uses. District personnel review training and BMP's prior to the application of aquatic pesticides including safety, reviewing pesticide label instructions and operational issues as well as the special-status species issues associated with water conveyance facilities in Oakdale Irrigation District and the sensitivity of aquatic resources that receive discharges from these conveyance facilities. No waste discharge requirements exist for application of aquatic pesticides. Oakdale Irrigation District complies with label instructions and does not release treated water from irrigation facilities while the aquatic pesticide remains in the water. When applying pesticides directly to the water, Oakdale Irrigation District uses the practice of closing all gates at potential release points before, during and after application to ensure that beneficial uses are not impacted. No impacts to water quality are known to have

1 occurred due to pesticide use by Oakdale Irrigation District and are not expected to occur in  
2 the future.

### 3 *Magnacide H*

4 • Magnacide H is applied only to irrigation canals with no designated beneficial uses. When  
5 Magnacide H is applied to irrigation canals, the main concern would be impacts to water  
6 quality due to release of the treated water from the canals. Prior to each treatment,  
7 arrangements are made to irrigate out the treated water to appropriate sites. Staff verifies that  
8 there will be no potential for crop damage, or for field runoff or drainage discharges to  
9 waters of the state (all irrigation water must be retained on site). If treated water is not  
10 irrigated out, water is held for a minimum of 6 days before releasing, per label instructions.  
11 Prior to opening gates, the Magnacide H Baker Petrolite Field Test is conducted at potential  
12 release points.

### 13 *Rodeo/AquaMaster*

14 Generally, Rodeo/AquaMaster is applied only to banks of irrigation facilities and drains with  
15 no designated beneficial uses. Rodeo/AquaMaster is generally not applied directly to the  
16 water but is applied to vegetation growing along the banks of irrigation canals and drains.  
17 However, in some cases, Rodeo/AquaMaster is applied to vegetation growing in water, or  
18 some overlap occurs onto the water surface when the pesticide is applied to vegetation  
19 growing on the banks. Glyphosate, the active compound in Rodeo/AquaMaster, is quickly  
20 immobilized by adsorption to soil/sediment particles and organic matter, and remains  
21 immobilized until degradation occurs. Therefore, glyphosate is not expected to be  
22 transported significantly in water.

### 23 *Copper Compounds*

24 Copper compounds are applied to 3 locations with no designated beneficial uses. Copper, the  
25 active ingredient in Clearigate and copper sulfate, does not remain in the water column for  
26 long periods of time because it precipitates and settles out, therefore, copper compounds are  
27 not expected to be transported significantly in water.

28 Oakdale Irrigation District applies Clearigate once a year in one irrigation conveyance  
29 facility and copper sulfate in two irrigation conveyance facilities on an as needed basis.

### 30 Water Quality Monitoring

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

39 No pesticides (active ingredients) were detected in water quality samples collected at  
40 discharge points. Therefore, no impacts to water quality are believed to have occurred as a  
41 result of pesticide application by Oakdale Irrigation District. The projects selected for  
42 monitoring are representative of typical pesticide application projects, sampling locations

1 represented the worst-case scenarios, and standardized BMPs were implemented consistently  
 2 for all pesticide application projects. Therefore, no significant impacts to water quality are  
 3 expected to occur in the future, assuming that equivalent practices will be used. In  
 4 comparison to No Project conditions, water quality would not be significantly impacted  
 5 because existing monitoring data indicate that pesticide applications will not result in  
 6 exceedances of applicable WQOs.

7 Table 6-1 identifies irrigation conveyance facilities that normally would spill directly to  
 8 water bodies with beneficial uses (such as rivers) that are treated with aquatic pesticide, and  
 9 that may potentially receive treated water if a release occurs. The estimated range of flow  
 10 rates are for irrigation conveyance facilities at their beginnings or headgates and not at the  
 11 end of the facilities where potential release could occur and flow rates would be significantly  
 12 reduced. Flow rates for locations where the potential for release exists would be in the 3 cfs  
 13 range.

