

4.5 PSP Cover Sheet (Attach to the front of each proposal)

Proposal Title: Tuolumne River Mining Reach Project 3 - Warner Deardorff Segment  
Applicant Name: Turlock Irrigation District  
Mailing Address: PO Box 949 (333 East Canal Dr.) Turlock CA 95380  
Telephone: 209-883-8316  
Fax: 209-656-2143  
Email: wbfryer@tid.org

Amount of funding requested: \$3,501,000 for 3 years

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

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

Does the proposal address a specified Focused Action?  yes  no

What county or counties is the project located in? Stanislaus

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

- Sacramento River Mainstem
- Sacramento Trib: \_\_\_\_\_
- San Joaquin River Mainstem
- San Joaquin Trib: Tuolumne
- Delta: \_\_\_\_\_
- East Side Trib: \_\_\_\_\_
- Suisun Marsh and Bay
- North Bay/South Bay: \_\_\_\_\_
- Landscape (entire Bay-Delta watershed)
- 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
- Late-fall run chinook salmon
- Delta smelt
- Splittail
- Green sturgeon
- Migratory birds
- Other: \_\_\_\_\_
- Spring-run chinook salmon
- Fall-run chinook salmon
- Longfin smelt
- Steelhead trout
- Striped bass
- All chinook species
- 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:

ERP Volume II pp 409 & 410: Restoration of stream & riparian habitat; ecological processes; gravel recruitment, transport and cleaning processes; a diverse self-sustaining riparian corridor; and predator reduction.

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

- |   |   |
|---|---|
| <input type="checkbox"/> State agency                         | <input type="checkbox"/> Federal agency |
| <input type="checkbox"/> Public/Non-profit joint venture      | <input type="checkbox"/> Non-profit     |
| <input checked="" type="checkbox"/> Local government/district | <input type="checkbox"/> Private party  |
| <input type="checkbox"/> University                           | <input type="checkbox"/> Other: _____   |

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

- |                                     |  |
|-------------------------------------|--|
| <input type="checkbox"/> Planning   | <input checked="" type="checkbox"/> Implementation |
| <input type="checkbox"/> Monitoring | <input type="checkbox"/> Education                 |
| <input type="checkbox"/> 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.

Wilton B. Fryer  
Printed name of applicant

Wilton B. Fryer  
Signature of applicant

**TUOLUMNE RIVER MINING REACH RESTORATION  
PROJECT No. 3 -- WARNER-DEARDORFF SEGMENT**

**I. TITLE PAGE**

Project Manager  
Turlock Irrigation District  
333 East Canal Drive  
Turlock, CA 95380

Wilton Fryer  
Water Planning Department Manager  
209-883-8316  
FAX 209-656-2143  
e-mail: wbfryer@tid.org

**APPLICANT:**

The Turlock Irrigation District is a California irrigation district, a political subdivision of the State of California. TID is a tax-exempt public agency.

**CONTACTS:**

For contract and project administration:	Wilton Fryer
For fishery and habitat details:	Tim Ford
	209-883-8275
	FAX 209-656-2143
	E-mail: tjford@ainet.com

**PARTICIPANTS:**

Tuolumne River Technical Advisory Committee (TRTAC) made up of the Turlock Irrigation District (TID), Modesto Irrigation District (MID), City & County of San Francisco (CCSF), California Dept. of Fish & Game (CDFG), and the U.S. Fish & Wildlife Service (USFWS). Collaborating stakeholder groups with TRTAC are the Tuolumne River Preservation Trust, Friends of the Tuolumne, California Sports Fishing Protection Alliance, Bay Area Water Users Association, East Stanislaus Resource Conservation District, National Marine Fishery Service (NMFS), and local mining operators and landowners.

**COST SHARE PARTICIPANTS:**

USFWS through the CVPLA-AFRP and TID, MID, and CCSF providing funds through the TRTAC.

**TUOLUMNE RIVER MINING REACH RESTORATION  
PROJECT NO. 3 -- WARNER-DEARDORFF SEGMENT**

**II. EXECUTIVE SUMMARY**

SUBMITTED BY: TURLOCK IRRIGATION DISTRICT

**DESCRIPTION:**

The overall Mining Reach project involves restoration of instream aquatic habitat and shaded riverine aquatic habitat for the primary benefit of San Joaquin fall-run chinook salmon within a 6.1 mile reach (River Mile 34.2 to 40.3) of the lower Tuolumne River below La Grange Dam. The Mining Reach project will return this reach of the river to a more natural, dynamic channel morphology that will improve, restore and protect instream and riparian habitat for fall-run chinook salmon survival, including restoring hydrological and geomorphic processes. Portions of the 6.1 mile long reach will be reformed, with a system of setback dikes, into a 500 foot wide riparian floodplain recreating a riffle and run pattern that follows the restored meander channel of the river. Native vegetation will be planted on restored river terraces in a mix similar to that found on undisturbed segments of the river. This is the third of four segments being reconstructed in the Mining Reach. Funding for the 1.3 mile long Warner - Deardorff Segment is requested to be from CALFED sources available after October 1999 (FY2000) because there is no additional PSP planned for FY2000.

**BIOLOGICAL OBJECTIVES:**

1. Restore and increase habitat for natural salmon production.
2. Reconstruct natural channel geometry scaled to current channel forming flows.
3. Restore native riparian plant communities within their predicted hydrological regime.
4. Reduce salmonid fish predator habitat.

**TASKS & SCHEDULES:**

The CEQA / NEPA mitigated EA/IS for the Warner-Deardorff Segment has been funded under current AFRP contracts and contributions from TID, MID, and CCSF. Design and permitting will be funded by AFRP starting May 2000 and be completed by March 2001. Construction in the Warner-Deardorff Segment will start in June 2001 and be completed in March 2002. Revegetation will be from October 2001 to March 2002.

**JUSTIFICATION:**

The fall run chinook salmon in the tributaries of the San Joaquin River are currently listed as a species of concern by the USFWS. Anadromous salmonid populations in the lower Tuolumne River require adequate ecosystem health to achieve and sustain their productivity. Restoring and maintaining dynamic geomorphic processes are crucial for insuring healthy river ecosystems with natural productive salmonid populations. When complete restoration of a river ecosystem is infeasible, as for alluvial rivers regulated by dams, limiting factors, such as predation, salmon fry & smolt entrapment, poor quality spawning riffles, etc. must be identified for prioritizing actions that would best improve the ecosystem.

## BUDGET:

The total project cost is estimated to be \$6,877,000. The CALFED is being asked to fund 51% of the costs, or \$3,501,000, for Mining Reach Project No. 3, the Warner-Deardorff Segment. This consists of \$1,300,000 for mineral rights purchases, \$1,665,000 for setback levee construction and floodplain reconstruction, \$150,000 for construction management, \$89,000 for project management, with a \$297,000 construction contingency. The USFWS-AFRP is being asked to fund 48% of the project, or \$3,336,000; including \$960,000 for mineral rights, \$530,000 for construction, \$595,000 for revegetation, \$409,000 for engineering, and \$180,000 for project monitoring. The Districts will contribute \$40,000 for permits, or 1% of the project.

## APPLICANT QUALIFICATIONS:

Since 1971, TID, MID, and CCSF, in cooperation with DFG and USFWS, have monitored river conditions and developed programs that enhance natural production of fall-run salmon. Tim Ford has been the District's staff biologist for the TID and MID since 1981. Personnel with the biological consulting firms EA Engineering and Stillwater Science have been conducting numerous fish studies for TID and MID on Tuolumne and San Joaquin River salmon since 1987. McBain & Trush, fluvial geomorphology consultants, have experience in developing habitat restoration plans for river systems in California. The firm HDR Engineering will provide construction design and management. The firm HART will provide revegetation design and native plant materials.

## MONITORING PLAN:

A project specific monitoring plan was developed as part of the mitigation measures in the EA/IS prepared for this project. The monitoring plan is designed to compliment the overall river wide monitoring program in the EIS for the FERC Settlement Agreement and Order for the Don Pedro Project. The basic components of the Mining Reach monitoring plan are:

1. **Physical habitat changes:** Pre and post construction changes will be recorded to assure that the desired channel contours and cross sections were built as designed and to assess geomorphological changes after major flood events.
2. **Riparian habitat changes:** Revegetation will require annual inspections during the first few years to confirm survival of planted materials and perform replanting if deemed necessary, followed with periodic assessment of natural changes in the vegetation mix.
3. **Fish population changes:** This will involve evaluation of pre and post project habitat conditions for both fish predators and salmon. Monitoring criteria would include items such as flow velocity, temperature, transit times through the stream channel, and sampling or observations of fish populations and spawning riffle conditions.

## LOCAL SUPPORT; COORDINATION WITH OTHER PROGRAMS

This is the third of the four Mining Reach projects approved by the TRTAC participants. Coordination meetings have been held with the affected aggregate mining operations and landowners in the Mining Reach as well as with federal, state and county agencies and local environmental groups starting in 1997. The mining operators and landowners have been cooperative and supportive of the project. USFWS has been supportive of the project and is continuing to work with TID to obtain additional AFRP funding for this and subsequent portions of the overall Mining Reach restoration project.

**TUOLUMNE RIVER MINING REACH RESTORATION PROJECT  
PROJECT NO. 3--WARNER-DEARDORFF SEGMENT**

**III. PROJECT DESCRIPTION**

**A. LOCATION**

The overall Mining Reach project covers a 6.1 mile length of channel and is located on the lower Tuolumne River, between river mile 34.2 and river mile 40.3, approximately 23 miles east of Modesto in Stanislaus County shown in Figure 1. Project No. 3 Warner-Deardorff Segment is between river mile 35.2 and 36.5. The project location on the Tuolumne River is shown in Figure 2.

**B. PROJECT DESCRIPTION AND APPROACH**

The Tuolumne River Technical Advisory Committee (TRTAC), under the auspices of the 1995 Don Pedro Project Settlement Agreement (FERC License No. 2299), have developed the final draft of a plan to restore instream aquatic habitat and shaded riverine aquatic habitat for the primary benefit of San Joaquin fall-run chinook salmon in the Tuolumne River below La Grange Dam. The TRTAC has identified as a high priority project the restoration of a 6.1-mile reach (River Mile 34.2 to 40.3) damaged in the January 1997 floods. This is called the "Mining Reach" because active sand and gravel-mining operations exist within this reach of the river. On behalf of the TRTAC, the firm of McBain & Trush has developed the project concept design for the proposed habitat restoration work based on geomorphology and fluvial processes in a reforested riparian floodplain.

