99D-108

Proposal Title: *DPR Pesticide Use Data on an Internet Site*

Applicant Name: California Department of Pesticide Regulation
Project Contact : Jim Perrine

Mailing Address: 830 K Street
Sacramento, California 95814

Telephone: (916) 324-4100

Fax: (916) 324-4088

Email: jperrine@cdpr.ca.gov

Amount of funding requested: $343,400 for 1 year

Indicate the Topic for which you are applying (check only one box).

Fish Passage/Fish Screens	Introduced Species
Habitat Restoration	Fish Management/Hatchery
Local Watershed Stewardship	ii Environmental Education
X Water Quality	

Does the proposal address a specified Focused Action? ___X__ yes _____no

What county or counties is the project located in?
Work will be performed in Sacramento and Yolo counties

Indicate the geographic area of your proposal (check only one box):

Sacramento River Mainstem	East Side Trib:
Sacramento Trib:	Suisun Marsh and Bay
San Joaquin River Mainstem	North Bay/South Bay:
San Joaquin Trib:	X Landscape (entire Bay-Delta watershed)
Delta:	Other:

Indicate the primary species which the proposal addresses (check all that apply):

San Joaquin and East-side Delta tributaries fall-run chinook salmon	Winter-run chinook salmon
Spring-run chinook salmon	Late-fall run chinook salmon
Fall-run chinook salmon	Delta smelt
Longfin smelt	Splittail
Steelhead trout	Green sturgeon
Striped bass	Migratory birds
All chinook species	Other: All species of concern to CALFED
All anadromous salmonids	

Specify the ERP strategic objective and target (s) that the project addresses. Include page numbers from January 1999 version of ERP Volume I and II:
(Strategic Plan Goal 6, Objective 1'). ERP Vol. I, page 506
LONG-TERM OBJECTIVE: Reduce concentrations and loadings of contaminants to levels that do not cause adverse affects on all organisms and ecosystems in the aquatic environment.
SHORT-TERM OBJECTIVE: Reduce concentrations and loadings of contaminants that affect the health of organisms and ecosystems in water and sediments to the extent feasible based on benefits achieved, cost and technological feasibility.

Indicate the type of applicant (check only one box):

X State agency	Federal agency
Public/Non-profit joint venture	Non-profit
Local government/district	Private party
University	Other:

Indicate the type of project (check only one box):

X Planning	Implementation
Monitoring	Education
Research	

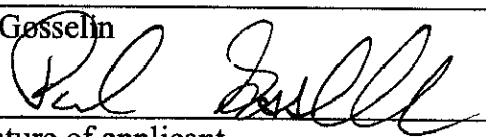
By signing below, the applicant declares the following:

1.) The truthfulness of all representations in their proposal;

2.) The individual signing the form is entitled to submit the application on behalf of the applicant (if the applicant is an entity or organization); and

3.) The person submitting the application has read and understood the conflict of interest and confidentiality discussion in the PSP (Section 2.4) and waives any and all rights to privacy and confidentiality of the proposal on behalf of the applicant, to the extent as provided in the Section.

Paul Gosselin



Signature of applicant

Title Page

Project Title:

DPR Pesticide Use Data on an Internet Site: Improving Water Quality by Improving Pesticide Use Data Access

Primary Contacts:

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CA Dept. Of Pesticide Regulation
830 K Street
Sacramento, CA 95814-3510
(916)445-4043 (phone)
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jperrine@cdpr.ca.gov

Participants and Collaborators:

Dr. Minghua Zhang
Director, UCD Agricultural Information Services

Type of Organization and Tax Status:

State Government

Tax Identification Number: 68-0325102

Executive Summary

The pesticide use data web page project makes all quality controlled pesticide use data held by the Department of Pesticide Regulation (currently about 4.2 gigabytes) available to all ecosystem restoration and protection projects. Tasks include selecting appropriate hardware and software, developing an Internet interface and querying capability by certain fields and spatial entities, presenting the results of queries as ascii files with user defined data fields, and producing thematic maps of the result. The project uses an adaptive management approach in three phases to accomplish the tasks. Phase 1 uses existing internal query capability and servers to asses the need for an Oracle universal license. Phase 2 temporarily places designed spatial and nonspatial query capabilities on line to gather data on the server load to assist in a server buy decision; customer feedback will also have input to the buy decision. Phase 3 incorporates development work and feedback into a fully functional site that includes thematic map output. Because of the range of possible buy decisions, the cost of the project is given as a range. The lower limit represents best case baseline costs and the upper limit represents worst case contingency costs. The cost range is $195,400 - 343,400.