14  
 15  
**Table 6-1**  
**Beneficial Uses of Potentially Affected Water Bodies**

Potentially Affected Water Bodies	Treated Directly? [Yes] or [No]	Number of Potential Release Locations	Estimate Range of Flow Rates	Designated Beneficial Uses
Stanislaus River	No	13	3-485	Agriculture, industry, recreation, freshwater habitat, migration, spawning

16 Under the Proposed Project, pesticide application procedures would be essentially equivalent to  
 17 practices that have occurred for the past 18 years including the last 2 years time that monitoring  
 18 has been conducted and BMPs implemented as required by the existing General Permit (existing  
 19 conditions). Therefore, no change to water quality is expected as compared to Existing  
 20 Conditions.

- 21 a. The Proposed Project will not alter groundwater recharge or supplies.  
 22 b. The Proposed Project will not alter existing drainage patterns or stream or river courses.  
 23 c. The Proposed Project will not alter existing drainage patterns or stream or river courses  
 24 because existing facilities are not being structurally modified.  
 25 d. The Proposed Project will not affect quantity or quality of surface water runoff.  
 26 e. Potential effects to water quality are discussed under item (a).  
 27 f. The Proposed Project will not create housing or change delineation of flood hazard areas.  
 28 g. The Proposed Project will not involve creation of new structures.  
 29 h. The Proposed Project will have no effect on the integrity of any levee or dam, and will have  
 30 no effect on flood flows.  
 31 i. The Proposed Project will have no effect on water flows.

1 **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?				✓

2 **Discussion:**

- 3 a. The Proposed Project does not involve any construction, and as such, would not divide an  
4 established community.
- 5 b. The objective of the Proposed Project is to control weeds and algae that interfere with  
6 irrigation conveyance. Agricultural land uses are all part of the counties' land use goals and  
7 objectives (see Section 5). The Proposed Project would not change the land use in the county.
- 8 c. The irrigation water conveyance systems are primarily located in agricultural areas with  
9 agricultural land uses. The application of aquatic pesticides to control weeds and algae occur  
10 in maintained, water conveyance facilities. Oakdale Irrigation District complies with label  
11 instructions and does not release treated water from irrigation facilities while the pesticide  
12 remains in the water. When applying pesticides directly to the water, Oakdale Irrigation  
13 District uses the practice of closing all gates at potential release points during and after  
14 application so that water containing aquatic pesticides are released except to pre-approved  
15 locations. No impacts to water quality are known to have occurred due to pesticide use by  
16 Oakdale Irrigation District and are not expected to occur in the future. The Project would not  
17 be in conflict with habitat conservation plans or natural community conservation plans.

18 **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?				✓



Would the project:	Potentially Significant Impact	Less-Than-Significant with Mitigation Incorporation	Less-Than-Significant Impact	No Impact
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?				✓

1 **Discussion:**

- 2 a. Because the application of aquatic pesticides would be to existing irrigation water  
 3 conveyance systems and no change in land use or stream flow would occur, no loss of known  
 4 mineral resources would occur from excavation/construction activity or erosion.
- 5 b. The Proposed Project would not involve any change in land use as specified by any local  
 6 general plan, specific plan, or other land use plan.

7 **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?				✓
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?				✓

