

Pleasant Grove-Verona Mutual Water Company Positive Barrier Fish Screen Design and Environmental Review

Project Information

1. **Proposal Title:**

Pleasant Grove-Verona Mutual Water Company Positive Barrier Fish Screen Design and Environmental Review

2. **Proposal applicants:**

Brett Sheidel, Pleasant Grove-Verona Mutual Water Company

3. **Corresponding Contact Person:**

Brett Sheidel
Pleasant Grove-Verona Mutual Water Company
1510 West Catlett Road Pleasant Grove, CA 95668
916 994-3265
norskemcs@aol.com

4. **Project Keywords:**

At-risk species, fish
Environmental Impact Analysis
Fish Passage/Fish Screens

5. **Type of project:**

Fish Screen

6. **Does the project involve land acquisition, either in fee or through a conservation easement?**

No

7. **Topic Area:**

Fish Screens

8. **Type of applicant:**

Private non-profit

9. **Location - GIS coordinates:**

Latitude: 38.782

Longitude: -121.604

Datum:

Describe project location using information such as water bodies, river miles, road intersections, landmarks, and size in acres.

The pumping station will be located on the Sacramento River at the junction with the Natomas Cross Canal, between River Mile 79 and River Mile 80.

10. Location - Ecozone:

3.5 Verona to Sacramento

11. Location - County:

Sutter

12. Location - City:

Does your project fall within a city jurisdiction?

No

13. Location - Tribal Lands:

Does your project fall on or adjacent to tribal lands?

No

14. Location - Congressional District:

3

15. Location:

California State Senate District Number: 4

California Assembly District Number: 2

16. How many years of funding are you requesting?

1

17. Requested Funds:

a) Are your overhead rates different depending on whether funds are state or federal?

No

If no, list single overhead rate and total requested funds:

Single Overhead Rate: n/a

Total Requested Funds: 1,384,000

b) Do you have cost share partners already identified?

Yes

If yes, list partners and amount contributed by each:

Pleasant Grove-Verona Mutual Water Company 10,000

c) Do you have potential cost share partners?

No

d) Are you specifically seeking non-federal cost share funds through this solicitation?

Yes

If yes, list total non-federal funds requested:

742,000

If the total non-federal cost share funds requested above does not match the total state funds requested in 17a, please explain the difference:

Federal funding was used for the Feasibility Study to determine the course of action of this Phase of the Project. State funding is requested to match the previous federal funding received through CVPIA -\$100,000. The rest of the \$1,284,000 can be split between federal and non-federal funds totaling \$742,000 from non-federal and \$642,000 from federal.

18. Is this proposal for next-phase funding of an ongoing project funded by CALFED?

No

Have you previously received funding from CALFED for other projects not listed above?

No

19. Is this proposal for next-phase funding of an ongoing project funded by CVPIA?

Yes

If yes, identify project number(s), title(s) and CVPIA program (e.g. AFRP, AFSP, b(1) other).

00FG200185 Positive Barrier Fish Screen Feasibility Study and Preliminary Environmental Assessment AFSP

Have you previously received funding from CVPIA for other projects not listed above?

No

20. **Is this proposal for next-phase funding of an ongoing project funded by an entity other than CALFED or CVPIA?**

No

Please list suggested reviewers for your proposal. (optional)

21. **Comments:**

#17a. PGVMWC will not be performing the work as described in the proposal. All work is contracted out. Therefore, there is no overhead rate for PGVMWC.

Environmental Compliance Checklist

Pleasant Grove-Verona Mutual Water Company Positive Barrier Fish Screen Design and Environmental Review

1. CEQA or NEPA Compliance

- a) Will this project require compliance with CEQA?

Yes

- b) Will this project require compliance with NEPA?

Yes

- c) If neither CEQA or NEPA compliance is required, please explain why compliance is not required for the actions in this proposal.

2. If the project will require CEQA and/or NEPA compliance, identify the lead agency(ies). If not applicable, put "None".

CEQA Lead Agency: Department of Fish and Game

NEPA Lead Agency (or co-lead:) U.S. Bureau of Reclamation

NEPA Co-Lead Agency (if applicable):

3. Please check which type of CEQA/NEPA documentation is anticipated.

CEQA

-Categorical Exemption

Negative Declaration or Mitigated Negative Declaration

-EIR

-none

NEPA

-Categorical Exclusion

Environmental Assessment/FONSI

-EIS

-none

If you anticipate relying on either the Categorical Exemption or Categorical Exclusion for this project, please specifically identify the exemption and/or exclusion that you believe covers this project.

4. CEQA/NEPA Process

- a) Is the CEQA/NEPA process complete?

No

If the CEQA/NEPA process is not complete, please describe the dates for completing draft and/or final CEQA/NEPA documents.

The draft environmental documentation will be completed by January 2003. The final environmental documentation will be completed by February 2003.

b) If the CEQA/NEPA document has been completed, please list document name(s):

5. **Environmental Permitting and Approvals** (*If a permit is not required, leave both Required? and Obtained? check boxes blank.*)

LOCAL PERMITS AND APPROVALS

Conditional use permit

Variance

Subdivision Map Act

Grading Permit

General Plan Amendment

Specific Plan Approval

Rezone

Williamson Act Contract Cancellation

Other Required

STATE PERMITS AND APPROVALS

Scientific Collecting Permit

CESA Compliance: 2081

CESA Compliance: NCCP Required

1601/03 Required

CWA 401 certification Required

Coastal Development Permit

Reclamation Board Approval Required

Notification of DPC or BCDC

Other

FEDERAL PERMITS AND APPROVALS

ESA Compliance Section 7 Consultation Required

ESA Compliance Section 10 Permit

Rivers and Harbors Act

CWA 404 Required

Other

PERMISSION TO ACCESS PROPERTY

Permission to access city, county or other local agency land.

Agency Name:

Permission to access state land.

Agency Name:

Permission to access federal land.

Agency Name:

Permission to access private land.

Landowner Name:

6. Comments.

#7. Other local permits includes any other required permits (Sutter county permits, for example).

Land Use Checklist

Pleasant Grove-Verona Mutual Water Company Positive Barrier Fish Screen Design and Environmental Review

- 1. Does the project involve land acquisition, either in fee or through a conservation easement?**

No

- 2. Will the applicant require access across public or private property that the applicant does not own to accomplish the activities in the proposal?**

No

- 3. Do the actions in the proposal involve physical changes in the land use?**

No

If you answered no to #3, explain what type of actions are involved in the proposal (i.e., research only, planning only).