An estimate of one year to complete the project does not speculate on the time needed to get a feasibility study through the California Department of Information Technology. This potential problem is discussed as an unresolved implementation issue in the body of the proposal. There is some potential for this uncertainty to reduce cost effectiveness and significantly increase time to completion.

The pesticide use data web page project has the potential to benefit the whole universe of ecosystem restoration and protection projects that are concerned with contaminants in California. While its objectives are primarily CALFED water quality objectives, the statewide nature of the native data ensures that all restoration and protection projects will have access to the data. There are no known adverse impacts. The project is compatible with all CALFED objectives.

The CALFED objective to reduce concentrations and loading of contaminants in all aquatic environments throughout CALFED watersheds requires data on pesticide use for its achievement. DPR pesticide use data contain the 'where', 'when', and 'how much' information needed to track down point and nonpoint sources, model pesticide movement, and study lethal and nonlethal effects. The data could reveal where broad changes in land management practices and pest control practices are needed. The data provides a basis for decisions to reduce amounts of pesticides applied or change the types of pesticides and application methods to reduce their ability to contaminate aquatic ecosystems. Pesticides may be only one of several sources of contamination, but they must be included in ecosystem solutions.

A second objective, 'develop regional plans to reduce the effects of non-point source contaminants', also requires pesticide use data for achievement. Cooperative watershed plans with built-in incentives for reducing contaminants must consider the potential for a pesticide

component. Pesticide use is quite widespread, and use not in compliance with the label has the potential to contribute to point and non-point source contamination. Where there is a pesticide component or potential component to contamination, planners will want to document well considered alternatives to existing pest control practices in order to reduce response times and improve response effectiveness.

Monitoring and data evaluation is limited to that associated with the software and hardware buy decisions, as well as incorporating customer feedback into the final data presentation on the web site.

DPR is uniquely qualified to oversee this project. We have developed the data, examined it, quality controlled it, and researched it for decades. We know the myriad ways in which it can be inadvertently misunderstood and misapplied. Our own internal web page, while very useful to DPR staff, would require numerous cautions and disclaimers before it is used by the general public. Only DPR staff are qualified to formulate these cautions and disclaimers. Only DPR staff are qualified to interpret and respond to the customer comments and problems revealed in the built-in feedback mechanism.

The AGIS group at UCD is also uniquely qualified to do the software engineering and design work required. Their director did her doctoral work on pesticide movement in soils, using GIS tools in her research. Her staff of researchers and programmers is drawn from among the best that the prestigious University of California campus can offer. They have experience in GIS applications, web site design, presentation of geographic data on the web site, programming in a variety of languages, spatial modeling, and model-GIS interface. Their employment on this project brings to it a synergistic bond between state agencies and the academic community that will bring this project in at minimum cost and maximum quality.

Ecological/Biological Benefits

Ecological/Biological Objectives

The objective of this project is to improve access to pesticide use data and thereby facilitate its use in achieving CALFED ecosystem restoration goals and objectives. Data is currently extracted as public information requests or provided wholesale on CDROMs. These two alternatives have been demanding of staff time, slow in response, often lacking custom output, and included no maps. Using the internet medium to replace manual methods will provide real time response, custom query, and map output capability to more customers per time period.

The need for pesticide use data will exist for as long as there is pesticide use. Therefore, the benefits of this project have no known time limits. Data is routinely updated annually to the next year of pesticide applications, so data additions will be routinely incorporated on the web site. The benefits to DPR of distributing the data on line are mentioned in the previous paragraph, and these benefits will drive our continued use of an external web site, funds permitting.

This project has the potential to benefit the whole universe of ecosystem restoration and protection projects in California. As a minimum, data limited to the CALFED area of interest benefits overlapping ecosystem restoration and protection programs. If statewide data is used (no extra cost), then data would be available for all ecosystem restoration and protection programs at every level of government, for all universities, all consultants, and all public interest groups. For example, the Russian River Watershed Project and the Salton Sea Restoration Project both exist outside the CALFED area of interest, but would have the same access to the data as projects inside the CALFED area of interest.