1 **Discussion:**

- 2 a. The spraying of Rodeo/AquaMaster is done with a tank-mounted, one-ton pick up, driven at  
 3 slow speed, in a predominantly agricultural setting, two or more times between June and  
 4 October. A Honda 5 horsepower motor drives the pump for the spray truck and generates  
 5 little noise. The application activity would not cause any discernable increases over ordinary  
 6 background level noise. Other pesticide applications would involve driving to the application  
 7 site, anywhere from once an irrigation season to every 30 days. Consequently, the Proposed  
 8 Project would not generate noise levels in excess of established standards.
- 9 b. No groundborne vibration or groundborne noise would be generated by the Proposed Project.
- 10 c. The application of the aquatic pesticides is a periodic event that occurs on an as-needed basis  
 11 or as a preventative measure during the irrigation season.
- 12 d. The application of the aquatic pesticides is a temporary event during the irrigation season. No  
 13 increase in ambient noise would occur as a result of the Proposed Project.
- 14 e. The application of these aquatic pesticides does not involve land use changes, construction of  
 15 buildings, or use of equipment that would interfere with operations of any public airport. The  
 16 application of the aquatic pesticides is a periodic event that occurs on an as-needed basis or  
 17 as a preventative measure during the irrigation season. No increase in ambient noise would  
 18 occur as a result of the Proposed Project.
- 19 f. The application of the aquatic pesticides is a periodic event that occurs on an as-needed basis  
 20 or as a preventative measure during the irrigation season. No increase in ambient noise  
 21 would occur as a result of the Proposed Project.

22 **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?				✓

23 **Discussion:**

- 24 a. The Proposed Project does not expand water supply or conveyance systems to serve urban  
 25 development. Irrigation water deliveries generally cease once agricultural land converts to  
 26 residential development and the irrigation conveyance systems abandoned or piped through

- 1 the residential areas. The application of aquatic pesticides is to control weeds and algae  
 2 primarily for agricultural irrigation purposes. Therefore, it would not induce substantial  
 3 population growth.
- 4 b. No building or other construction activities would be part of the Proposed Project, so no  
 5 displacement of existing housing or construction of replacement housing would occur.
- 6 c. The Proposed Project would not involve any changes in land use or construction that would  
 7 displace substantial numbers of people.

8 **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?				✓

9 **Discussion:**

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

15 **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				✓

Would the project:	Potentially Significant Impact	Less-Than-Significant with Mitigation Incorporation	Less-Than-Significant Impact	No Impact
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?				✓

1 **Discussion:**

- 2 a. No increase in population growth would occur as a result of the Proposed Project. Therefore,
- 3 no increase in the use of existing recreational facilities would occur.
- 4 b. The Proposed Project includes the application of aquatic pesticides to irrigation water
- 5 conveyance systems and would not include the need for construction of or expansion of
- 6 recreational facilities.

7 **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)?				✓

1 **Discussion:**

- 2 a. No increase in population growth would occur as a result of the Proposed Project. Therefore,  
 3 no increase in existing traffic load or capacity would occur. Oakdale Irrigation District  
 4 would use one (1) vehicle on county roads primarily during noncommute hours.
- 5 b. Because no increase in traffic would occur, no exceedence of service standard levels for  
 6 designated roads or highways would occur as a result of the Proposed Project.
- 7 c. No change in air traffic would be associated with the Proposed Project.
- 8 d. The Proposed Project is for the application of aquatic pesticides. The application of aquatic  
 9 pesticides is generally done via the banks of the irrigation water conveyance systems or other  
 10 convenient locations safely out of the public roadway. No changes in design features of roads  
 11 would be a part of the Proposed Project. The applicators of the aquatic pesticides utilize one  
 12 (1) vehicle and would be careful to avoid any encounters with farm equipment.
- 13 e. The application of aquatic pesticides is generally done via the banks of the irrigation water  
 14 conveyance systems or other convenient locations safely out of the public roadway. As such,  
 15 no construction or obstruction of roads would impair or physically interfere with emergency  
 16 access.
- 17 f. No parking would be required with the periodic application of aquatic pesticides because this  
 18 event would be temporary, and transportation to and from the irrigation water conveyance  
 19 systems would involve temporary parking primarily on District property.
- 20 g. No conflict would occur with programs supporting alternative transportation because the  
 21 Proposed Project would involve periodic trips to the irrigation water conveyance systems to  
 22 apply the pesticides.