This project involves construction of the fish screen facility at the diversion location as specified in the proposal. The current land use is for the pumping plant, therefore no change in land use is necessary.

- 4. Comments.**

Conflict of Interest Checklist

Pleasant Grove-Verona Mutual Water Company Positive Barrier Fish Screen Design and Environmental Review

Please list below the full names and organizations of all individuals in the following categories:

- Applicants listed in the proposal who wrote the proposal, will be performing the tasks listed in the proposal or who will benefit financially if the proposal is funded.
- Subcontractors listed in the proposal who will perform some tasks listed in the proposal and will benefit financially if the proposal is funded.
- Individuals not listed in the proposal who helped with proposal development, for example by reviewing drafts, or by providing critical suggestions or ideas contained within the proposal.

The information provided on this form will be used to select appropriate and unbiased reviewers for your proposal.

Applicant(s):

Brett Sheidel, Pleasant Grove-Verona Mutual Water Company

Subcontractor(s):

Are specific subcontractors identified in this proposal? Yes

If yes, please list the name(s) and organization(s):

As needed Montgomery Watson Harza

Steve Clifton Steve Clifton Associates

None None

None None

None None

None None

Helped with proposal development:

Are there persons who helped with proposal development?

Yes

If yes, please list the name(s) and organization(s):

Amy Wade Montgomery Watson Harza

Neil Schild Montgomery Watson Harza

Michelle Treinen Montgomery Watson Harza

Chris Leininger Ducks Unlimited

Comments:

Budget Summary

Pleasant Grove-Verona Mutual Water Company Positive Barrier Fish Screen Design and Environmental Review

Please provide a detailed budget for each year of requested funds, indicating on the form whether the indirect costs are based on the Federal overhead rate, State overhead rate, or are independent of fund source.

Independent of Fund Source

Year 1												
Task No.	Task Description	Direct Labor Hours	Salary (per year)	Benefits (per year)	Travel	Supplies & Expendables	Services or Consultants	Equipment	Other Direct Costs	Total Direct Costs	Indirect Costs	Total Cost
1	Project Management						162,000			162000.0		162000.00
2	Environmental Documentation						150,000			150000.0		150000.00
3	Preliminary Design						345,000			345000.0		345000.00
4	Geotechnical Investigations						55,000			55000.0		55000.00
5	Surveying						40,000			40000.0		40000.00
6	90% design						474,000			474000.0		474000.00
7	100% design						93,000			93000.0		93000.00
8	Permitting						65,000			65000.0		65000.00
		0	0.00	0.00	0.00	0.00	1384000.00	0.00	0.00	1384000.00	0.00	1384000.00

Year 2												
Task No.	Task Description	Direct Labor Hours	Salary (per year)	Benefits (per year)	Travel	Supplies & Expendables	Services or Consultants	Equipment	Other Direct Costs	Total Direct Costs	Indirect Costs	Total Cost
		0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Year 3												
Task No.	Task Description	Direct Labor Hours	Salary (per year)	Benefits (per year)	Travel	Supplies & Expendables	Services or Consultants	Equipment	Other Direct Costs	Total Direct Costs	Indirect Costs	Total Cost
		0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Grand Total=1384000.00

Comments.

Budget Justification

Pleasant Grove-Verona Mutual Water Company Positive Barrier Fish Screen Design and Environmental Review

Direct Labor Hours. Provide estimated hours proposed for each individual.

N/a. PGVMWC will not be performing the work indicated in the proposal. All work will be contracted out.

Salary. Provide estimated rate of compensation proposed for each individual.

N/a. PGVMWC will not be performing the work indicated in the proposal. All work will be contracted out.

Benefits. Provide the overall benefit rate applicable to each category of employee proposed in the project.

N/a. PGVMWC will not be performing the work indicated in the proposal. All work will be contracted out.

Travel. Provide purpose and estimate costs for all non-local travel.

N/a. PGVMWC will not be performing the work indicated in the proposal. All work will be contracted out.

Supplies & Expendables. Indicate separately the amounts proposed for office, laboratory, computing, and field supplies.

N/a. PGVMWC will not be performing the work indicated in the proposal. All work will be contracted out.

Services or Consultants. Identify the specific tasks for which these services would be used. Estimate amount of time required and the hourly or daily rate.

Subcontractors will perform all tasks specified in budget. The estimated total hours is 10,000 hours which will be split among the team members accordingly. The hourly rate ranges from \$70 per hour for an Associate Engineer to \$150 per hour for a Principal Engineer.

Equipment. Identify non-expendable personal property having a useful life of more than one (1) year and an acquisition cost of more than \$5,000 per unit. If fabrication of equipment is proposed, list parts and materials required for each, and show costs separately from the other items.

N/a. PGVMWC will not be performing the work indicated in the proposal. All work will be contracted out.

Project Management. Describe the specific costs associated with insuring accomplishment of a specific project, such as inspection of work in progress, validation of costs, report preparation, giving presentatons, reponse to project specific questions and necessary costs directly associated with specific project oversight.

Project Management subtasks and costs are as follows: Prepare Work Plan-\$14,000 Participate in Project Meetings-\$96,000 Distribute Project Information and Progress Reports-\$53,000 Institute and Maintain a QA/QC Program-\$29,000

Other Direct Costs. Provide any other direct costs not already covered.

N/a. PGVMWC will not be performing the work indicated in the proposal. All work will be contracted out.

Indirect Costs. Explain what is encompassed in the overhead rate (indirect costs). Overhead should include costs associated with general office requirements such as rent, phones, furniture, general office staff, etc., generally distributed by a predetermined percentage (or surcharge) of specific costs.

N/a. PGVMWC will not be performing the work indicated in the proposal. All work will be contracted out.