Linkages

Concerns about the toxic effects of pesticides are addressed in the Strategic Plan for Ecosystem Restoration, Goal 6 (Aquatic Toxicity), Page 31. Objectives are itemized in Table 5-1 at the end of the chapter. The CALFED objective to reduce concentrations and loading of contaminants in all aquatic environments throughout CALFED watersheds requires data on pesticide use for its achievement. DPR pesticide use data contain the 'where', 'when', and 'how much' information needed to track down point and nonpoint sources, model pesticide movement, and study lethal and nonlethal effects. The data could reveal where broad changes in land management practices and pest control practices are needed. The data provides a basis for decisions to reduce amounts of pesticides applied or change the types of pesticides and application methods to reduce their ability to contaminate aquatic ecosystems. Pesticides may be only one of several sources of contamination, but they must be included in ecosystem solutions.

A second objective, 'develop regional plans to reduce the effects of non-point source contaminants', also requires pesticide use data for achievement. Cooperative watershed plans with built-in incentives for reducing contaminants must consider the potential for a pesticide component. Pesticide use is quite widespread, and use not in compliance with the label has the potential to contribute to point and non-point source contamination. Where there is a pesticide component or potential component to contamination, planners will want to document well considered alternatives to existing pest control practices in order to reduce response times and improve response effectiveness.

There is no existing legal obligation or agency mandate to make pesticide use data available to the public on a web site.

System-Wide Ecosystem Benefits.

This project potentially benefits ecosystems statewide. For production agricultural applications, the data can be presented statewide or any subset of the state down to PLSS section. For non-agricultural applications, county level resolution only is available in the data, although modeling techniques can be used to derive non-agricultural uses at less than county resolution. Breakout by watershed statewide is also done as easily as for a subset of the state. The data sort by watershed can be done using the Teale watershed spatial file or any other watershed breakout

specified by CALFED.

Compatibility with Non-Ecosystem Objectives.

This project benefits any objectives that include reducing concentrations or contaminant loads in water, statewide. This project conflicts with no known objectives of any known ecosystem restoration or ecosystem protection plan.

Project Description

Pesticide Use Data Overview

DPR requires that all agricultural, structural, professional landscaping, and other nonagricultural pest control operators to report all pesticide use. Agricultural use has a broad definition, including parks, golf courses, cemeteries, rangeland, pastures, road and railroad rights-of-way, and postharvest treatment of agricultural commodities. These pesticide applications are made under permit from county agricultural commissioner (CAC) offices, and reported back through the CAC offices to DPR. Data from CAC offices includes who applied the product, what product was applied, when it was applied, the amount applied, and (production agriculture only) the PLSS section in which it was applied. At DPR, the data goes through a normalization process, during which it is married with data from a pesticide label database to add information about the product applied, chemical applied, and pounds of product and chemical applied.

Within DPR, the data is primarily used for regulatory purposes. Areas of concern include endangered species, Clean Air Act compliance, ground and surface water protection, pest management strategies, and risk assessment. A number of research oriented groups also use the data, including the academic community, the pesticide industry, consumer advocacy groups, government agencies, and consultants.

The statewide pesticide use data for one calendar year runs between 2 - 3 million records and occupies approximately 600 megabytes of disk space. The initial offering of data on the web site will be around 4.8 gigabytes (1990 - 1997 data), and will grow by about 600 megabytes per year.

Proposed Scope of Work

DPR proposes to make all quality controlled pesticide use data available on an external internet site. Work required is not part of any existing legal requirement or mandate. Work will involve placing existing internal web capabilities on an external site (database queries only), developing data upon which to base software and hardware buy decisions, programming user and application interfaces, and programming new query and thematic map output capability. DPR further proposes to employ the services of the Agricultural Information Service (AGIS) group at the University of California, Davis (UCD) to do most of the programming and development work. Under the direction and control of DPR, AGIS will program, test, and install user developed application software and provide documentation for ongoing maintenance by DPR. AGIS will

also install and employ the necessary commercial applications to make the web site functional.

This project description uses the terms 'baseline costs' and 'contingency costs'. Baseline costs are those required regardless of contingencies. Baseline costs are the minimum amount required regardless of the buy decisions indicated by development and testing. Contingency costs are those that could vary depending on the result of development and testing. For example, will testing reveal the need for a low end $25,000 server or a high end $105,000 server? The low cost server is a baseline cost because some sort of server will be needed; any amount over the low cost is a contingency cost since the amount varies with the server required. The high cost is based on the cost of a Sun Enterprise 3000 server, the greatest capability this project could conceivably need.

This project lends itself to division into increments based on decision points generated by the development process:

Phase 1.