23 **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				✓

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

**1 Discussion:**

- 2 a. All release points for the irrigation water would be closed prior to treatment, and the treated
- 3 water would be either applied to pre-approved fields or held according to the required time
- 4 on the pesticide label. BMPs for the application of Rodeo/AquaMaster include starting
- 5 downstream and spraying upstream to avoid concentrations of the pesticide in water. No
- 6 wastewater would be generated by the Proposed Project.
- 7 b. Because the treated irrigation water would be either applied to pre-approved fields or held in
- 8 place according to the required time on the pesticide label, no wastewater would be generated
- 9 nor would construction of water or wastewater facilities be needed.
- 10 c. The treated irrigation water would be either applied to pre-approved fields or held in place
- 11 according to the required time on the pesticide label. Therefore, construction of new
- 12 stormwater facilities would not be needed.
- 13 d. No additional water supplies would be needed to apply the aquatic pesticides to the irrigation
- 14 water conveyance systems.
- 15 e. No wastewater would be generated by the Proposed Project. Therefore, a wastewater
- 16 treatment provider would not be required.
- 17 f. No solid waste would be generated in the application of aquatic pesticides to the irrigation
- 18 water conveyance systems; therefore, no landfill would be needed.
- 19 g. No solid waste would be generated in the application of aquatic pesticides to the irrigation
- 20 water conveyance systems.

1 **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?				✓

2 **Discussion:**

- 3 a. The Proposed Project would not result in increased use of aquatic pesticides compared to  
 4 historical usage and is not expected to result in increased concentrations of these chemicals in  
 5 the treated water conveyance facilities. The temporary applications of pesticides to irrigation  
 6 system facilities does not require any physical alteration or construction of any facilities at  
 7 the point of application or elsewhere. Aquatic species and their habitats would only be  
 8 affected temporarily during pesticide application. Oakdale Irrigation District does not release  
 9 treated water from irrigation facilities while the pesticide remains active. Therefore, the  
 10 Proposed Project would not degrade the quality of the environment, substantially reduce the  
 11 habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-  
 12 sustaining levels, threaten to eliminate a plant or animal community, reduce the number or  
 13 restrict the range of a rare or endangered plant or animal, or eliminate important examples of  
 14 the major periods of California history or prehistory.
- 15 b. At least five districts in the project area and vicinity have used and are proposing to continue  
 16 to use aquatic pesticides as shown on Figure 6-1, Cumulative Analysis Study Area.  
 17 When combined with similar activities of these five districts (including the project  
 18 proponents) and potentially other districts in the project area,<sup>1</sup> the Proposed Project would

<sup>1</sup> 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

1 not be expected to result in cumulatively considerable impacts to water quality. The relevant  
2 water bodies listed in Table 3-2 (Impaired Water Bodies and Listed Pollutants) are currently  
3 not listed as impaired for any of the chemicals applied under the Proposed Project. In  
4 addition, the use of these chemicals is not expected to increase over historical usage and is  
5 not expected to result in increased concentrations in these water bodies.

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

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

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applied by the dischargers.