Executive Summary

Pleasant Grove-Verona Mutual Water Company Positive Barrier Fish Screen Design and Environmental Review

Pleasant Grove-Verona Mutual Water Company (PGVMWC) is applying for \$1,384,000 in CALFED funds to complete the engineering final design, environmental documentation, and permits necessary for the implementation of a positive barrier fish screen for deliveries to the Pleasant Grove-Verona Mutual Water Company area. This is a proposal for next-phase funding. Pleasant Grove-Verona Mutual Water Company is currently conducting a feasibility study to evaluate water delivery alternatives for PGV including the feasibility of implementing a positive barrier fish screen. The proposed fish screen location will be on the northeast bank of the Sacramento River just above the intersection of Natomas Cross Canal. The objective of implementing the positive barrier fish screen at the diversion on the Sacramento River is to protect the anadromous and non-anadromous fish species that use the Sacramento River and its tributaries for some portion of their life cycle. These species include chinook salmon, steelhead trout, Sacramento splittail, and delta smelt. Construction of the fish screen facility will address CALFED and CVPIA priorities as outlined in the Draft Stage 1 Implementation Plan for 2001. The proposed phase of the project will be the engineering final design, final environmental assessments, and permitting aspects of the project. The engineering final design will use the design criteria established in the feasibility study to complete engineering drawings, technical specification, contract documents, and bidding documents. The environmental and permitting aspects of this project will involve preparing the documents necessary to meet the requirements of the state, local, and federal agencies, and coordinating with all appropriate agencies. After the engineering final design, environmental analyses, and permitting have been completed, the next phase of the project will be to use the plans and specifications to advertise for construction, and complete the construction of the fish screen facility. Pleasant Grove-Verona Mutual Water Company will then conduct post-construction evaluations and biological monitoring, and implement an operations and maintenance plan to ensure the facility is accomplishing the desired objectives.

Proposal

Pleasant Grove-Verona Mutual Water Company

**Pleasant Grove-Verona Mutual Water Company Positive Barrier Fish Screen
Design and Environmental Review**

Brett Sheidel, Pleasant Grove-Verona Mutual Water Company

**Pleasant Grove-Verona Mutual Water Company
POSITIVE BARRIER FISH SCREEN
DESIGN AND ENVIRONMENTAL REVIEW**

CALFED PROPOSAL

Submitted by

Pleasant Grove-Verona Mutual Water Company
1510 West Catlett Road
Pleasant Grove, CA 95668

October 2001

A. PROJECT DESCRIPTION: PROJECT GOALS AND SCOPE OF WORK

1. Problem

Location: Pleasant Grove-Verona (PGV) is located in Sutter County, west of Highway 99, east of the Sacramento River, and north of the Natomas Cross Canal. Ecozone 3 – Sacramento Region, 3.5 – Verona to Sacramento. The area of interest spans from the Sacramento River and Natomas Cross Canal intersection to the intersection of the Natomas Cross Canal and Highway 99. A location map of the PGV service area is shown in **Figure 2-1**.

Problem: Adverse effects of stressors, such as poorly screened or unscreened diversions on the Sacramento River, minimize the chance of survival for all four races of chinook salmon, steelhead trout, splittail, and other Sacramento River aquatic species. (ERPP, 2000) Two diversions along the Natomas Cross Canal serve PGV. The Natomas Cross Canal diversions fall within criteria established by the CVPIA, passed in 1992, for the protection and recovery of fisheries and fish habitat. The Anadromous Fish Screen Program was implemented under the CVPIA to oversee and fund the establishment of fish screens at water diversions to reduce fish mortality. PGV's pumps and diversion practices on the Natomas Cross Canal are considered detrimental to fish passage under the directives of the CVPIA and CALFED. Consequently, they may require screening or other mitigation measures, such as relocation.

Pleasant Grove-Verona Mutual Water Company is currently undergoing a Feasibility Study to evaluate water delivery alternatives for PGV and the feasibility of the design, construction, and operation of positive barrier fish screens for anadromous fish. Several anadromous and non-anadromous fish species use the Sacramento River and its tributaries for some portion of their life cycle. These species include chinook salmon, steelhead trout, Sacramento Splittail, and delta smelt. Primary funding of the Feasibility Study was provided through the Central Valley Project Improvement Act (CVPIA). This proposal requests additional funding from CALFED in order to prepare the engineering final design, conduct the final environmental analyses, and secure the necessary permits for the project.

Relevant past studies of fish screen implementation include *White River Fish Screen Project Planning and Design* (1997) and *M&T/Parrott Pumping Station and Fish Screen* (1998), *Banta-Carbona Fish Screen Feasibility Study* (1996).

2. Justification

The justification including conceptual model, hypotheses and selection of project type is not required for Fish Screen and Ladder Construction proposals. **Attachment 1** describes the justification for the Feasibility Study, which can also be applied to this phase of the project.

3. Approach

Pleasant Grove-Verona Mutual Water Company (PGVMWC) is in the process of completing a Feasibility Study to evaluate water delivery alternatives including the feasibility of implementing fish screens. PGVMWC is applying for CALFED grant funds to complete the next phase of the project. This will be to complete the engineering final design, final Environmental Assessment/Initial Study (EA/IS) with Negative Declaration and Finding of No Significant Impact (FONSI), and permitting.

PGVMWC will contract with Montgomery Watson Harza, who will be completing the engineering final design based upon the conceptual design developed in the Feasibility Study. This phase of the project will include a preliminary design, geotechnical investigations, surveying, 90 percent design submittal, and 100 percent complete final design submittal.

The preliminary design will include all of the necessary design criteria, preliminary layouts of fish screens and pump station, a preliminary cost estimate, and preliminary construction schedule. The preliminary design will include presentations to the Anadromous Fish Screen Program Technical Review Team. The geotechnical investigations and surveying will supplement the geotechnical and surveying information collected during the feasibility stage. (See Performance Measures #1 and #4)

The 90 percent design submittal will incorporate comments from the AFSP Technical Team, PGVMWC landowners and staff. The submittal will consist of engineering drawings, technical specifications, construction cost estimate, contract documents, and bidding documents for the following design disciplines: civil, mechanical, HVAC, electrical, instrumentation, structural, architectural, and corrosion. (See Performance Measure #5) The 100 percent complete final design will incorporate review comments received from the 90 percent submittal to provide bid-ready documents for construction. (See Performance Measure #6)

Montgomery Watson Harza will also complete the necessary environmental documentation necessary to meet the requirements of the California Environmental Quality Act (CEQA), and the National Environmental Policy Act (NEPA). The initial focus of the environmental work effort will be to contact the various agencies, solicit input, and identify the documents that need to be prepared. Then, using the data collected in the draft Biological Assessment of the Feasibility Study, the consultant will prepare a final Environmental Assessment/Initial Study (EA/IS) with Negative Declaration and Finding of No Significant Impact (FONSI). Draft documents will be prepared and submitted to the CALFED/AFSP Technical Team. Final documents will be prepared by responding to the comments received on the draft document. The lead agencies for the CEQA and NEPA process are Department of Fish and Game, and the U.S. Bureau of Reclamation, respectively. (See Performance Measures #1 and #3)

Montgomery Watson Harza will also prepare the necessary permits. The permitting process will consist of preparing permit applications and coordinating with appropriate

agencies. (See Performance Measure #3) The following permits and authorizations have been identified (Refer to **Table 1** for requirements for application).