The Mining Reach project will return this 6.1 mile reach of river to a more natural, dynamic channel morphology that will improve, restore and protect instream aquatic habitat and shaded riverine aquatic habitat for San Joaquin fall-run chinook salmon productivity and will help restore natural hydrological and geomorphic processes. Portions of the 6.1 mile long reach will be reformed into a 500 foot wide riparian floodplain recreating a riffle and run pattern that would follow the restored meander channel of the river. Native vegetation will be planted on restored river terraces in a mix similar to that found on undisturbed segments of the river. The riparian reforestation is intended to provide food and shade for juvenile salmon. Terrestrial species will also benefit from a more continuous corridor of riparian habitat in the restored areas. The wider river channel will allow channel meander to provide a sustainable and dynamic river morphology, i.e., flood flow-related channel-bed movement with periodic scour, that partially or fully restore the processes associated with natural salmon production and survival.

The Mining Reach project is divided into four segments. The CEQA / NEPA mitigated EA/IS for all four segments has been funded by available USFWS AFRP funds with a TID-MID-CCSF contribution towards permitting costs. AFRP and CALFED have funded design, construction, revegetation, and monitoring for first two segments. Completion of the construction Mining Reach Restoration will require funding for Segments 3 and 4. As a result of the Mining Reach Projects, the channel capacity in the project area will increase from 7,000 cfs

to 15,000 cfs, the maximum regulated flow that can be released from Don Pedro Reservoir. The sequence of segments to be constructed and the associated source of funding are intended to allow finished work to remain structurally sound against a designed flood event of 15,000 cubic feet per second in case subsequent funding is delayed or not forthcoming. McBain & Trush designed the Mining Reach work so that it would tie into the downstream Reed restoration project designed by DFG and funded by the 4-Pumps program that was originally scheduled for construction in 1997.

This proposal seeks CALFED funding for the third portion of the Mining Reach restoration work known as Project 3, Warner-Deardorff Segment. This project is a continuation of the Mining Reach project construction currently funded by AFRP and CALFED. This project can also be seen as a demonstration project to test the effectiveness of the proposed restoration project design and work and the feasibility of performing similar type fish and riparian habitat restoration work in other rivers and streams within the Central Valley. Follow-on proposals for CALFED funding will be submitted for the forth segment of the Mining Reach Project.

The original Mining Reach proposal from McBain & Trush anticipated some restoration work in this segment could be performed in 1997 under a Corps of Engineers emergency exemption. Only the temporary repair work, to fix breaches in existing dikes that separate the active mining areas from the river, was performed in 1997 by the aggregate mining operators under their existing permits and at their cost. These temporary repairs will now allow permanent reconstruction work to proceed behind the dikes at a time of year when such work would not be allowed in the active river channel. Also, some of the materials used in these temporary repairs will be recovered and reused in the reconstruction of the new riparian floodplain.

The restoration tasks for the four respective Mining Reach segments are shown in the attached Figures 8 to 11 from the EA/IS documentation of the project description. Currently pre-construction, project specific monitoring funded by AFRP, started in the spring of 1998. Construction in the 7/11 Segment is anticipated to start in the summer of 1999. Permitting, construction design, and acquisition of conservation easements for the upstream MJ Rudy Segment will start in mid 1999 under existing AFRP and CALFED contracts. Construction of the upstream MJ Ruddy Segment is anticipated to start in June 2000.

This project funding is requested to be from CALFED sources available after October 1999 (FY2000) because there is no additional PSP planned for FY2000. Project No. 3, Warner-Deardorff Segment restoration, would start in the spring of 2000, with permitting and construction design work performed during the summer and fall of 2000 under contracts with AFRP. Construction would start in June 2001. This work would tie into the permanent floodplain channel reconstruction and the downstream end of the setback dike work constructed in the MJ Ruddy Segment. The setback dikes will require significant quantities of imported materials to fill in deep pit areas created by past gravel mining, but this will re-create a riffle and run pattern that follows the restored meander channel of the river. In addition the project will need to purchase significant quantities of aggregate mineral rights under the old existing mining permits that encroach into the river channel. The channel will be reformed into a 500-foot wide riparian floodplain complete with native vegetation in a mix similar to that found along

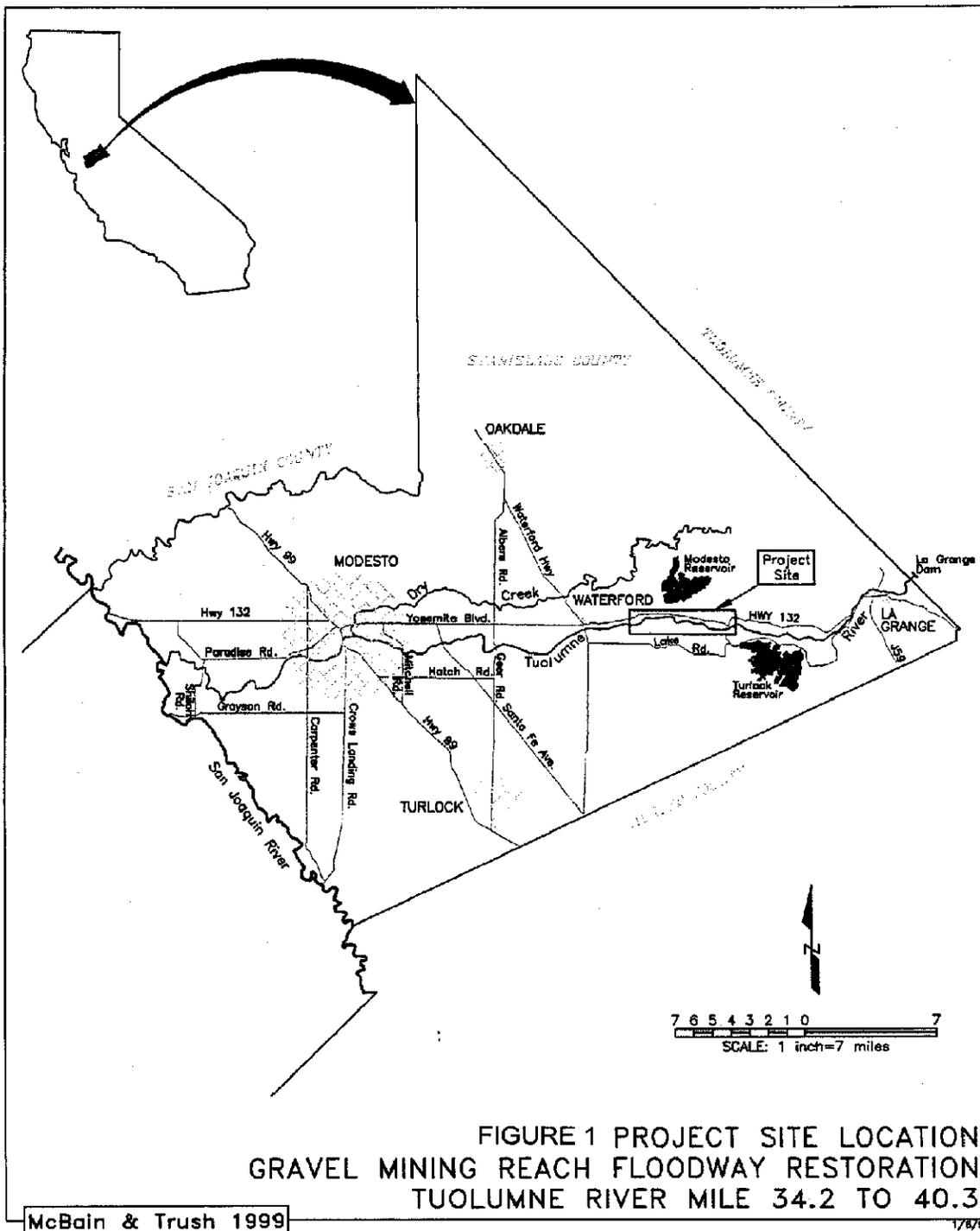
undisturbed segments of the Tuolumne River. The channel will be hydraulically sized using currently regulated flows to be an active riverine channel with full-grown riparian vegetation. These regulated flows periodically could reach as high as 15,000 cfs for short periods. It is anticipated and planned that during such high flow events there will be some movement of the channel within the flood plain to expose added spawning materials and clean existing spawning gravels. To minimize long term future maintenance expenditures, this restoration work is being designed with the intent to provide a self maintaining riparian floodway channel once the revegetation is completed and established.