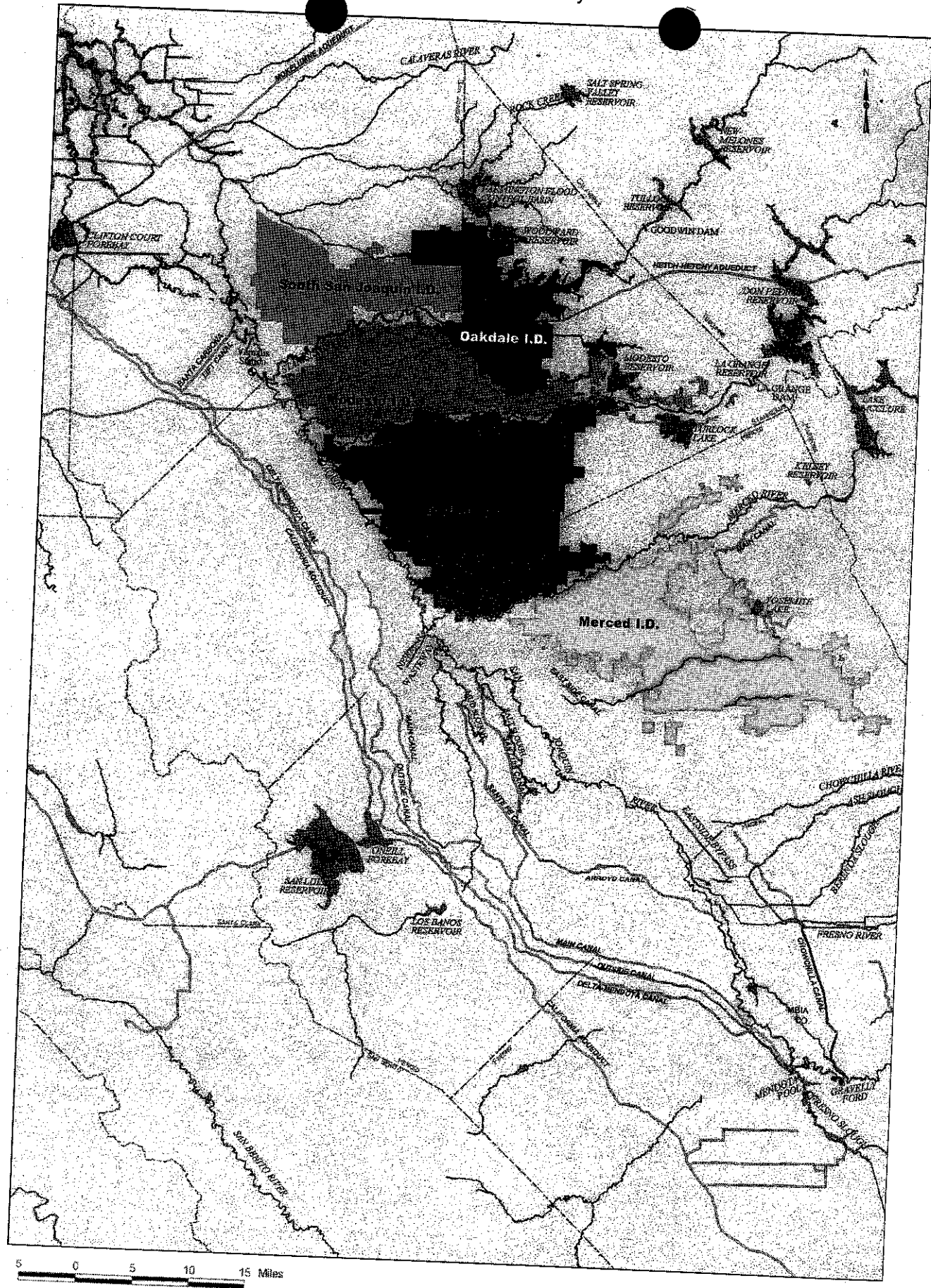


Figure 6-1 Cumulative Analysis Study Area

**7 LIST OF PREPARERS**

The following personnel were directly involved in the preparation of this Initial Study:

- Steve Knell General Manager
- Mike Hanf Pest Control Coordinator/Assistant Watermaster
- Sally J. Davis Engineering Technician
- Joe Fos Engineering Technician

Technical and support personnel from URS Corporation who were involved in document preparation are listed in Table 7-1.

**Table 7-1  
List of Technical and Support Personnel**

Preparers	Degree(s)/Years of Experience	Experience and Expertise	Role in Preparation
<b>URS</b>			
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

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- 22 U.S. Fish and Wildlife Service (USFWS). 2003. Special-Status Species Life Histories.  
23 Sacramento Field Office. <http://www.sacramento.fws.gov>.
- 24 Wang, Y.S., C.G. Jaw, and Y.L. Chen. 1994. Accumulation of 2,4-D and glyphosate in fish and  
25 water hyacinth. *Water, Air, and Soil Pollution* 74(3/4):397-403.