Objective 1: develop a means of transferring an existing internal web site capability (inside the firewall) to an external web site (outside the firewall). The intent is to make available to the internet a database query capability currently enjoyed by DPR personnel on an internal web site. For this objective, DPR will initially use existing hardware; no hardware purchase will be necessary at this time. Existing hardware must be used in order to test for the hardware required by system demand in Phase 2.

Objective 2: resolve the question of what Oracle software will be needed, if any. The use of a proxy server and/or software alternatives to a universal license will be explored. If existing database software can be isolated from the web server, additional database licensing may not be necessary. If we will need to procure additional software, the highest cost option would be for universal access and web server software and commensurate software maintenance; these costs would be in addition to baseline costs.

Costs are spelled out in the table below. Contingency costs are given as a range because license costs vary with the server and number of CPUs it has. If additional software is needed, it can be added based on the existing DPR server used for testing, and then upgraded or downgraded depending on the server choice in phase 2, or temporary licensing may be used.

NOTE: GIS and internet map server software are included in the Phase 1 baseline even though they are not used until Phase 2 because they will be needed regardless of contingencies, and some early Phase 2 development could overlap Phase 1.

Phase 1 is complete when pesticide use data can be queried externally and output supplied as an ascii file (150 days).

Phase 1 Costs

Baseline Costs		
Development and Testing	$37,000	
Training (for DPR personnel)	4,000	
GIS Software	6,600	
Total Baseline Costs		$47,600
Contingency Costs		
Range of Universal License	$59,000-171,000	
Support for Web Server	1,800 - 1,800	
Database License Maintenance	15,000 - 15,000	
Total Contingency Costs		$75,800 - 187,800
Total Phase 1 Costs		$123,400 - 235,400

Phase 2.

Objective 1: add a basic map-based query capability. Program and install the initial map-based query using ESRI's open development environment software, MapObjects Internet Map Server. Install and program ArcView as the GIS engine. Initial capability is limited to the customer identifying PLSS sections and/or watersheds for which pesticide use data is needed using a map as the input for the query.

Objective 2: measure server load and procure a new server. Once Goal 1 is achieved, the site can be temporarily opened up to users and internet server load measured. Further feedback can be gained by allowing users to make suggestions as to enhancements and additions to capabilities. The feedback and server load data will form the basis for making a decision on what server to buy. One month will be used for data gathering. If server procurement is delayed (see comments on the DOIT process in the Technical Feasibility section), development can continue on the test server. However, the site cannot be made permanently available to the public on a new server without DOIT approval. Phase 2 is complete when the server is procured and the web site is working from it (150 days). The assigned duration of 150 days does not consider the time to seek DOIT approval for a new server.

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Phase 2 Costs

Baseline Costs		
Development	$37,000	
Baseline Server	22,000	
Baseline Server Support	3,000	
Total Baseline Costs		$62,000
Contingency Costs		
Maximum Additional Server Cost	$38,000*	
Maximum Additional Support	2,000	
Total Contingency Costs		$40,000
Total Phase 2 Costs		$62,000 - 102,000

* The high end server would cost around $100,000, but DPR is willing to share the cost equally should the high end server contingency materialize.

Phase 3.

Goal: output thematic maps. Phase 3 can use feedback from phase 2 to design follow-on query and output capabilities. The minimum capability required by the PSP is thematic map output. DPR assumes this means options for a bitmap type of picture map, as well as output as vector data (shapefile). Costs beyond the minimum required by the PSP would depend on CALFED interest in proceeding and funds available; additional costs would all be in development and testing. All costs in phase 3 are baseline.

Phase 3 Costs

Baseline Costs (development only)	$6,000
Total Phase 3 Costs	$6,000
Total Project Cost	$195,400 - 343,400

Location and /or Geographic Boundaries of the Project.

Because this proposal is of an information services nature, it will be confined to DPR in Sacramento County. The project provides an informational infrastructure available to all

CALFED shareholders. As such, it includes as a minimum all watersheds outlined in the PSP. Watersheds for the whole state can be used at no extra cost.

Technical Feasibility and Timing

The most significant choices of alternatives are included in the project itself and are driven by project development. These include the more costly software choices and server selection. Among the lower cost software needed, we chose ArcView as one of our GIS components because it is relatively inexpensive, will do the job required of it, and DPR personnel are already familiar with it. We chose MapObjects Internet Map Server as the other GIS component because it is compatible with ArcView (both are ESRI products), in the midrange in flexibility among products of its type, and will do the job required of it. Technical support is excellent on both products.