- USACOE 404 Permit
- CVRWQCB 401 Water Quality Certification
- CDFG Section 1600 Streambed Alteration Permit
- SHPO and National Historic Preservation Section 106
- CESA Consultation
- ESA Compliance
- Reclamation Board Compliance
- Sutter County Permits as required

4. Feasibility

The feasibility of positive barrier fish screens at the proposed location will be shown during the feasibility stage of the project. Similar projects also show the feasibility of the fish screen implementation in terms of schedule and procedure (*M&T/Parrott Pumping Station and Fish Screen, 1998; White River Fish Screen Project Planning and Design, 1997*).

Technical presentations have been given to the AFRP Technical Team describing the plan to implement fish screens on the PGVMWC diversion. Briefing has been given to other regulatory agencies, who have shown strong support for the positive barrier fish screen project.

The completion of the proposed phase of the project is dependent on the timely completion of the Feasibility Study. The Feasibility Study is currently underway. **Attachment 1** in the Appendix of this proposal shows the progress of the specific tasks being accomplished.

All physical actions associated with the construction of the fish screen facility will be performed on land owned by the shareholders of Pleasant Grove-Verona Mutual Water Company. Therefore, permission to access public or private land is unnecessary.

Several permits are necessary to obtain before construction can proceed. **Table 1** lists the various agencies with applicable permit requirements. The permitting process will be completed during the proposed phase of the project.

The opportunity is excellent for completing the project in an efficient manner as described in the Approach section of this proposal.

Table 1. Required Permits and Authorizations

Agency/Permit	Applicability	Requirements for Application
U.S. Army Corps of Engineers Section 404 Nationwide and Section 7 Individual Permits	Required when working in natural streams and rivers	<ul style="list-style-type: none"> • Site Plan and Section Drawings • Location Map • CVRWQCB Sect. 401 Water Quality Certification (may be done concurrently) • COE Application 4345 • Environmental Documentation
Central Valley Regional Water Quality Control Board Section 401 Water Quality Certification	Required when working in natural streams and rivers if the construction area is less than 5 acres	<ul style="list-style-type: none"> • CEQA Certification • Application Form and Fee • Section 1600 Stream Alteration Agreement or note contact with CDFG • Copy of COE Application 4345
California Department of Fish and Game Section 1600 Stream Alteration Permit	Required when natural streambed is to be altered by construction	<ul style="list-style-type: none"> • Environmental Documentation • Application Form and Fee • Project Location Map • Site Plan
State Historic Preservation Officer (SHPO) and National Historic Preservation Section 106 Coordination	Required for construction	<ul style="list-style-type: none"> • Archeological Inventory Survey and Report
California Endangered Species Act (CESA) Consultation	Required for construction	<ul style="list-style-type: none"> • State lead agency designated • Threatened and endangered biological review
Endangered Species Act (ESA) Compliance	Required for construction	<ul style="list-style-type: none"> • Federal lead agency designated • Site Visit • Threatened and endangered biological review
Reclamation Board Compliance	Required when under jurisdiction of Reclamation Board (flood control areas)	<ul style="list-style-type: none"> • Description of work and location • Environmental questionnaire and environmental review documents • Complete plans and specifications • Names and addresses of adjacent landowners
National Environmental Policy Act (NEPA) Compliance	Required for construction	<ul style="list-style-type: none"> • Federal lead agency designated • Prepare draft environmental assessment • Prepare EIS or FONSI
California Environmental Quality Act (CEQA)	Required for construction	<ul style="list-style-type: none"> • State lead agency designated • Prepare initial study • Prepare Negative Declaration or EIR

5. Performance Measures

Project evaluation will be performed throughout all phases of the project, from the feasibility stage to post-construction. Once the fish screen facility is constructed an ERP-MSCS milestone for the Sacramento River Basin will be achieved: “Install positive barrier fish screens on all diversions greater than 250 cfs in all Ecological Management Zones and 25% of all smaller unscreened diversions in the Sacramento River Basin. All fish species classified as “R” (Recovery) will benefit from this milestone.”

A list of project-specific performance measures for each of the general indicator categories defined in Attachment G of the 2002 PSP are listed in **Table 2**. These performance measures will be used to assess the project's success in relation to its goals and objectives.

Table 2. Performance Measures

Performance Measure	Metric	Target	Baseline
1) Participation by landowners and key resource managers at project planning/ coordination meetings	Number of representatives from interested agencies.	Full Participation for duration of the project.	Not Applicable
2) Establishment and implementation of QA/QC program	Steps to establish QA/QC program.	Successful implementation of QA/QC program by all involved in the project for the duration of the project.	Not Applicable
3) Completion and distribution of Environmental Documentation and necessary permits.	Steps to complete CEQA and NEPA documentation and number of final documents to be issued to respectable agencies.	Final document approved by all interested parties before construction of the project and during July '02 to June '03.	Draft Biological Assessment
4) Development and approval of preliminary design for the preferred alternative established in the feasibility report.	Number of preliminary design drawings to be issued to MFWC.	MFWC staff and other interested parties to review drawings and submit comments during July '02 to Nov '02.	Preferred Alternative in the Feasibility Report.
5) Approval of comments from the 30% preliminary design and completion of the 90% contract documents.	Number of 90% documents submitted to MFWC staff and number of 30% comments to be incorporated.	Consultant to respond to all comments, incorporating relevant comments into the 90% design. MFWC staff and other interested parties to review 90% drawings and submit comments during Dec '02 to May '03.	Preliminary Design
6) Finalize 100% contract documents incorporating all review comments from the 90% submittal	Number of 100% documents submitted to MFWC for bidding and number of 90% comments to be incorporated.	Consultant to respond to all comments, incorporating relevant comments into the 100% design. MFWC to accept contract documents during May '03 to June '03.	90% Submittal

Future Performance Measures: The facilities will be designed and constructed to allow monitoring of the impacts on the fishery. Following the completion of the construction phase of the project, there will be an inspection and monitoring of the facility to ensure that the facility is achieving the designed purposes. The monitoring will include a hydraulic evaluation and biological monitoring. Pleasant Grove-Verona Mutual Water Company will create an operation and maintenance plan to make sure that the fish screen facility continues to operate as planned. Improvement in the number of

anadromous fish as a result of the installation of this fish screen should be shown in future data.

6. Data Handling and Storage

Montgomery Watson Harza will maintain the data collected during the construction and start-up phase and will transfer the data to PGVMWC upon transfer of constructed facilities. The data will be available for the review of state and federal agencies upon request.