### C. GENERAL CONDITIONS OF PROPOSED WORK

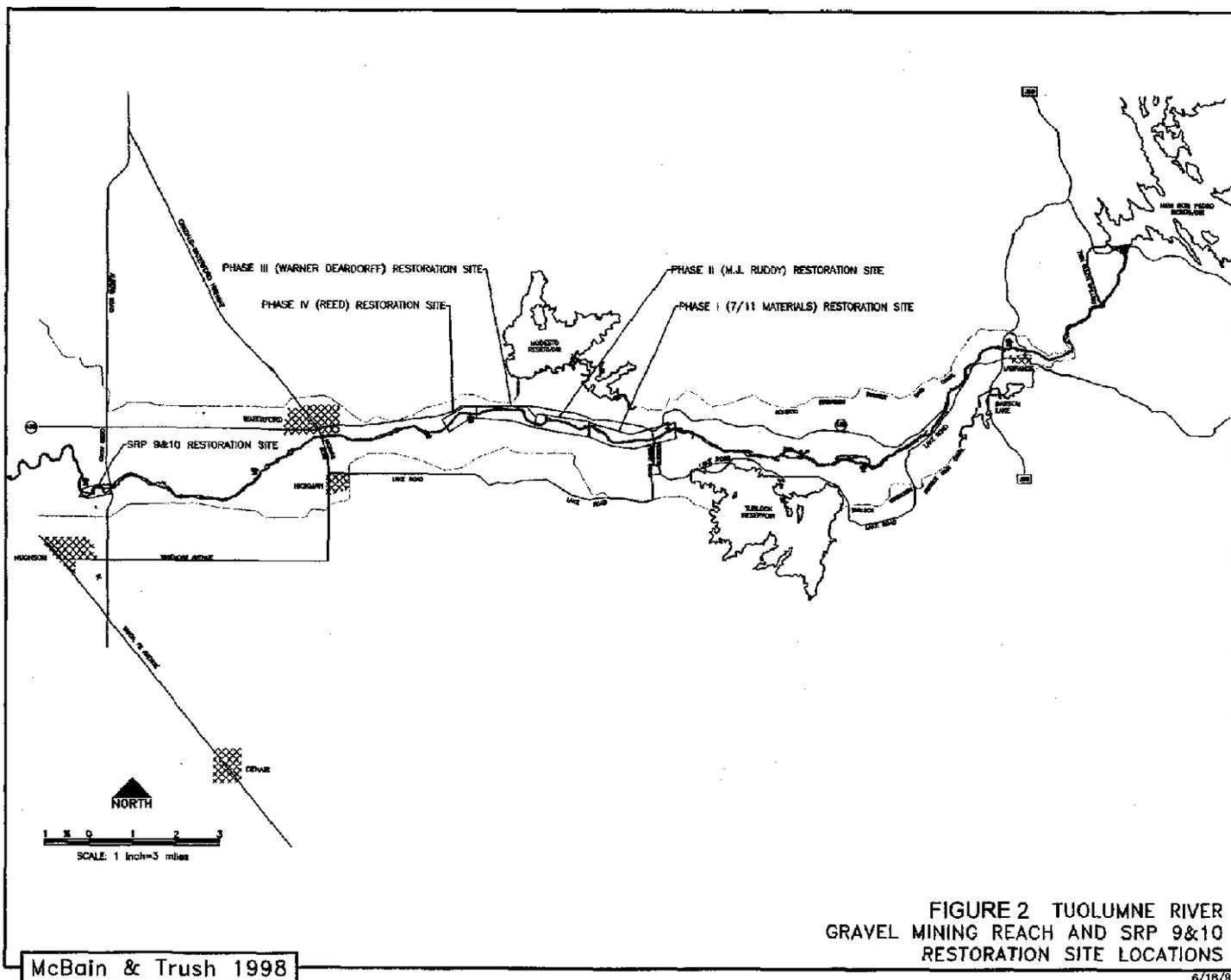
The reconstruction work in the flowing water of the river with heavy equipment is anticipated to be limited for fishery reasons to an annual opportunity window of 90 working days from mid-June through mid-October of each season when the salmon are not as abundant in the river. Construction out of the water will occur through out the year with appropriate erosion control measures. The restoration plantings are also seasonally restricted to the winter months when planting materials are dormant. CEQA and NEPA issues were resolved through a through a mitigated EA/IS jointly prepared with the USFWS in 1998-9. Construction design, revegetation design, permitting, monitoring, and acquisition of conservation easements are being done for the each segment of the Mining Reach as funding becomes available. Construction and revegetation funding will also be requested for each separate project segment. The funding requests may be divided among different construction, revegetation, and monitoring tasks of the project for ease of tracking and administering differing funding sources.

Some of the dike and reconstruction materials are anticipated to be mined from existing tailings deposits that are located at the upstream end of the mining reach and are regulated under County use permits. One benefit of using these tailings is that it may be possible to restore additional floodplain habitat during the mining of these excavation areas. Significant quantities of materials will be purchased from existing active mining areas on the backside of the setback levees to reduce haul costs. If most of the materials are locally available they can be hauled to the project site on private roads, so the impact on public roads should be minimized. The project EA/IS identified and addressed mitigation for utilization and transportation of the various sources of restoration materials locally available for this project. Additional materials for the major setback levees may need to be imported into the site. There are additional deposits of dredger tailings along the Tuolumne River and near Snelling along the Merced River. We have an option to utilize some of the clean rock materials from January 1997 flood debris excavated from La Grange reservoir. The original project materials cost estimates are based on cost information using the local mining sources adjacent to the river in 1997. Current highway and housing construction demands have significantly increased the cost of the aggregate materials for these projects over what was in the original proposal from McBain & Trush.

Creation of the riparian floodway habitat zone by the setback dikes will require the long-term maintenance of project improvements. TID and MID will jointly hold conservation easements from willing sellers that protect the public investment, but at the same time protect the land owner's property rights.



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#### IV ECOLOGICAL & BIOLOGICAL BENEFITS

##### A. EXPECTED PROJECT BENEFITS

1. Reduce salmonid stranding in gravel mining ponds during dike breaks that occur at high river flows and flood events.
2. Restore and increase habitat for natural salmon production.
3. Reconstruct a natural river channel geometry scaled to current channel forming flows.
4. Restore native riparian plant communities within their predicted hydrological regime.

The Mining Reach projects address the ERPP objectives and visions for the Tuolumne River Ecological Unit identified on pages 409 & 410 of the ERPP Vol. II. These include restoration of stream & riparian habitat; ecological processes; gravel recruitment, transport, and cleaning processes; a diverse self-sustaining riparian corridor; and predator reduction.

##### B. BACKGROUND & TECHNICAL JUSTIFICATION

The Tuolumne River is a major tributary of the San Joaquin River. The Don Pedro Project is the largest reservoir located above the fall-run chinook salmon spawning reach on the Tuolumne River. Don Pedro Reservoir is owned by the TID and the MID and is licensed by the Federal Energy Regulatory Commission (FERC).

The fall run chinook salmon in the tributaries of the San Joaquin River are currently listed as a species of concern by the USFWS. Anadromous salmonid populations in the lower Tuolumne River require adequate ecosystem health to achieve and sustain their potential productivity. Restoring and maintaining dynamic geomorphic processes are crucial for insuring healthy river ecosystems with natural productive salmonid populations. When complete restoration of a river ecosystem is infeasible, as for alluvial rivers regulated by dams, limiting factors, such as limited available spawning riffles and associated habitat and periodic entrapment of juvenile salmon in mining pits during high river flows, must be identified for prioritizing actions that would best improve the ecosystem, particularly salmonid habitat.

The TRTAC specifically identified habitat conditions to be improved for the enhancement of natural salmon production in the Tuolumne River. The TRTAC has developed the final draft of an integrated, long-term fish and riparian habitat restoration plan and monitoring program for the Tuolumne River below La Grange Dam that utilizes adaptive management for enhancing the natural production of salmon. The TRTAC and the AFRP have each funded \$117,500 towards developing this integrated restoration plan. An initial public outreach meeting was held with local City of Modesto and Stanislaus County public works and planning staffs in December of 1998. Adoption of a final plan is scheduled for June 1999. The Plan divides the river into four basic reaches with 14 segments representing specific types of restoration projects within each reach. Some of these projects focus on restoration of geomorphic processes, others on riparian restoration and predator reduction, and still others deal with gravel re-introduction, cleaning, and sediment management.

The Tuolumne River supports a population of fall-run chinook salmon, whose numbers

have fluctuated from 40,000 fish in 1985, to a low of 100 fish in 1991, and is on another upward swing with 7,000 spawners in 1997 and 8,900 in 1998. One of many stressors identified in recent studies on the Tuolumne River that limit salmonid populations are the aggregate extraction pits, which are a byproduct of extensive in-stream and off-channel mining. Many of these instream and off-channel pits have negatively impacted salmonid populations by stranding juveniles in ponds and fostering large populations of non-native predator fish (bass). Additionally, spawning and rearing habitats have been negatively impacted by either complete removal during aggregate extraction, degradation by channel encroachment, or fine sediment infiltration. Many of the off-channel pits had a small topsoil berm separating them from the river. Common floods (e.g., 1983, 1986, 1995, & 1998) of less than 11,000 cfs have breached some of these berms. In addition, the January 1997 flood (estimated at 59,000 cfs) breached nearly every berm in the Mining Reach. This resulted in channel capture through the aggregate pits starting with the 711 Aggregates plant (EAVIS Figure 8) and breaching the berms at downstream aggregate pits (EAVIS Figures 9 through 11). Aggregate miners completed emergency repairs to separate most of the ponds from the Tuolumne River and placed the river back into its pre-flood channel in the fall of 1997. However, most of these emergency repairs are only a temporary solution, as shown by the breach of the Warner-Deardorff Segment dike in 1998 at flows of less than 7,000 cfs.

The floods of January 1997 provided a unique opportunity during the development of the Habitat Restoration Plan to design a 6.1 mile model riparian habitat floodway with a system of setback dikes. The ecological benefits of a restored floodway, with increased flood capacity that provides a long-term flood protection to the mining operators in this reach and capacity for a more variable flood flow regime, presents an opportunity with common objectives among the irrigation districts, landowners, mining interests, and restorationists. The goal of this project is to restore riparian habitats, salmonid habitats, and a continuous floodway through this 6.1 mile reach of the Tuolumne River. The objectives include:

1. Improve salmonid spawning and rearing habitats by restoring an alternate bar (pool riffle) morphology, restoring spawning habitat within the meandering channel, and filling in-channel mining pits;
2. Improve juvenile salmon survival by preventing future connection between the Tuolumne River and off-channel mining pits;
3. Restore native riparian communities on appropriate geomorphic surfaces (i.e., active channel and floodplain terraces) within the restored floodway;
4. Restore habitats for special status species (e.g., egrets, ospreys, hawks, and herons);
5. Restore and improve isolation of off-channel aggregate extraction pits that were connected to the Tuolumne River by the January 1997 flood;
6. Restore a fully vegetated riparian floodway width that will safely convey regulated flood flows up to 15,000 cfs;
7. Allow the river channel the ability to migrate within the restored floodway to improve and maintain riparian and salmonid habitat;
8. Remove floodway "bottlenecks" created by inadequate mining pit berms that are subject to failure at threshold flows, thus protecting aggregate extraction operations and other human structures from future flood damage.