Because the project consists solely of making existing data available on the internet, environmental compliance documents need not be prepared. Nothing in the collection, quality control, or dissemination of the data impacts the environment. The data exists whether this project is approved or not; we merely propose to make it available to a wider audience in a more customized and readily useable form than in the past.

Requirements of the California Department of Information Technology (DOIT) may prove to be an implementation issue. DOIT requires a feasibility study for procurement of servers of the type needed for this project. DOIT's approval can take as much as a year, which can seriously delay project completion and drive up costs. For example, bids for work on the project assume a fairly steady progress so that people hired can be kept busy. If the project is delayed, the subcontractor is faced with the option of letting people go and rehiring later, or continue paying them. Either way project cost is adversely affected. If additional money is not forthcoming, the project may not be completable. Furthermore, since technology marches on apace, the long delays can lead to less than optimal choices and values in hardware. Timelines given in the scope of work assume that we can expedite the server procurement process.

Monitoring and Data Collection Methodology

Biological/Ecological Objectives

Biological/ecological objectives are indirect. This project provides a data infrastructure which will aid understanding of the lethal and nonlethal effects of waters containing toxic substances and help develop habitat restoration plans. The overall goal of making this data infrastructure readily available does have objectives which depend upon data to be gathered during the life of the project. The data collected is intended to help make decisions as to the server needed and the effectiveness of the programs that give access to the online data. The two objectives in Phase 1 and the two objectives in Phase 2 will require data collection and/or feedback from users in order to adequately achieve them.

Monitoring Parameters and Data Collection Approach

The data collected for this project will be limited to server load data and customer feedback on services. Server load data is necessary in order to size the server needed for the project. Servers can run to great expense, so an appropriately sized server can keep costs down. Data collected will include number of hits per time period, queue data, CPU use, and I/O use.

Customer feedback is important in the layout and specific query design. Even during the online development period we plan to place a comments entry form on the web site to get customer feedback on desired enhancements or observed problems. This feedback can also be a responsive way to identify data and program problems that did not surface during offline testing.

Data Evaluation Approach

Software is available for determining whether a server is limited by CPU, I/O, RAM, or network limitations. This data will be used to size the server for expected traffic in the present and for the future. Additionally, data on the number of site hits and time to complete queries will tell us whether the overall system design and programs are adequate.

Further input on system design and program adequacy will be available from customer comments typed into a local database from the web site screen. These comments will serve in final debugging and evaluating system design and service adequacy.

Table 1. Monitoring and data Collection Information

Biological/Ecological Objectives			
Hypothesis/Question to be Evaluated	Monitoring Parameter(s) and data Collection Approach	Data Evaluation Approach	Comments/Data Priority
Phase 1, Objective 1	Customer Feedback	Identify Flaws in Design and Services	
Phase 1, Objective 2	Customer Feedback	Identify Flaws in Design and Services	
Phase 2, Objective 1	Customer Feedback	Identify Flaws in Design and Services	
Phase 2, Objective 2	Customer Feedback and System Statistics	Identify Potential Logjams and Size Server	

Cost

Cost Sharing

DPR will be heavily invested in this project. Staff time will be used for project management, network administration, system administration, and testing. Should a Sun Enterprise 3000 level of sever be required, DPR is committed to funding half the cost of the server. We offer priceless assets of people, servers, software, and networks as the test bed for the project. Lastly, the gigabytes of pesticide use data to be placed on line are unequaled in the nation for quality and completeness.

Budget

Table 2. Total Budget (CALFED funds only)

Task	Direct Labor Hours	Direct Salary and Benefits	Service Contracts	Material and Acquisition Costs	Misc and other Direct Costs	Overhead and Indirect Costs	Total Cost
Phase 1			$43,600	$187,800*	$4,000		$235,400
Phase 2			37,000	65,000*#			102,000
Phase 3			6,000				6,000

*See Scope of Work for details. These costs are the maximum in a range of costs dependent on development work conducted as part of the project. These amounts represent a worst case scenario.

#DPR will match CALFED funds for the server should the more expensive Sun Enterprise 3000 server be required. This figure represents the maximum cost to CALFED should the Enterprise 3000 be required.