7. Expected Products/Outcomes

- Environmental documentation: Environmental Assessment/Initial Study (EA/IS) with Negative Declaration and Finding of No Significant Impact (FONSI), and all necessary permits (as listed in **Table 1**)
- Engineering design drawings and specifications for the fish screen facility at the PGVMWC diversion. Submittals for review will include a 30, 90, and 100% design.
- Presentations as requested to inform and update CALFED Committees, Landowners, and Regulatory Agencies about project progress and findings.
- Fish to be protected from entrainment in PGVMWC diversions.
- Quarterly reports detailing task accomplishments and fiscal expenditures to CALFED.

8. Work Schedule

Once the grant funds have been made available through a contract with CALFED, the applicant will be able to begin the engineering final design, final environmental analyses, and permit acquisition. In this proposal, it is considered that July 2002 would be a likely starting date. However, the funds from CALFED may not be granted until later than July 2002. If this is the case, the schedule will be adjusted accordingly.

The engineering final design and environmental assessments will be completed within twelve months from when a grant contract is acquired. The individual tasks, deliverables, and completion dates for the Pleasant Grove-Verona Mutual Water Company Fish Screen final design and environmental assessments are identified in **Table 3**.

Table 3. Work Schedule

Task / Subtask No.	Description Title	Start Date (mo / yr)	Due Date (mo / yr)
Task 1	Project Management	Jul '02	Jun '03
Subtask 1.1	Prepare work plan	Jul '02	Aug '02
<i>Deliverable 1</i>	<i>Work Plan</i>	<i>Jul '02</i>	<i>Aug '02</i>
<i>Deliverable 2</i>	<i>Draft service contracts</i>	<i>Jul '02</i>	<i>Aug '02</i>
<i>Deliverable 3</i>	<i>Final service contracts</i>	<i>Jul '02</i>	<i>Aug '02</i>
Subtask 1.2	Participate in Project Meetings	TBD	TBD
<i>Deliverables</i>	<i>Meeting Agenda and Minutes</i>	<i>TBD</i>	<i>TBD</i>
Subtask 1.3	Distribute Project Information and Progress Reports	Jul '02	Jun '03
<i>Deliverables</i>	<i>Monthly Reports, and Quarterly Programmatic and Fiscal Reports in the CALFED approved format</i>	<i>Jul '02</i>	<i>Jun '03</i>
Subtask 1.4	Institute and Maintain a QA/QC Program	TBD	TBD
<i>Deliverable 1</i>	<i>Memorandum to file</i>	<i>TBD</i>	<i>TBD</i>
Task 2	Environmental Documentation	Jul '02	Feb '03
<i>Deliverable 1</i>	<i>Draft Environmental Document</i>	<i>Jul '02</i>	<i>Jan '03</i>
<i>Deliverable 2</i>	<i>Final Environmental Document</i>	<i>Jan '03</i>	<i>Feb '03</i>
Task 3	Preliminary Design (30 percent)	Jul '02	Nov '02
Subtask 3.1	River and Canal Hydraulics	Jul '02	Nov '02
Subtask 3.2	Fish Screen	Jul '02	Nov '02
Subtask 3.3	Pump Station	Jul '02	Nov '02
Subtask 3.4	Corrosion Analysis	Sept '02	Nov '02
Subtask 3.5	Cost Estimate and Construction Schedule	Sept '02	Nov '02
Task 4	Geotechnical Investigations	Sept '02	Nov '02
Task 5	Surveying and Mapping	Jul '02	Sept '02
Task 6	90 Percent Complete Final Design	Dec '02	May '03
<i>Deliverable 1</i>	<i>90 Percent Complete Documents</i>	<i>Dec '02</i>	<i>May '03</i>
Task 7	100 Percent Complete Final Design	May '03	Jun '03
<i>Deliverable 1</i>	<i>Final Documents</i>	<i>May '03</i>	<i>Jun '03</i>
Task 8	Permits	TBD	May '03
<i>Deliverables</i>	<i>Permits</i>	<i>TBD</i>	<i>May '03</i>

B. APPLICABILITY TO CALFED ERP GOALS AND IMPLEMENTATION PLAN AND CVPIA PRIORITIES

1. ERP and CVPIA Priorities

Ecosystem Restoration Program Strategic Goals:

GOAL 1: At-Risk Species- This project will promote the recovery of at-risk species, in particular chinook salmon, steelhead trout, Sacramento Splittail, and delta smelt. The project will contribute to the reversing of downward population trends of non-listed native species, by reducing or eliminating delay and injury to migrating adult fish by improving passage conditions and reducing entrainment in diversion for juvenile and larval fish.

GOAL 4: Habitats-Installation of a positive barrier fish screen will protect the habitat of the target species by decreasing the likelihood of entrainment in diversion facilities.

Regional Implementation– Sacramento Valley Region

SR-2) Restore fish habitat and fish passage particularly for spring-run chinook salmon and steelhead trout and conduct passage studies.

- *Facilities improvements and fish passage programs.* This project will help ensure fish passage on the Sacramento River. Spring-run chinook salmon and steelhead trout, along with other at-risk species, will be protected from harm.

SR-6) Continue major fish screen projects and conduct studies to improve knowledge of implications of fish screens for fish populations.

- *Continue and complete ongoing fish screen construction projects.* Screening PGVMWC's diversion from the Sacramento River and Natomas Cross Canal (one of eleven facilities names under this objective).

Central Valley Project Improvement Act Goals

This project will also address the Anadromous Fish Screen Program authorized by Section 3406(b)(21) of the Central Valley Project Improvement Act.

- *Improve habitat for all life stages of anadromous fish by providing flows of suitable quality, quantity, and timing, and improved physical habitat.* This project improves fish passage and flow management in the Sacramento River that greatly increases the spawning success and survival of anadromous fish.
- *Improve survival rates by reducing or eliminating entrainment of juveniles at diversions.* The fish screen to be constructed at the Pleasant Grove-Verona Mutual Water Company diversion will result in the elimination of a source of mortality to juveniles.

- *Improve the opportunity for adult fish to reach their spawning habitat in a timely manner.* The installation of fish screens at the PGVMWC diversion greatly increases the opportunity for adult anadromous fish to reach their natural spawning and rearing habitat. The number of out-migrants will increase with the screening of this diversion. The surviving out-migrants will in turn produce additional adults to return to the river and spawn.