## V TECHNICAL FEASIBILITY & TIMING

### A. IMPLEMENTABILITY

This is the fourth of several restoration projects being proposed for the Tuolumne River based on the Habitat Restoration Plan developed by the TRTAC. The staff will continue to work closely with the affected landowners and mining operators in the development of site specific adjustments during the design phase to create final plans. The firm of EDAW, Inc. was hired to assist with the CEQA, NEPA, and permitting work. The NEPA work was jointly prepared with the USFWS and coordinated with the AFRP program. A mitigated EA/IS was jointly developed between TID, as project manager & lead agency, and the USFWS as a Federal funding agency. The EA/IS was tiered off the 1995 EIS for the FERC Settlement Agreement for the Don Pedro Project. Public and agency comments were heard in July and August 1998 and the comments focused on economic issues of compensation for conservation easements and lost availability of aggregate supplies. No environmental comments were received. An addendum to the proposed mitigation measures addressing the comments received is being finalized with adoption anticipated in May 1999. The mitigation is designed to avoid a take of listed species such that take permits under ESA \ CESA will not be required.

The finalization of the EA/IS required resolution of the complex compensation issues involved with the acquisition of the conservation easements in the Mining Reach starting with the 711 Segment. The terms of the District's control of the conservation easements has taken time to resolve with the landowners due to their concerns over potential public access to their land. Maintenance of easement facilities also ties to revisions in portions of the reclamation plans that are a part of the County Use Permits issued to the mining companies. Figure 3 shows in a cross section typical easement elements that are involved in the ROW issues. The same process will be used on easements in all four segments in the Mining Reach.

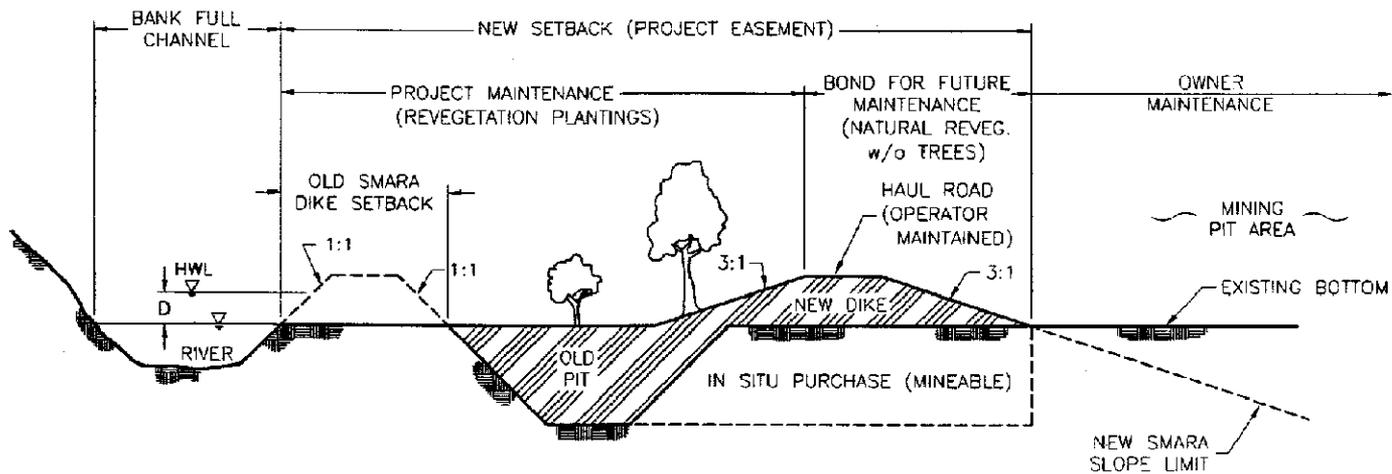
The following is a list of the agencies and associated permits being acquired with the assistance of the firm EDAW.

- 1) A Nationwide 27 Permit from the USACE, including a 404 wetlands delineation.
- 2) A 1600 Series Streambed Alteration Agreement from CDFG.
- 3) A mining lease and Boundary Delineation finding from the State Lands Commission.
- 4) An exemption from the SMARA permit by the CDMG.
- 5) Modification of the Stanislaus County use permits for the mining operations.
- 6) A RWQCB 401 waiver for water quality.
- 7) An Encroachment Permit from the Reclamation Board.

The four maps, Figures 8 through 11 from the EA/IS, show how the typical design and restoration treatments are integrated within the entire Mining Reach Project. The project starts at the upstream end with the 7-11 Reach (RM. 37.6-40.3), then the M. J. Ruddy Reach (RM. 36.5-37.6), followed by the Warner-Deardorff Reach (RM. 35.1-36.5), and finishing with the Reed Reach (RM. 34.2-35.1).

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### CONSERVATION EASEMENT ELEMENTS



**CHANNEL DYNAMICS**

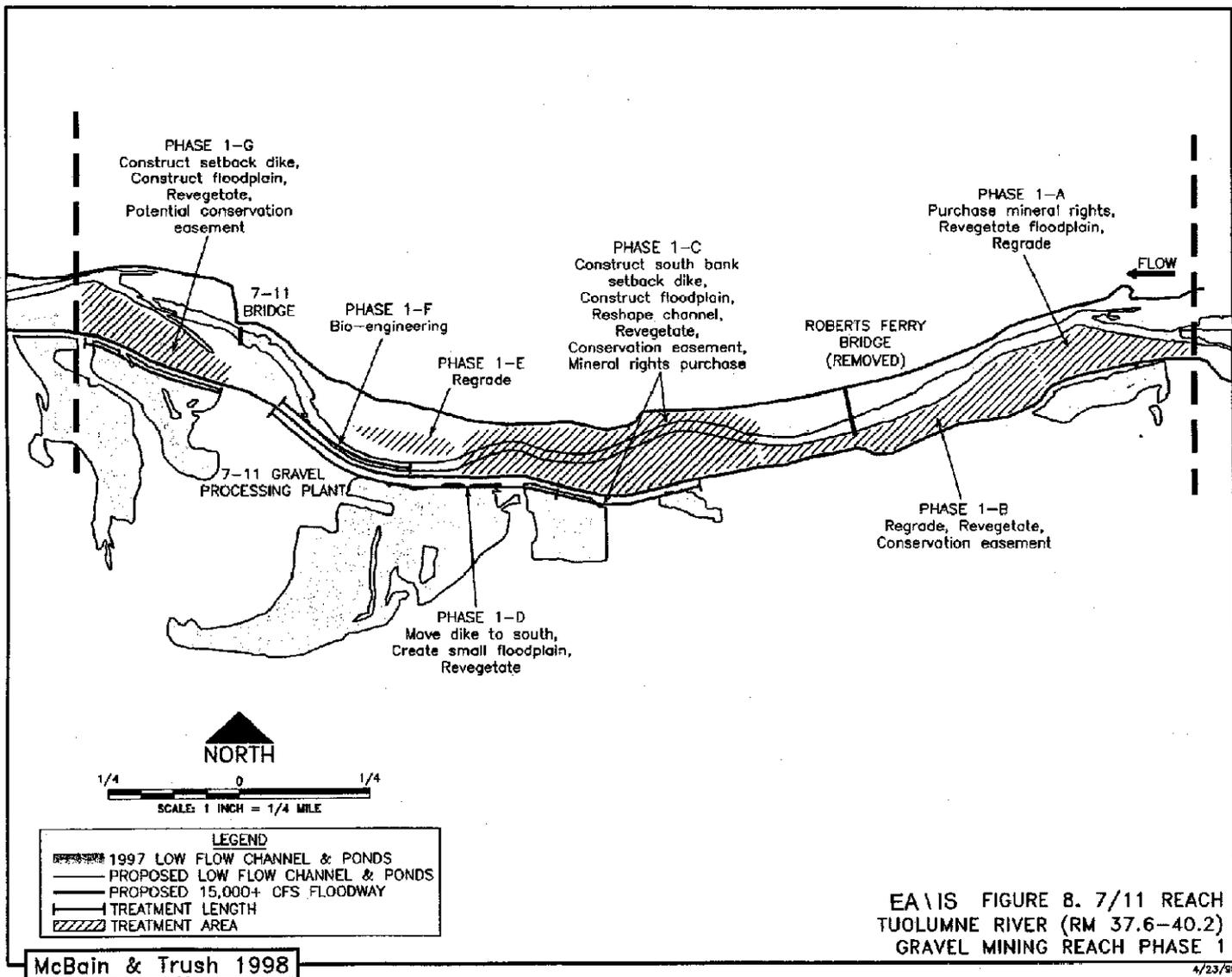
$Q_1 = V_1 A_1 = V_1 W_1 D$   
 $Q_1 = 8000 \text{ cfs}$   
 $Q_F = V_1 2 W_1 D = 15,000 \text{ cfs}$   
 $Q_0 = V_2 4 W_1 D = 15,000 \text{ cfs}$      $V_2 = \frac{1}{2} V_1$

**PROJECT NOTES:**

- 1) NEW CONSTRUCTION TO CUP & SMARA STANDARD 3:1 SLOPES
- 2) NEW DIKE CONSTRUCTED BY PROJECT
- 3) REVEGETATION TO PROJECT STANDARDS