Table 3. Quarterly Budget

Task	Quarterly Budget Oct - Dec 99	Quarterly Budget Jan - Mar 00	Quarterly Budget Apr - Jun 00	Quarterly Budget Jul - Sep 00	Total Budget
Phase 1	$142,840	$92,560			$235,400
Phase 2		7,400	22,200	72,400	102,000
Phase 3				6,000	6,000
	$142,840	$99,960	$22,200	$78,400	$343,400

Applicant Qualifications

DPR is uniquely qualified to oversee this project. We have developed the data, examined it, quality controlled it, and researched it for decades. We know the myriad ways in which it can be inadvertently misunderstood and misapplied. Our own internal web page, while very useful to DPR staff, would require numerous cautions and disclaimers before it is used by the general public. Only DPR staff are qualified to formulate these cautions and disclaimers. Only DPR staff are qualified to interpret and respond to the customer comments and problems revealed in the built-in feedback mechanism.

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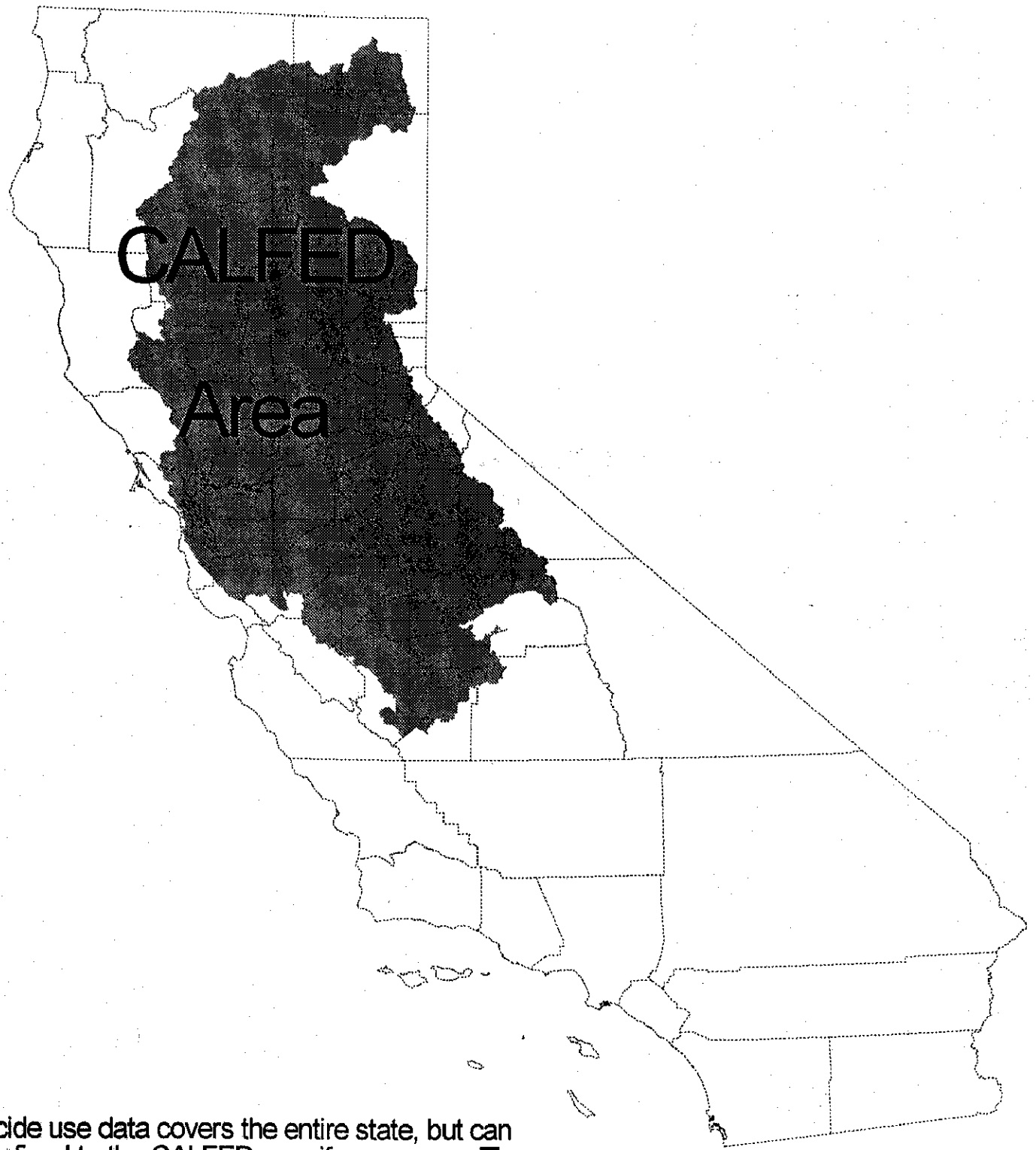
Project Area



Pesticide use data covers the entire state, but can be confined to the CALFED area if necessary. The area covered does not affect the cost.