2. Relationship to Other Ecosystem Restoration Projects

The implementation of fish screens at diversion points along the Sacramento River has a strong relationship to other ecosystem restoration projects. By keeping the anadromous and non-anadromous fish species within the channel of the Sacramento River, other ecosystem restoration projects can be implemented in the surrounding areas. By screening the PGVMWC diversion, fish species are able to reach upstream reaches of the Sacramento River to spawn and rear, and then make their way to the Bay-Delta.

As more fish screens are constructed at diversion points along the Sacramento River, the fish species in the watershed will be protected from harm, and the number of anadromous and non-anadromous fish will increase. Screened diversions on the Sacramento River that are present or being constructed include the Glenn-Colusa Irrigation District intake (under construction) located between River Mile 205 and 206 near Corning, the M&T/Parrot intake in Chico, the Maxwell Irrigation District intake near Princeton, and the RD 108 intake near Grimes.

3. Requests for Next-Phase Funding

The Pleasant Grove-Verona Mutual Water Company previously received funding from CVPIA for the Positive Barrier Fish Screen Feasibility Study and Preliminary Environmental Assessment. In conjunction with Montgomery Watson Harza, the applicant has completed a Preliminary Feasibility Report (November 2000) and is planning on completing the Final Feasibility Study in February 2002. The information gathered from this phase of the project will provide the framework necessary for implementation of the engineering final design and final environmental analyses aspects of the project. **Attachment 1** in the appendix of this proposal provides a summary of the status of the Feasibility Study and its relationship to the proposed phase of the project.

4. Previous Recipients of CALFED or CVPIA Funding

Pleasant Grove-Verona Mutual Water Company received \$100,000 from CVPIA (Contract No. 00FG200185) for the previous-phase funding of the project. No other CALFED or CVPIA Funding has been received.

5. System-Wide Ecosystem Benefits

Installation of a fish screen at the diversion point on the Sacramento River will provide ecosystem benefits for the areas beyond the diversion point because the fish survival will be significantly augmented. The fish screen facility will keep fish from becoming genetically isolated from the rest of the population, thus augmenting the long-term sustainability of the fish species present in the Sacramento River. This project will complement other restoration projects that are underway or completed on the watersheds above the diversions.

6. Additional Information for Proposals Containing Land Acquisitions N/A

C. QUALIFICATIONS

Montgomery Watson Harza, MWH, is a full service civil and environmental engineering firm specializing in a variety of services including water and wastewater engineering, energy and infrastructure engineering, flood control, waste remediation, fisheries design, and environmental assessment and mitigation. The firm also works in a number of other industry sectors such as construction, finance, information technology, applied research, project management, laboratory services and government relations.

MWH - the result of a recent merger between Montgomery Watson and Harza Engineering Company – brings to the industry expertise in fish screen and water structure design and construction. With more than \$721 million in revenue, MWH has 5,500 specialists in more than thirty nations and more than 231 years of combined experience. MWH is successful in delivering progressive environmental solutions that reflect the latest scientific and technological developments while recognizing the importance of protecting the environment and the quality of life in local communities. MWH is a recognized leader in water resources and environmental planning. MWH has been present in Northern California for many years and continues to provide engineering service to many local private and public clients. The company has expertise and the capability to perform all phases of a project from the planning phase to the construction and operation of the completed project.

Montgomery Watson Harza Engineers:

Neil W. Schild is a Principal Engineer with 41 years of experience in operation and maintenance of dams, water supply reservoirs, and power generation projects. He earned a B.S. in Agricultural Engineering from Kansas State University and is a Professional Agricultural Engineer in California. During 20 years with the U.S. Bureau of Reclamation, he has proven his ability to provide reasonable and practicable solutions to even the most complex situations. His background includes design and construction of fish protection facilities, application of environmental regulations, management of water and land resources, transfer of water rights, water resource planning, project management, and administration of personnel. Mr. Schild was Project Manager for M&T Chico Ranch Fish Screen Facility, Gorrill Land Company Fish Screen and Ladders

Project, and Banta-Carbona Irrigation District Fish Screen Feasibility Study. He is currently the Project Manager for the Pleasant Grove-Verona Fish Screen Feasibility Study and the Patterson Irrigation District Fish Screen Feasibility Study.

Wayne C. Dahl is a Principal Engineer with 23 years of experience in large civil engineering projects including planning, design, and construction management of water resources projects, including flood control and water supply. He received a B.S. in Civil Engineering from North Dakota State University, and completed graduate course study in Hydrology from Arizona State University. He is a Professional Civil Engineer in California and Arizona, and a Land Surveyor in California. Mr. Dahl has expertise in the design and construction of water distribution systems; hydrology and drainage projects; canals, channels, pipelines, and pumping stations; reservoir design; and bridges and roadways. Mr. Dahl is experienced in all phases of project and program implementation, including planning, analysis, design, plans and specifications, cost estimating, bidding, and construction management. He is the Project Manager for the American River Pump Station Project, and for Arcade Water District's Capital Improvement Program.

Janet L. Atkinson is a Supervising Engineer with 21 years of experience in the planning and design of water resource and general civil engineering projects with special emphasis on the design of pipelines and pumping plants. She received a B.S. in Civil Engineering from University of Oklahoma and is a Professional Civil Engineer in California and Oklahoma. She has served as project manager and project engineer for several planning and design projects for pump stations. She was responsible for leading the preliminary design effort for a 25 MGD pump station for the Contra Costa Water District. Ms. Atkinson also participated in the design of an irrigation distribution system for the Semitropic Water Storage District in Kern County, the preliminary design of the Central Utah Project Irrigation and Drainage System, and a conceptual engineering report for the San Francisco Water Department Alameda Creek Fishery Water Recapture Facility.

Dennis E. Dorratcague is a Principal Engineer and the water resources director in Montgomery Watson Harza's Northwest Region. He earned a B.S. from University of Notre Dame and his M.S. in Civil Engineering at Colorado State University. He is a Professional Civil Engineer in Washington, Oregon, Alaska, and California. He has been working in the field of hydrology and hydraulics since 1972, primarily concentrating on hydraulic structures and fisheries engineering. He has served as Technical Manager for the Banta-Carbona Irrigation District Fish Screen Feasibility Study and for the preliminary and final design for a fish screen, ladder, and tailrace barrier in Western Oregon. Mr. Dorratcague was also Project Manager for the development of the Feature Design Memorandum for the Surface Bypass Spillway Project; the hydraulic modeling, preliminary and final designs, and construction services of a fish screen on the White River in Western Washington; the preliminary and final design of a fish screen facility for Pacific Power and Light Company; and the Salmon Falls Fish Passage Project.