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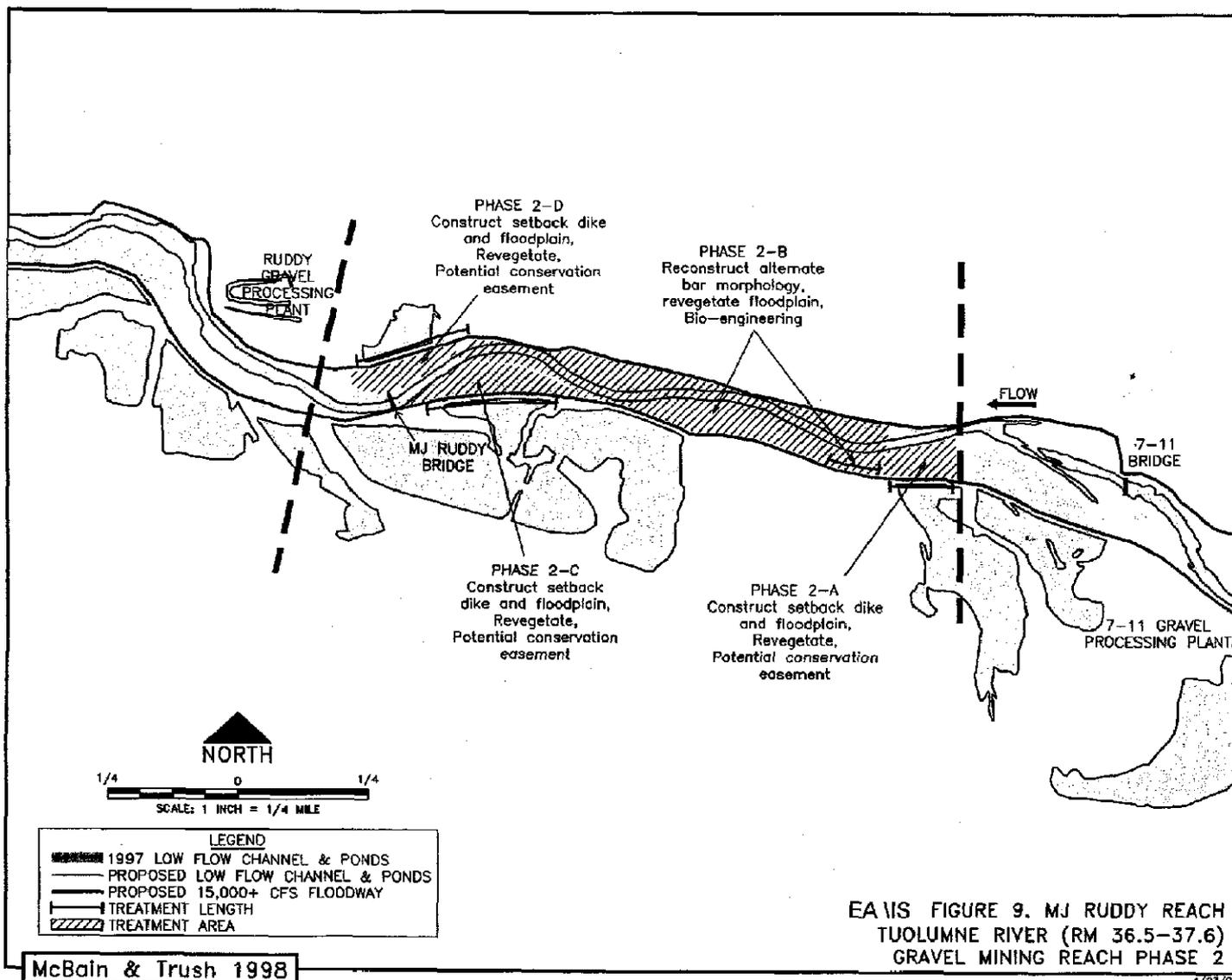
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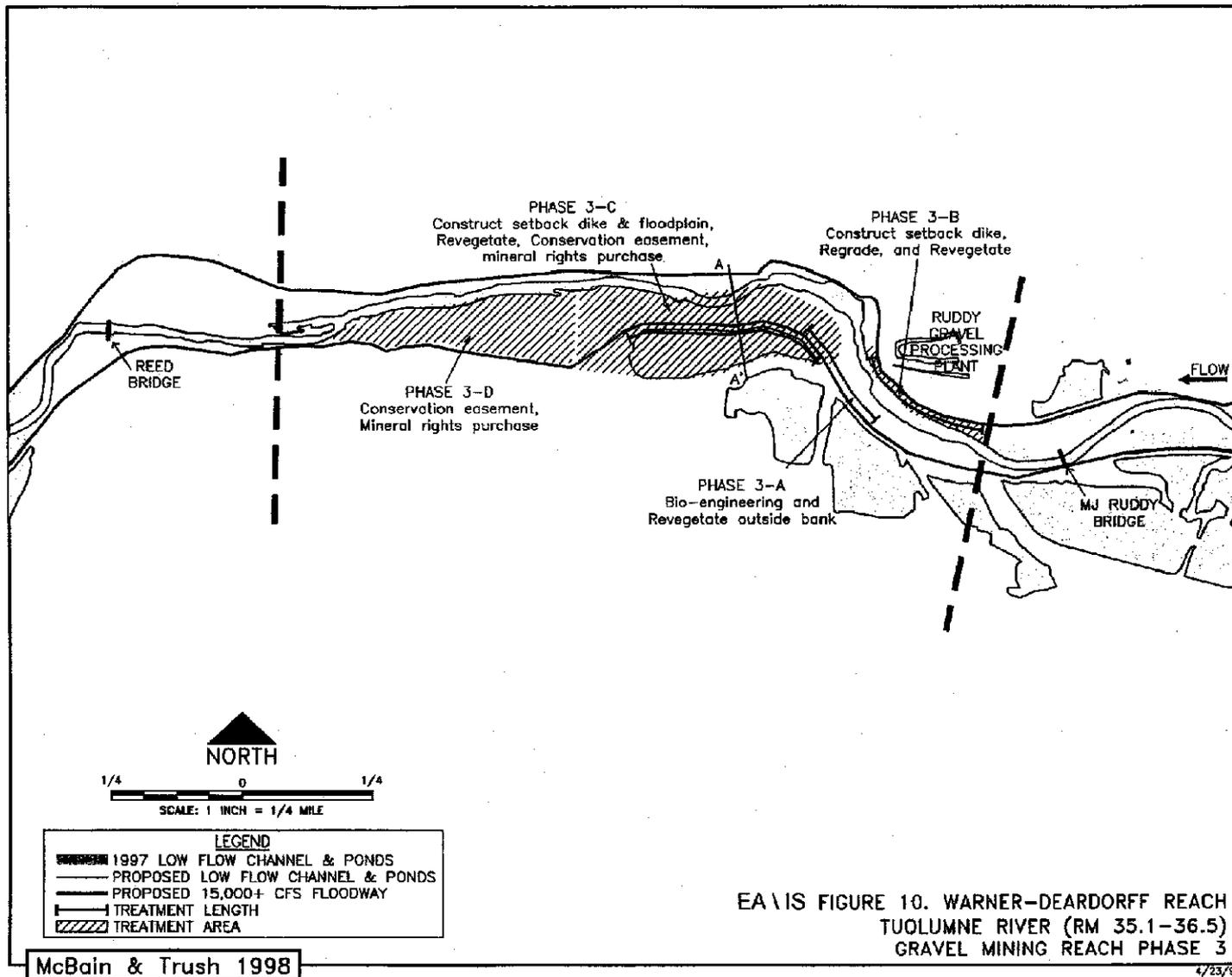
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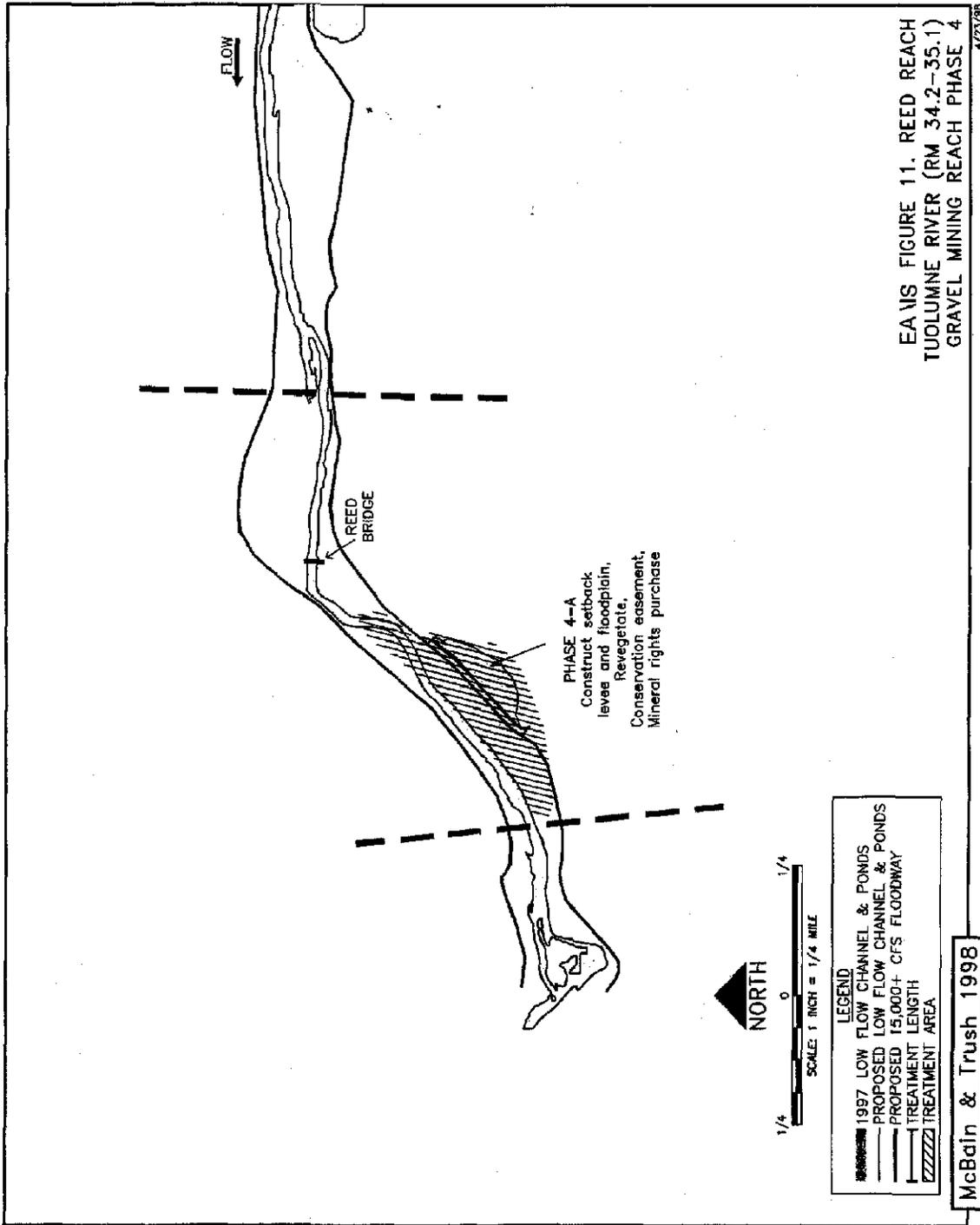
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EA 115 FIGURE 10. WARNER-DEARDORFF REACH  
TUOLUMNE RIVER (RM 35.1-36.5)  
GRAVEL MINING REACH PHASE 3

4/23/98

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## VI MONITORING & DATA COLLECTION

### A. MONITORING PLAN

A detailed mitigation and monitoring program was developed with the project EA/IS. Tables 1 and 2 developed from the EA/IS summarize the basic monitoring program over the life of the restoration project. Table 3 outlines the monitoring and data collection that will be used to track the activities. The monitoring activities can be grouped into three basic areas.