KATH // L

Department of Pesticide Regulation

Winston H. Hickox
Secretary for Environmental Protection

830 K Street • Sacramento, California 95814-3510 • www.cdpr.ca.gov

Gray Davis
Governor

April 16, 1999

Board of Supervisors President Keith Carson
County Administrative Building
1221 Oak Street, Suite 536
Oakland, California 94612

Dear Honorable Keith Carson:

As required by the CALFED Bay Delta Program, the California Department of Pesticide Regulation (DPR) is hereby notifying you that we are submitting four proposals in response to the recent CALFED Proposal Solicitation package. The projects that DPR are proposing may either be performed in your county, or may involve collection of data related to activities in your county.

The proposed projects are:

DPR Pesticide Use Data on an Internet Site
A project to make the DPR Pesticide Use Report Database available to users through the Internet. Work will be performed in Sacramento and Yolo counties; however, data encompasses all counties in the CALFED area.

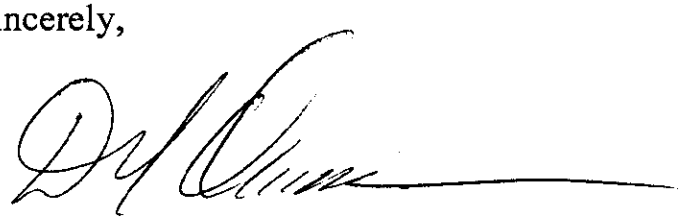
Reduction of Insecticides Loads in the San Joaquin Watershed
A project to evaluate best management practices to reduce surface water contamination from insecticides used in almonds. Work may be performed in Stanislaus, San Joaquin, and/or Merced counties. Work may also be performed in one or more counties in the Sacramento Valley. Final identification of counties will depend on identification of cooperating growers.

Adaptive Development of a Watershed Specific Pesticide Use Monitoring Strategy
Project will assess pesticide use, chemistry, and toxicological data for use in the developing a comprehensive monitoring strategy for CALFED. Work will be performed in Sacramento county, however, data may be collected and assessed concerning any county within the CALFED area.

Implementation of Management Practices that Prevent Offsite Movement of Chlorpyrifos from Alfalfa
A project to evaluate best management practices to reduce surface water contamination from insecticides used in almonds. Work will be performed in Stanislaus, San Joaquin, and/or Merced counties. Final identification of counties will depend on names of cooperating growers.

Unless we hear otherwise, DPR will consider the Alameda County agricultural commissioner, Mr. Earl G. Whitaker as our contact person for projects in your county. If you have any questions please feel free to contact me, or your staff may contact Ms. Kathy Brunetti, of my staff, at (916) 324-4100. You can also reach Kathy by fax, at (916) 324-4088 or by e-mail, at <kbrunetti@cdpr.ca.gov>.

Sincerely,



Douglas Y. Okumura, Acting Assistant Director
Division of Enforcement, Environmental
Monitoring, and Data Management
(916) 324-4100

cc: Ms. Kathy Brunetti
Mr. Daniel J. Merkley
CALFED Bay Delta Program
CAC

I-018713

A similar letter was sent to:

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Oakland, California 94612

Board of Supervisors Chair Chris Gansberg
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Markleeville, California 96120

Board of Supervisors Chair Edward T. Bamert
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Redding, California 96001

Board of Supervisors Chair Richard Luchessi
County Courthouse
PO Drawer D
Downieville, California 95936

Board of Supervisors Chair Bill Hoy
PO Box 338
Yreka, California 96097

Board of Supervisors Chair Gordon Gojkovich
Old Court House
580 Texas Street
Fairfield, California 94533

Board of Supervisors Chair Thomas Mayfield
1100 H Street
Modesto, California 95354

Board of Supervisors Chair Cornelis Casey Kroon
1160 Civic Center Boulevard
Yuba City, California 95993

Board of Supervisors Chair Charles Willard
PO Box 250
Red Bluff, California 96080

Board of Supervisors Chair Matt Leffler
County Courthouse
PO Box 1258
Weaverville, California 96093

I-018717

Board of Supervisors Chair Bill Maze
Administration Building
2800 West Burrel
Visalia, California 93291

Board of Supervisors Chair Larry Rotelli
2 South Green Street
Sonora, California 95370