Amy L. Wade is an Associate Engineer with experience in civil, environmental, and water resource engineering. She received a B.S. in Civil and Environmental Engineering from Brigham Young University. Her background includes the planning, analysis, and design of flood management and water intake facilities. Ms. Wade has served as Project Engineer on several major water resources projects including the Pleasant Grove-Verona Fish Screen Feasibility Study, and participated in the preliminary design phase for the Sacramento River Watershed Project.

Private Environmental Consultant:

Steve Clifton has a wildlife consulting background with an emphasis on the ecology and conservation of special-status plant and wildlife species endemic to California. He received a Bachelor of Arts Degree in Wildlife Biology/Zoological Concentration in 1985 from California State University. Mr. Clifton has worked as a sub-consultant conducting field surveys in Plumas National Forest of California in accordance to present survey protocol. He has served as project biologist for the Endangered Species Recovery Program collecting genetic samples, monitoring movement patterns, and providing technical expertise concerning the San Joaquin kit fox, giant kangaroo rat, riparian brush rabbit, riparian woodrat, and other species. He served as Field Investigator for the Habitat Assessment and Finding of No Significant Impact for the proposed Tracy O&M Facility Relocation Site. Mr. Clifton is the Principle Field Investigator conducting pipeline alignment clearance surveys for the Delta-Mendota Canal and California Aqueduct right-of-way in San Joaquin, Stanislaus, Merced, Fresno, Kings, and Tulare counties, CA.

D. COST

1. Budget

A detailed budget for this project is included in the application portion of the proposal.

2. Cost-Sharing

Pleasant Grove-Verona Mutual Water Company is planning on contributing \$10,000 for the fish screen project (for all phases of the project). PGVMWC is willing to furnish in-kind services for the fish screen project. PGVMWC staff will provide information and assistance when requested, review contracts and legal documents concerning the project, and provide facilities for the stakeholders meeting to obtain input from the community and local governmental interests.

E. LOCAL INVOLVEMENT

Public Outreach Plan: A cooperative program will be developed to conduct public outreach to key stakeholders which include Pleasant Grove – Verona Mutual Water Company, California Dept. of Fish and Game, California Dept. of Water Resources, U.S. Fish and Wildlife Service, U.S. Army Corps of Engineers, Sutter County government, and other interested parties. The outreach program will be structured to maximize the participation of the stakeholders in order to inform and educate the community about the project and its intent to protect anadromous fish. Planned and scheduled meetings will be organized and conducted by Montgomery Watson Harza. These stakeholder meetings will provide an opportunity for all participants to have input regarding the design and construction of fish passage and water delivery structures on the Sacramento River.

Commitment by PGVMWC and MWH to keep the public informed about the project will minimize conflict and misinformation between land users, governmental agencies, and conservation groups. In addition, these outreach efforts will inform and educate local communities about the CALFED Ecosystem Restoration Program.

Local, state, and federal resource agencies have shown strong support for this fish screen project because it meets specific natural resource program goals and objectives. Additional local participation will occur during the CEQA/NEPA compliance process. A public notice will be made once the draft EA/IS is available for public and agency review. Any comments received during this period will be addressed in the final EA/IS. The installation of the fish screen facility is not expected to have any negative impacts to businesses and residents along the river or from recreational users of the river.

Third Party Impacts: None

F. COMPLIANCE WITH STANDARD TERMS AND CONDITIONS

PGVMWC is willing to accept the standard terms and conditions for the state and federal contracting. The applicant has reviewed the terms and conditions and is agreeable to the language as presented. All of the bid bonds and required documents will be utilized when the construction contracts are awarded.

F. LITERATURE CITED

CALFED Bay-Delta Program, Ecosystem Restoration Program 2002 Proposal Solicitation Package, 2001.

CALFED Bay-Delta Program. Guide for Regulatory Compliance for Implementing CALFED Actions, Volume 2: Environmental Regulatory Processes, June 2001.

Central Valley Anadromous Fish Annual Run-Size, Harvest and Population Estimates, 1967 through 1991, CDFG, August 1994 Revision.

Central Valley Project Improvement Act, Title 34 of PL 102-575, Sections 3402, 3406 and 3407. Approach and Focus for Implementing the CVPIA 1999-2004.

Department of California Fish and Game, Projects Upstream on Merced and San Joaquin Rivers, Personal knowledge of Fish and Game staff.

Department of California Fish and Game, National Community Conservation Planning Act, Sections 2800-2840, 1991.

Final Endangered Species Act Section 7 Consultation Handbook, March 1998.

McMillen, M.D., and W. Porter, White River Fish Screen Project Planning and Design. Proceedings of Waterworks '97, 1997.

Schild, Neil W., M&T/Parrott Pumping Station and Fish Screen. Presented at Fish Passageway Workshop, Sacramento, California, March 26, 1998.

APPENDIX

ATTACHMENT 1

Summary of Existing Project Status: Positive Barrier Fish Screen Feasibility Study and Preliminary Environmental Assessment

Overview of Project. Pleasant Grove-Verona Mutual Water Company (PGVMWC) is in the process of completing a Feasibility Study in order to evaluate water delivery alternatives for PGV and the feasibility of the design, construction, and operation of positive barrier fish screens for anadromous fish and other species. A preliminary Feasibility Report was completed in November 2000 and examined several alternatives for water deliveries to Pleasant Grove-Verona Mutual Water Company. The Feasibility Study will provide conceptual designs, preliminary environmental assessments, and collection of the data necessary for the completion of the requested next phase of the project, final design and final environmental assessment. The applicant received \$100,000 from CVPIA to complete the feasibility. The progress and costs allocated for each task of the Feasibility Study are described below.

Task 1—Meetings and Site Visit. PGVMWC has met with Montgomery Watson Harza to discuss the Preliminary Feasibility Report and the additional alternatives to be included in the Feasibility Study. Several site visits have been made to review the project area, the possible screening locations, and existing facilities. More meetings between PGVMWC and Montgomery Watson Harza are planned in order to coordinate the efforts of each party, make periodic reports, and discuss the financing of the next phases of the project. \$7,800 was reserved for Task 1.

Task 2—Develop Project Alternatives. PGVMWC and Montgomery Watson Harza have developed four screening alternatives to be analyzed in the Feasibility Study. These alternatives are variations on the alternatives analyzed in the Preliminary Feasibility Report. These alternatives will be evaluated to determine the pump sizes, horsepower, life and location of pump stations, O&M and capital costs comparisons, and environmental work. As more information is obtained from the data collection phase of the study, the alternatives may be refined to accommodate the existing conditions of the area. \$16,400 was allocated for the completion of Task 2.