1. **Physical & Geomorphic Processes:**  
Pre and post construction changes will be recorded from the as-built engineering drawings. This assures that the desired channel contours and cross sections were built as designed and these as-built records can be used to assess future geomorphological changes after major flood events.
2. **Riparian habitat:**  
Revegetation will require annual inspections during the first few years to confirm survival of planted materials, perform replanting if deemed necessary, and to assess natural changes in the vegetation mix. Monitoring vegetation would then be reduced to evaluations after significant flood events. The layout of planting modules is designed to facilitate monitoring. There are 20 different hexagonal planting units classed by predominant vegetation type. These planting units are grouped together to recreate the diverse mosaic patches and strings of vegetation found on undisturbed areas of the Tuolumne. The center point for any "hex" that can be relocated at a later date from the as-built drawings.
3. **Fishery Resources changes:**  
This will involve evaluation of pre and post project changes in habitat conditions and populations for both fish predators and salmon. Monitoring criteria would include items such as flow velocity, temperature, comparisons of estimated transit time through the old vs. new stream channel, combined with sampling observations of fish populations and spawning riffle conditions.

Pre project monitoring started in 1998. Post project monitoring will start after the completion of the 7/11 Segment and increase as more segments are restored. Generally the project funded monitoring for a given segment will extend for 2 years after the completion of construction and revegetation. The project specific monitoring was designed to compliment the fishery monitoring requirements of the FERC Settlement Agreement. Annual monitoring summaries will be provided to the TRTAC. The first level of peer review for monitoring comes from the biologists that make up the regular representation on the TRTAC. There is a monitoring subcommittee of the TRTAC charged with close technical review of the FSA and project specific monitoring. Recently the UC Davis Centers for Water and Wildland Resources was asked to evaluate competing fry and smolt survival methods currently used on the Tuolumne River. Stillwater Sciences provides technical design of monitoring programs and statistical analysis of the results.

**TABLE 1 Mining Reach Monitoring schedule based on a sequence of hypothesized flows, to illustrate the monitoring elements.**

	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008
<i>Hypothetical annual peak discharge in cfs</i>		3650	7280	2980	1200	10400	8010	6870		
<b>CONSTRUCTION</b>	PHASE I	PHASE II	PHASE III	PHASE IV						
<b>MONITORING ELEMENTS</b>										
<b>PHASE I</b>										
GEOMORPHOLOGY	pb	ab,rx	n, rx, xs, thal			rx*, xs, thal	xs, thal	xs, thal		
FISHERIES	map	map, sss	Sss	sss	sss	Sss	sss	sss#		
RIPARIAN		ab, pp, \$	bio, \$	pp	pp	Bio	pp, bio			
<b>PHASE II</b>										
GEOMORPHOLOGY		pb	ab, n, rx, thal			rx*, xs, thal	xs, thal			
FISHERIES		map	map, sss	sss				sss#		
RIPARIAN			ab, pp, bio, \$	\$	pp	pp, bio	bio	pp, bio		
<b>PHASE III</b>										
GEOMORPHOLOGY		pb	ab, rx, thal			rx*, n, xs, thal	xs, thal	xs, thal		
FISHERIES			Map	map, sss	sss			sss#		
RIPARIAN				ab, pp, \$	\$	pp, bio	pp, bio	bio	pp	
<b>PHASE IV</b>										
GEOMORPHOLOGY			Pb		ab, rx	rx*, xs, thal	n, xs, thal	xs, thal		
FISHERIES				map	map, sss	Sss		sss#		
RIPARIAN					ab, pp, \$	\$	pp	pp	pp	

Geomorphology symbols: pb = pre-built channel topography; ab = as-built channel topography; n = Manning's "n" hydraulic calculation; rx = bed mobility with tracer rocks; thal = channel vertical adjustment with thalweg profile; xs = channel planform adjustment with cross-section profiles; \* = bed mobility observed; Fisheries symbols: ef = bass abundance by electrofishing; sv = smolt survival estimate; map = habitat mapping; sss = annual spawning and seining surveys; # denotes that spawning surveys will occur annually by CDFG Riparian symbols: pb = pre-built vegetation; ab = as-built vegetation; pp = project performance plots; bio = bioengineered bank protection; \$ = last year of irrigation

**TABLE 2 Estimated costs for Mining Reach Monitoring using hypothesized monitoring schedule.**

	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008
<b>MONITORING BUDGET</b>										
Geomorphic Processes	1,600	6,700	31,80	8,000	8,700	107,200	71,100	53,500		
Fisheries Resources	5,400	14,900	17,000	19,100	19,000	9,400	4,200	2,100		
Riparian Resources		9,600	11,800	18,900	27,900	21,600	22,200	29,800	10,400	9,600
Annual Report	4,500	5,400	7,600	6,100	3,700	9,100	7,000	4,800	1,000	500
<b>TOTAL</b>	<b>11,500</b>	<b>36,600</b>	<b>68,200</b>	<b>52,100</b>	<b>59,200</b>	<b>147,300</b>	<b>104,400</b>	<b>90,200</b>	<b>11,400</b>	<b>10,100</b>

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**Table 3 Turlock Irrigation District AFRP – CALFED Project Monitoring Plan Summary**

Project: Tuolumne River -- Warner / Deardorff Segment of Mining Reach

1 Apr 99

Summary of Ecological & biological objectives, hypotheses, and monitoring parameters and approaches:

1) Objective: Restore and increase habitat for natural salmon production			
Hypothesis	Monitoring Parameter	Data Evaluation Approach	Comments
A. Restore alternate bar (pool riffle) morphology.	Pre vs. post construction and topographic changes.	Measure channel cross sections after construction from as-built drawings.	As-Built drawing becomes starting point for fluvial process monitoring.
B. Restore spawning habitat.	Area of riffles created from channel re-construction	Evaluate use during spawning period, redd counts, etc.	

2) Objective: Reconstruct a natural channel geometry scaled to current channel forming flows			
Hypothesis	Monitoring Parameter	Data Evaluation Approach	Comments
A. Geomorphological & fluvial process occur at channel forming flows (approx. 5,000 cfs)	Channel thalweg movement	Measure cross sections after flow events of predetermined magnitude.	Frequency of occurrence subject to random timing of flow events. Target three samples.
	Bed load mobility	Monitor movement of tracer rocks, D84 & D50 size, after flow events of predetermined magnitude.	
	Bed load mobility	Take surface pebble counts and subsurface bulk samples to evaluate size distribution.	
B. Floodway will convey design flow (15,000 cfs in this reach of the river) without damage.	Bed load mobility	Calculate effective Manning's "n" during flow events	Frequency of occurrence subject to random timing of flow events. Target three samples.
	Post event channel changes; particularly vegetation and project facilities.	Visually inspect after flow event.	
	Dike Maintenance & Operation Plan	To be developed by end of construction.	

3) Objective: Restore native riparian plant communities within their predicted hydrological regime			
Hypothesis	Monitoring Parameter	Data Evaluation Approach	Comments
A. Composition and distribution of native riparian vegetation can be re-established.	Survival: 90 % 1 <sup>st</sup> year, 70 % 2 <sup>nd</sup> year, & 60 % 3 <sup>rd</sup> year with 10 % increase in cover in same period.	Set up permanent plots to track survival. Evaluate vigor, size, species dominance, canopy coverage, etc.	Plants will be irrigated for year 1 & 2
B. Establish different plant series on appropriate reconstructed geomorphic surfaces.	Pre & Post construction vegetation mapping.	Up to 20 separate plant series (landscape types) will be used to re-create plant community diversity within floodplain.	Protection from beavers will be necessary.
C. Bio-engineering is effective bank stabilization	Survival of vegetation plantings.	Evaluate vigor, size, species dominance, canopy coverage, etc.	
	Stability of bank	Document changes in bank stability after specified flow events.	Frequency of occurrence subject to random timing of flow events. Target three samples.

4) Objective: Reduce salmon fish predator habitat			
Hypothesis	Monitoring Parameter	Data Evaluation Approach	Comments
A. Reduce potential to breach dikes and connect off-channel mining pits to the main river channel.	Pre vs. post project construction changes.	Measure channel cross sections after construction. Using as-built drawings and topographic and photogrametry data.	Proposed setback dikes are wider and higher than current dikes.

## VII LOCAL INVOLVEMENT

### A. THIRD PARTY IMPACTS

The parties most directly impacted by the proposed project are the local landowners and the aggregate-mining operators. The TID staff and consultants started working with local stakeholders in 1997 and will continue to meet with the affected stakeholders to listen to and address their individual concerns. Recognizing those individual concerns, the landowners and the mining operators have been cooperative and supportive of the project. Periodic meetings are held with the executive committee of the 35 landowners that will be involved with all six restoration projects the TRTAC has identified, even those not yet funded. Typical discussions at these meetings include restoration project activities, terms and conditions in conservation easements, ROW appraisal processes, USFWS hazardous material surveys, project design issues, etc. The Districts have initiated sending a restoration news letter to the land owners in addition to the meeting minutes sent from the land owner committee.

The formal process to acquire necessary conservation easements from willing sellers for the first phase of construction started in February 1999 in the 7/11 Segment of the Mining Reach. The landowners and mining operators have asked that design and ROW engineering be completed prior to entering into formal agreements such as Rights of Entry for Construction and Conservation Easements. For the Warner Deardorff Segment this work will not be completed until fall 2000.

Outreach meetings have been held with City of Modesto and Stanislaus County public works and planning agency staffs starting in December 1998. The Stanislaus County planning department is actively involved with the Project induced modifications to the use permits for the mining operations in the project areas. Further meetings are scheduled for May and June 1999. The EA/IS for the four projects in the Mining Reach went through a public hearing in June 1998. The comments received are being addressed in the amended mitigation plan for the EA/IS. The final EA/IS is due for adoption in June 1999 and it outlines the mitigation and monitoring that are to be followed to minimize impacts associated with the restoration activities.

Attached is the notice for the EA/IS that was sent in June 1997 to the landowners, mining interests and agencies shown on the associated mailing lists. Copies of the notice letters for this phase of the project that were sent to the Stanislaus County Board of Supervisors and Planning Department are attached.