- 1 9 STANISLAUS COUNTY. 1994. STANISLAUS COUNTY GENERAL PLAN. OCTOBER.
- 2 ENVIRONMENTAL FACTORS POTENTIALLY AFFECTED
- 3 None of the environmental factors listed below would be potentially affected by the Proposed
- 4 Project as indicated by the checklist on the preceding pages in Section 6.

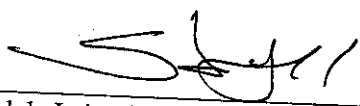
- |  |   |   |
|--|---|---|
| <input type="checkbox"/> Aesthetics                    | <input type="checkbox"/> Agriculture Resources              | <input type="checkbox"/> Air Quality            |
| <input type="checkbox"/> Biological Resources          | <input type="checkbox"/> Cultural Resources                 | <input type="checkbox"/> Geology /Soils         |
| <input type="checkbox"/> Hazards & Hazardous Materials | <input type="checkbox"/> Hydrology / Water Quality          | <input type="checkbox"/> Land Use / Planning    |
| <input type="checkbox"/> Mineral Resources             | <input type="checkbox"/> Noise                              | <input type="checkbox"/> Population / Housing   |
| <input type="checkbox"/> Public Services               | <input type="checkbox"/> Recreation                         | <input type="checkbox"/> Transportation/Traffic |
| <input type="checkbox"/> Utilities / Service Systems   | <input type="checkbox"/> Mandatory Findings of Significance |   |

1 **10 DETERMINATION**

2 On the basis of the information available to it in the record and the boxes checked in Section 6 of  
 3 this Initial Study, Oakdale 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.

4 This disposition constitutes the official action of the Oakdale Irrigation District.

5   
 Oakdale Irrigation District

General Manager

Date

12/18/03

**PROPOSED  
NEGATIVE DECLARATION**

Pursuant to Section 21000 et. Seq. of the Public Resources Code, State of California, a Negative Declaration is proposed for the following project.

1. **Project Name:** **Aquatic Pesticide Application Program for the Oakdale Irrigation District**
2. **Location and Description:**

The Oakdale Irrigation District is located in the northeastern San Joaquin Valley which is located in southeastern San Joaquin County and eastern Stanislaus County with approximately 80 percent of the District in Stanislaus County and 20 percent of the District in San Joaquin County.

Cities: Project area includes cities of Oakdale and Riverbank

Counties: Stanislaus and San Joaquin

The Proposed Project is the continuation of an aquatic pesticide application program by Oakdale Irrigation District since 1985. 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.

Oakdale 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.

3. **Project Sponsor:**

Oakdale Irrigation District  
1205 East F Street  
Oakdale, CA 95361

4. **Finding:** Based on the attached Initial Study (IS) and public meeting, it is my judgement that:

There is no substantial evidence that the Proposed Project may have a significant effect on the environment. There would be no new construction or alteration of facilities; no new irrigation of lands; and no substantial changes in the operation of the irrigation water conveyance or storage facilities. The proposed treatments are not likely to have a substantial adverse effect, either directly or through habitat modifications, on special-status species over existing conditions.

\_\_\_\_\_  
Steve Knell, General Manager  
Oakdale Irrigation District  
CEQA Lead Agency

Date: \_\_\_\_\_

5. **Preparation and Public Review**

This proposed Negative Declaration was prepared by the Oakdale Irrigation District. Copies may be obtained at the address listed below:

Oakdale Irrigation District  
1205 East F Street  
Oakdale, CA 95361

Contact Sally Davis at: (209) 847-0341 ext 220

Materials used in preparation of the Initial Study are available for review at this address during the following hours:

Monday - Friday, 8:30 am to 4:00 pm

**The public review period is from December 19, 2003 to January 20, 2004. The Board of Directors will also consider comments at its meeting on January 20, 2004. Final adoption of the Negative Declaration will be considered at the Board of Directors meeting on January 20, 2004. Please mail or fax your comments to Steve Knell, General Manager, 1205 East F Street, CA 95361; fax (209) 847-3468. For questions, contact Mike Hanf or Sally Davis at (209) 847-0341.**