Task 3—Data Collection and Development of Design Criteria. This task includes preliminary geotechnical, hydrologic, water quality, project operation, existing facilities, topographical, vegetation and wildlife, fisheries, and cultural resources information. Montgomery Watson Harza has obtained several borings of the projected pumping sites, topographic maps of the area, and water supply records for diversions from the Natomas Cross Canals. Also, Montgomery Watson Harza will be surveying the area to obtain water surface elevations and other elevations at key points in the project area, in order to develop accurate design criteria necessary to evaluate the four alternatives. Additional information will be obtained on the hydraulics, water quality, operational requirements, vegetation and wildlife, fisheries, and cultural resources of the area. A draft Biological

Assessment and a cultural resources survey report will be several deliverables from this task of the project. \$31,300 is reserved for Task 3.

Task 4—Conceptual Design. After the geotechnical, topographical, and bathymetry survey data collection is completed and the design criteria is established, conceptual designs of pumping plant and conveyance facilities will be developed. Sketches of the alternatives and a complete cost estimate will be completed for each alternative. Task 4 will use \$27,500 to complete.

Task 5—Feasibility Report. The final Feasibility Report will evaluate each alternative using the criteria of capital costs, annual operation and maintenance, biological effectiveness, ease of construction, and design limitations. This Feasibility Report will serve as the basis for the final design and final environmental assessment aspects of the project. The writing of the Feasibility Report will cost \$25,400, plus \$1,600 for Quality Assurance and Quality Control.

Scientific Merit. There is relatively little uncertainty associated with this project. With the scientific knowledge regarding anadromous fish restoration, an increase in the number of fish returning to the spawning areas upstream of this facility will certainly occur. Diversions of this type potentially impact the fish in the Sacramento River. Thus, something must be done to protect them. Instead of eliminating the diversions, which would have devastating local and statewide economic and social impacts, the diversions will be screened in order to increase the number of fish in the Sacramento River. The Feasibility Study will provide the information necessary to determine the best alternative for screening the diversions. An adaptive management framework will be set during the design and construction phases of the project by producing a flexible design and inspecting the construction quality and making adjustments accordingly.

Relationship to Next-Phase Funding. The Feasibility Study as described above will be completed by the time a grant contract is issued by CALFED. This Feasibility Study will set the necessary framework for the design and environmental phase by presenting design criteria, conceptual designs, and a preliminary environmental assessment. No outstanding regulatory or implementation issues will interfere with the proposed next-phase of funding.

ATTACHMENT 2

Figures

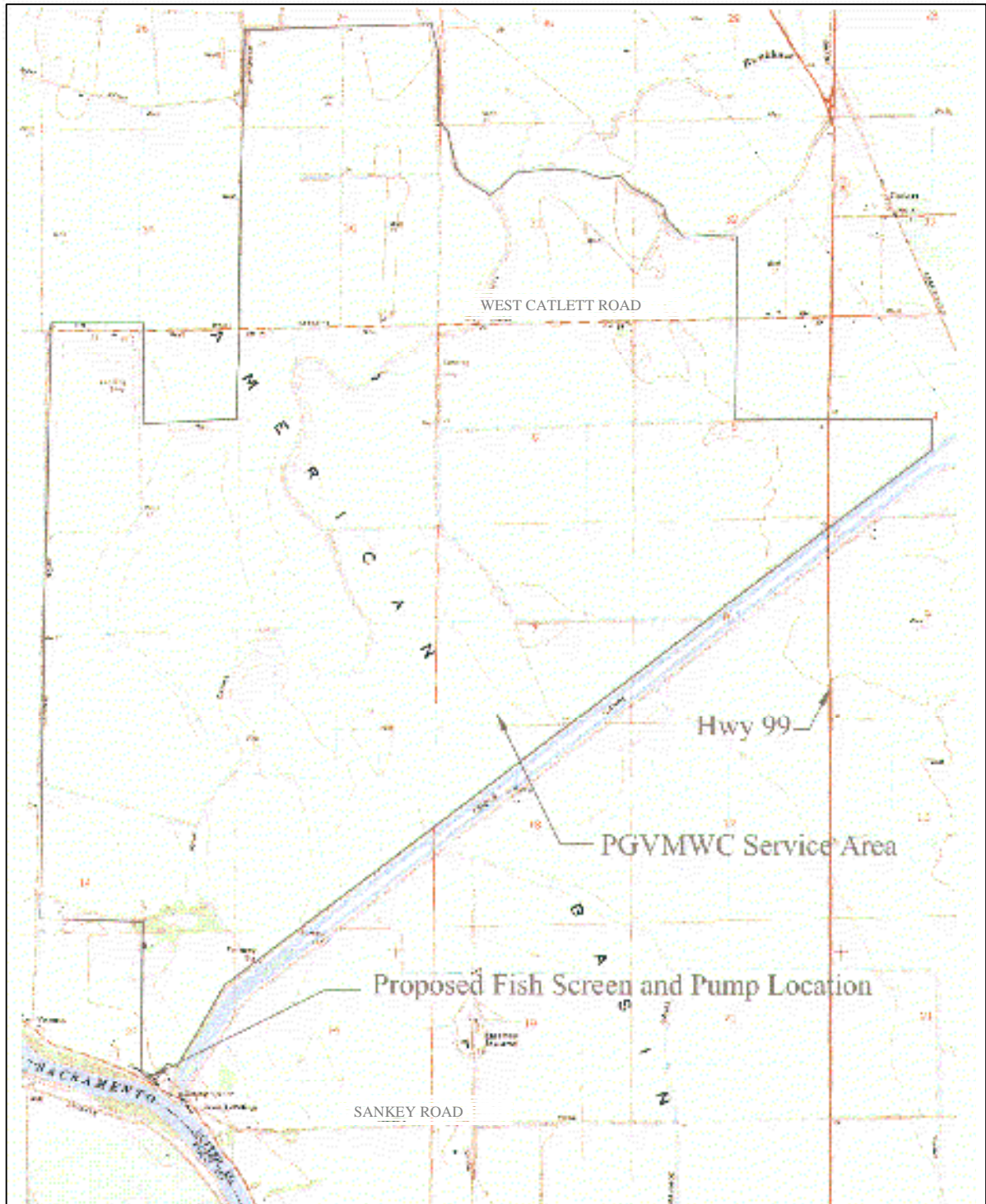


Figure 2.1 – Location Map