TUOLUMNE RIVER TECHNICAL ADVISORY COMMITTEE  
DON PEDRO PROJECT - FERC LICENSE 2299

MODESTO IRRIGATION DISTRICT  
TURLOCK IRRIGATION DISTRICT  
CITY & COUNTY OF SAN FRANCISCO  
CALIFORNIA DEPARTMENT OF FISH & GAME  
U. S. FISH & WILDLIFE SERVICE



333 East Canal Drive  
Turlock, CA 95381-0949  
Phone: (209) 883-8275  
Fax: (209) 656-2143  
Email: tford@tid.org

Wilton Fryer  
Restoration Program Manager  
Turlock Irrigation District  
333 East Canal Drive  
Turlock, CA 95381-0949

April 7, 1999

Dear Mr. Fryer:

The Tuolumne River Technical Advisory Committee (TRTAC) is a product of the 1995 Don Pedro Project FERC Settlement Agreement (FSA). The FSA is a precedent-setting document signed by 11 parties representing water agencies, fishery agencies, and environmental groups. The TRTAC is presently engaged in preparing a Habitat Restoration Plan for the 52-mile reach known as the Lower Tuolumne River, from La Grange Dam to the San Joaquin River. The FSA, the habitat plan, and salmon restoration plans developed by both the CDFG and US Fish and Wildlife Service, all recognize the importance of and the need for improvements from existing conditions.

The TRTAC supports the proposal for the Warner-Deardorff Segment the Gravel Mining Reach submitted by you on behalf of the TRTAC. This project will continue the restoration effort to improve salmon and riparian habitat conditions in this reach of the Tuolumne River. The TRTAC believes this project represents an important restoration action consistent with the draft Habitat Restoration Plan and will complement other restoration projects that are underway in the Tuolumne River corridor.

Authorized by and signed on behalf of the TRTAC,

*Tim Ford*

Tim Ford  
Coordinator, TRTAC  
Turlock and Modesto Irrigation Districts

George Neillands  
California Department of Fish and Game

Susan Boring  
U. S. Fish and Wildlife Service

Ron Yoshiyama  
City and County of San Francisco

Tim Ramirez  
Tuolumne River Preservation Trust

John Farnkopf  
Bay Area Water Users Association

Dave Boucher  
Friends of the Tuolumne

CC: TRTAC distribution



**TURLOCK IRRIGATION DISTRICT**

333 EAST CANAL DRIVE  
POST OFFICE BOX 949  
TURLOCK, CALIFORNIA 95381  
(209) 883-8300

Don Pedro Dam and  
Powerhouse

13 April 1999

Ron Freitas, Director  
Stanislaus County Dept. of Planning  
1100 H St., 2<sup>nd</sup> Floor  
Modesto, CA 95354

RE: Salmon Habitat Restoration Construction Projects

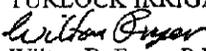
Dear Mr. Freitas,

The CALFED Bay-Delta Program has developed a Proposal Solicitation Package for funding Ecosystem Restoration Projects and Programs in 1999 and 2000. The Turlock and Modesto Irrigation Districts have been actively working on several fall-run salmon habitat restoration projects along the Tuolumne River since 1997. The TID is the program manager for these projects and coordinator for the Tuolumne River Technical Advisory Committee, TRTAC, which oversees the development of the projects.

This letter is a formal notice that on behalf of the TRTAC, the TID will be submitting two restoration proposals to CALFED for funding in 2000. The first is called Mining Reach No. 3, Warner-Deardorff Segment and is located between River Mile 36.5 and 35.1 below the Roberts Ferry Bridge. The second is called SRP 10, located at River Mile 25 below the Geer Road Bridge. Project work in 2000 would consist of engineering design, ROW acquisition, and permitting. We anticipate the actual construction would start in 2001 and end in 2002.

These two projects are a continuation of the work started in 1998 with the filing of a mitigated EA/IS for all six projects currently identified by the TRTAC. We are actively working on these projects with Bob Kachel of your staff. Currently CALFED and the US Fish & Wildlife Service Anadromous Fish Restoration Program have funded the first three projects. Construction on the first two projects is anticipated to start late this summer.

If you have any questions please call me at 2029-883-8316.

Sincerely,  
TURLOCK IRRIGATION DISTRICT  
  
Wilton B. Fryer, P.E.  
Water Planning Department Manager

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**TURLOCK IRRIGATION DISTRICT**  
333 EAST CANAL DRIVE  
POST OFFICE BOX 949  
TURLOCK, CALIFORNIA 95381  
(209) 883-8300

Don Pedro Dam and  
Powerhouse

13 April 1999

Ray Simon, Chairman  
Stanislaus County Board of Supervisors  
1100 H St., 2<sup>nd</sup> Floor  
Modesto, CA 95354

RE: Salmon Habitat Restoration Construction Projects

Dear Mr. Simon,

The CALFED Bay-Delta Program has developed a Proposal Solicitation Package for funding Ecosystem Restoration Projects and Programs in 1999 and 2000. The Turlock and Modesto Irrigation Districts have been actively working on several fall-run salmon habitat restoration projects along the Tuolumne River since 1997. The TID is the program manager for these projects and coordinator for the Tuolumne River Technical Advisory Committee, TRTAC, which oversees the development of the projects.

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These two projects are a continuation of the work started in 1998 with the filing of a mitigated EAMS for all six projects currently identified by the TRTAC. We are actively working on these projects with Ron Freitas and Bob Kachel of the Planning Department staff. Currently CALFED and the US Fish & Wildlife Service Anadromous Fish Restoration Program have funded the first three projects. Construction on the first two projects is anticipated to start late this summer.

If you have any questions please call me at 2029-883-8316.

Sincerely,  
TURLOCK IRRIGATION DISTRICT  
*Wilton B. Fryer*  
Wilton B. Fryer, P.E.  
Water Planning Department Manager

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**GRAVEL MINING REACH &  
SPECIAL RUN POOLS 9/10**

Dear Interested Parties:

Enclosed for your review and comment is the draft environmental assessment and initial study (EA/IS) for two restoration and mitigation projects ("proposed action") on the Tuolumne River in Stanislaus County, California. The upstream Gravel Mining Reach project extends along six miles of the river between Waterford and Roberts Ferry from River Mile (RM) 34.3 to 40.3; and the downstream Special Run Pools 9 and 10 project is within a one-mile reach immediately downstream of Fox Grove County Park from RM 25.2 to 25.9. The two projects are identified as priority actions in the Anadromous Fish Restoration Program Tuolumne River Riparian Zone Improvements, and the *Final Environmental Impact Statement (FEIS) for the Reservoir Release Requirements for Fish at the New Don Pedro Project, California*. This EA/IS is tiered from the FEIS, which is incorporated by reference into the document.

The proposed action would rehabilitate the channel and floodplain system and improve natural geomorphic functions to restore and maintain instream and floodplain habitats for the benefit of salmon and other native riparian species. Following implementation of the first phase, the success of the proposed action will be evaluated and, based on the results of evaluation, the remaining phases of the proposed action will be fine-tuned to improve success. In support of this adaptive management strategy, a monitoring plan (also enclosed) will be implemented to assess progress toward meeting the objectives of the proposed action, and to minimize environmental impacts described in the EA/IS. For the purposes of the analysis, three alternatives to the proposed action are identified, including the no-action alternative.

The public review period for this document will end 45 days after publication of a notice of availability in the *Modesto Bee*. Comments or requests for more information should be addressed to:

U.S. Fish and Wildlife Service  
Sacramento Field Office  
(Attn: John Brooks)  
3310 El Camino Avenue, Suite 130  
Sacramento, CA 95821-6340  
(916) 979-2745

or

Turlock Irrigation District  
Water Planning Department  
(Attn: Wilton Fryer)  
333 East Canal Drive - PO Box 949  
Turlock, CA 95381-0949  
(209) 883-8316

A public meeting of the Turlock Irrigation District Board of Directors will be held on Tuesday, June 23, 1998, at 10:30 a.m. at the Turlock Irrigation District, 333 East Canal Drive, Turlock. Comments on the EA/IS can also be presented at that meeting. Copies of the EA/IS can be reviewed at the locations listed above and at those listed at the end of this notice.

Sincerely,

TURLOCK IRRIGATION DISTRICT

U.S. FISH AND WILDLIFE SERVICE

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Wilton B. Fryer, P.E.  
Water Planning Department Manager