Board of Supervisors Chair Dave Rosenberg
625 Court Street, Room 204
Woodland, California 95695

Board of Supervisors Chair Al Amaro
215 5th Street
Marysville, California 95901

Winston H. Hickox
Secretary for Environmental Protection

Department of Pesticide Regulation

830 K Street • Sacramento, California 95814-3510 • www.cdpr.ca.gov

Gray Davis
Governor

April 16, 1999

Bay Conservaion and Development Commission
30 Van Ness Avenue, Room 2011
San Francisco, California 94102

Dear Commission Members:

As required by the CALFED Bay Delta Program, the California Department of Pesticide Regulation (DPR) is hereby notifying you that we are submitting four proposals in response to the recent CALFED Proposal Solicitation package. The projects that DPR are proposing may either be performed in your region, or may involve collection of data related to activities in your county.

The proposed projects are:

DPR Pesticide Use Data on an Internet Site
A project to make the DPR Pesticide Use Report Database available to users through the Internet. Work will be performed in Sacramento and Yolo counties; however, data encompasses all counties in the CALFED area.

Reduction of Insecticides Loads in the San Joaquin Watershed
A project to evaluate best management practices to reduce surface water contamination from insecticides used in almonds. Work may be performed in Stanislaus, San Joaquin, and/or Merced counties. Work may also be performed in one or more counties in the Sacramento Valley. Final identification of counties will depend on identification of cooperating growers.

Adaptive Development of a Watershed Specific Pesticide Use Monitoring Strategy
Project will assess pesticide use, chemistry, and toxicological data for use in developing a comprehensive monitoring strategy cor CALFED. Work will be performed in Sacramento county, however, data may be collected and assessed concerning any county within the CALFED area.

Implementation of Management Practices that Prevent Offsite Movement of Chlorpyrifos and Other Pesticides from Alfalfa
A project to evaluate best management practices to reduce surface water contamination from insecticides used in almonds. Work will be performed in Stanislaus, San Joaquin, and/or Merced counties. Final identification of counties will depend on identification of cooperating growers.

If you have any questions, please contact Ms. Kathy Brunetti, of my staff, at (916) 324-4087. You can also reach her by e-mail, at <kbrunetti@cdpr.ca.gov>.

Sincerely,

Douglas Y. Okumura, Acting Assistant Director
Division of Enforcement, Environmental

I-018720

Winston H. Hickox
Secretary for Environmental Protection

Department of Pesticide Regulation

830 K Street • Sacramento, California 95814-3510 • www.cdpr.ca.gov

Gray Davis
Governor

April 16, 1999

Delta Protection Commission
P.O. Box 530
Walnut Grove, California 95690

Dear Commission Members:

As required by the CALFED Bay Delta Program, the California Department of Pesticide Regulation (DPR) is hereby notifying you that we are submitting four proposals in response to the recent CALFED Proposal Solicitation package. The projects that DPR are proposing may either be performed in your region, or may involve collection of data related to activities in your region.

The proposed projects are:

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Reduction of Insecticides Loads in the San Joaquin Watershed
A project to evaluate best management practices to reduce surface water contamination from insecticides used in almonds. Work may be performed in Stanislaus, San Joaquin, and/or Merced counties. Work may also be performed in one or more counties in the Sacramento Valley. Final identification of counties will depend on identification of cooperating growers.

Adaptive Development of a Watershed Specific Pesticide Use Monitoring Strategy
Project will assess pesticide use, chemistry, and toxicological data for use in developing a comprehensive monitoring strategy cor CALFED. Work will be performed in Sacramento county, however, data may be collected and assessed concerning any county within the CALFED area.

Implementation of Management Practices that Prevent Offsite Movement of Chlorpyrifos and Other Pesticides from Alfalfa
A project to evaluate best management practices to reduce surface water contamination from insecticides used in almonds. Work will be performed in Stanislaus, San Joaquin, and/or Merced counties. Final identification of counties will depend on identification of cooperating growers.

If you have any questions, please contact Ms. Kathy Brunetti, of my staff, at (916) 324-4087. You can also reach her by e-mail, at <kbrunetti@cdpr.ca.gov>.

Sincerely,

Douglas Y. Okumura, Acting Assistant Director
Division of Enforcement, Environmental
Monitoring, and Data Management
(916) 324-4100

cc: Ms. Kathy Brunetti
CALFED Bay Delta Program

I-018722

Per Table D-1. The Department of Pesticide Regulation, a State Agency, is not submitting state contract forms with this proposal