---

Wayne White, Field Supervisor  
Sacramento Field Office

Enclosure

**Tiered Environmental Assessment and  
Initial Study/Mitigated Negative Declaration**

**Anadromous Fish Restoration Program  
Tuolumne River Riparian Zone Improvements**

**Gravel Mining Reach & Special Run Pools 9/10  
Restoration and Mitigation Projects**



**Sacramento Field Office  
United States Fish and Wildlife Service  
Sacramento, California**



**Turlock Irrigation District  
Turlock, California**

**May 15, 1998**

## OWNER OPERATOR LIST

First	Last	Mail	City	State	Zip	Parcel	Project
Rowe	Barney	19400 Yosemite Rd.	Waterford	CA	95386	008-07-35	7-11 Reach
Don	Crooker	21166 Yosemite Rd.	Waterford	CA	95386	008-08-08	7-11 Reach
Wendell	Reed	PO Box 3191	Modesto	CA	95353	008-11-01	7-11 Reach
Lillian	Riley	1539 Sayre St.	San Leandro	CA	94579	008-07-16	7-11 Reach
Ken	Riley	14868 Saturn Dr	San Leandro	CA	94578	008-07-16	7-11 Reach
Wesley	Sawyer	600 Roberts Ferry Rd.	Waterford	CA	95386	008-07-20	7-11 Reach
Wesley	Sawyer	600 Roberts Ferry Rd.	Waterford	CA	95386	008-07-23	7-11 Reach
Tom	Sawyer	619 Roberts Ferry Rd.	Waterford	CA	95386	008-11-05	7-11 Reach
Wesley	Sawyer	600 Roberts Ferry Rd.	Waterford	Ca	95386	008-12-02	7-11 Reach
Mark	van Overbee	660 Geer Court	Modesto	CA	95354	008-07-34	7-11 Reach
Betty	Wynne	19411 Lake Rd.	Hickman	CA	95323	008-11-02	7-11 Reach
Anthony	Donovan	1745 Mc Cormick St.	Turlock	CA	95380	018-04-12	SRP 9 & 10
Anthony	Donovan	1745 Mc Cormick St.	Turlock	CA	95380	018-04-13	SRP 9 & 10
State of Calif	Gen. Service	P.O. Box 2048	Stockton	CA	95201	018-03-06	SRP 9 & 10
Wil	Streeter	879 Geer Rd.	Modesto	CA	95354	018-03-17	SRP 9 & 10
Wil	Streeter	879 Geer Rd.	Modesto	CA	95354	018-03-20	SRP 9 & 10
Joe	Ruddy	P.O. Box 3042	Modesto	CA	95353	008-05-10	Ruddy Reach
Joe	Ruddy	P.O. Box 1504	Modesto	CA	95353	008-06-04	Ruddy Reach
Joe	Ruddy	P.O. Box 1504	Modesto	CA	95353	008-06-05	Ruddy Reach
Joe	Ruddy	P.O. Box 1504	Modesto	CA	95353	008-06-06	Ruddy Reach
Joe	Ruddy	P.O. Box 1504	Modesto	CA	95323	008-10-01	Ruddy Reach
Joe	Ruddy	P.O. Box 1504	Modesto	CA	95353	008-10-23	Ruddy Reach
Joe	Ruddy	P.O. Box 1504	Modesto	CA	95353	008-10-26	Ruddy Reach
State of Calif	Gen. Service	P.O. Box 2048	Stockton	CA	95201	008-10-32	Warner Reach
Ed	Garcia	1136 Charles Rd.	Hughson	CA	95326	018-03-19	SRP 10
Adeline	Solari	876 Charles Rd	Hughson	CA	95326	018-03-03	SRP 10
Douglas	Starn	6621 Blue Gum Rd.	Hughson	CA	95326	018-03-14	SRP 10
Charles	Claus	1012 Bristol Ln.	Modesto	CA	95350	008-09-14	Warner Reach
Walter	Deardorff	16825 Lampley Rd.	Waterford	CA	95323	008-09-15	Warner Reach
Roger	Warner	307 Denton Rd.	Hickman	CA	95323	008-10-22	Warner Reach
Bret	Warner	281 Denton Rd.	Hickman	CA	95323	008-10-34	Warner Reach
Kurt	Warner	471 Denton Rd.	Hickman	CA	95323	008-10-35	Warner Reach
Hollis	Warner	419 Denton Rd.	Hickman	CA	95323	008-10-37	Warner Reach
Roger	Warner	307 Denton Rd.	Hickman	CA	95323	008-10-38	Warner Reach
Charles	Golding	15930 Lampley Rd.	Hickman	CA	95324	080-14-05	Reed Reach
Lillian	Hampton	16231 Lampley Rd	Hickman	CA	95323	008-09-09	Reed Reach
Joyce	LaMunyon	500 Pauline Ave.	Modesto	CA	95358	080-14-03	Reed Reach
Linda	Larrick	15648 Yosemite Blvd.	Waterford	CA	95323	080-15-18	Reed Reach
Wendell	Reed	P.O. Box 3191	Modesto	CA	95353	008-05-14	Reed Reach
Rose	Reed	P.O. Box 3191	Modesto	CA	95353	008-09-10	Reed Reach
Wendell	Reed	P.O. Box 3191	Modesto	CA	95353	080-14-06	Reed Reach
Wendell	Reed	P.O. Box 3191	Modesto	CA	95353	008-11-01	7-11 Reach
Carol	Vierra	P.O. Box 3191	Modesto	CA	95353	operator	7-11 Reach
Robert	Wooley	19701 Lake Rd.	Hickman	CA	95323	Wynne tenant	7-11 Reach
William	Brown	P.O. Box 3042	Modesto	CA	95352	operator	Ruddy Reach
Ron	Turcotte	P.O. Box 3042	Modesto	CA	95352	operator	Ruddy Reach
Don	Crooker	409 Greenwich Ct.	Modesto	CA	95350	008-12-01	source
Linda	Falasco	P.O. Box 1111	Los Banos	CA	93635	operator asso.	CMAC
Phil	Short	1376 Swanson Rd.	Hughson	CA	95326		TID Bd. Of Dir.

Tuolumne River Restoration

AGENCY LIST

Agencies

Ron	Milligan	Army Corp of Engineers	1325 "J" St. Room 1430	CA	95814	Sacramento	CA	95814	916-557-6728
Cindy	Darling	CALFED	1416 Ninth St., Suite 1155	CA	95814	Sacramento	CA	95814	916-657-2666
James	Pompy	Calif. Dept. of Conservation	801 "K" St., MS 12-30	CA	95814-3531	Sacramento	CA	95814-3531	916-445-1825
William	Loudermilk	Calif. Dept. of Fish & Game	1234 E. Shaw Ave.	CA	93710	Fresno	CA	93710	209-222-3761
Steve	Ford	Calif. Dept. of Water Resources	3251 "S" Street	CA	95816	Sacramento	CA	95816	916-227-7534
Kevin	Faulkenbury	Calif. Dept. of Water Resources	3374 E. Shields Ave.	CA	93726	Fresno	CA	93726	209-445-5286
William	Jennings	Calif. Sport Fishing Protection Alliance	3536 Rainter Ave.	CA	95204	Stockton	CA	95204	209-464-5090
Dan	Steele	CALTRANS Environmental Program	1976 E. Charter Way	CA	95201	Stockton	CA	95201	
Ron	Yoshiyama	CCSF	Dept. of WFCB, U.C. Davis	CA	95616	Davis	CA	95616	916-752-0205
Linda	Falasco	CV Rock Sand Gravel Asso.	P.O. Box 1111	CA	95635	Los Banos	CA	95635	209-826-5955
Tom	Taylor	ENTRIX	590 Ygnacio Valley # 200	CA	94596	Walnut Creek	CA	94596	510-935-9920
Barbara	Ashworth	FEMA	3695 Bleckley St.	CA	95655	Mather	CA	95655	
John	Schnagl	FERC	888 First St. N.E.	D.C.	20426	Washington	D.C.	20426	202-219-2661
Dave & Allison	Boucher	Friends of the Tuolumne	2412 Hilo Lane	CA	95307	Ceres	CA	95307	209-537-7533
John	Farnkopf	Hilton, Farnkopf, & Hobson	2201 Walnut Ave. Suite 280	CA	94538-2334	Fremont	CA	94538-2334	510-713-3273
Cort	Hiebert	J. Massey Atlantic Mutual							818-240-5530
Allen	Short	Modesto Irrigation District	P.O. box 4060	CA	95352	Modesto	CA	95352	209-526-7405
Chris	Mobley	National Marine Fishery Service	777 Sonoma Ave., Rm 325	CA	95404	Santa Rosa	CA	95404	
Michael	McElhiney	NRCS	711 County Center III, Suite B	CA	95355	Modesto	CA	95355	209-569-0497
Ranny	Eckstrom	Office of Emergency Services	2800 Meadowview Road	CA	95832	Sacramento	CA	95832	916-364-3359
Donn	Furman	Office of the City Attorney (CCSF)	1390 Market St. Suite 250	CA	94102	San Francisco	CA	94102	415-584-3961
Zeke	Grader	PCFFA	P.O. Box 783	CA	95460	Mendocino	CA	95460	707-937-4145
Raymond	Barsch	Reclamation Board	1416 Ninth Street	CA	95814	Sacramento	CA	95814	916-653-5434
Greg	Vaughn	Regional Water Quality Control Bd.	3443 Router Rd., Suite A	CA	95827-3098	Sacramento	CA	95827-3098	
Art	Jensen	SFB/WMUA	155 Bovet Road, Suite 410	CA	94402	San Mateo	CA	94402	650-349-3000
Tracey	Bettencourt	SJV Unified Air Pollution Control Distr	4130 Kiernan Ave., Suite 130	CA	95356	Modesto	CA	95356	
Robert	Kachel	Stanislaus County Planning Dept.	1100 "H" Street	CA	95354	Modesto	CA	95354	209-525-6330
Diane	Jones	State Lands Commission	100 Howe Ave., Suite 100-South	CA	95825	Sacramento	CA	95825	916-574-1843
Tim	Ramirez	Tuolumne River Preservation Trust	Fort Mason Building C	CA	94123	San Francisco	CA	94123	415-292-3531
Phil	Short	Turlock Irrigation District	1376 Swanson Road	CA	95326	Hughson	CA	95326	209-883-4374
Paul	Elias	Turlock Irrigation District	P.O. Box 949	CA	95881	Turlock	CA	95881	209-883-8211
Gary	Taylor	U.S. Fish & Wildlife Service	3310 El Camino Ave., Suite 130	CA	95821	Sacramento	CA	95821	916-979-2117
John	Brooks	U.S. Fish & Wildlife Service	3310 El Camino Ave., Suite 130	CA	95821	Sacramento	CA	95821	916-979-2745

## VIII. COSTS AND SCHEDULES

### A. BUDGET COSTS

The total project cost is estimated to be \$6,877,000. The CALFED is being asked to fund 51% of the costs for Project No. 3 Warner-Deardorff Segment of the Mining Reach projects. The total amount being requested from CALFED is \$3,501,000, consisting of \$1,300,000 for mineral rights purchases, \$1,665,000 for setback levee construction and floodplain reconstruction, \$150,000 for construction management, \$89,000 for project management, with a \$297,000 construction contingency. The USFWS-AFRP is being asked to fund 48% of the project, or \$3,336,000; including \$960,000 for mineral rights, \$530,000 for construction, \$595,000 for revegetation, \$479,000 for engineering and permits, and \$180,000 for project monitoring. The Districts will be contributing \$40,000 to the monitoring and permitting costs. The project budget summary is shown in Table 4 and Table 5 shows the funding break down by source. The quarterly funding estimates are shown in Table 6.

The estimated costs for mineral rights purchases stem from pre SMARA Stanislaus County Use Permit #1211 for aggregate mining issued in 1965 and modified in 1973 that covers the project area. There is not an active contract to mine under this permit. It is not certain at this early stage in the project if current regulatory setbacks and other restrictions can be made to apply to this old permit. The mineral rights cost estimates for this project assumes that the bulk of the material, approximately 1,400,000 cubic yards, would NOT be subject to these regulatory restrictions. To the extent that the current regulatory restrictions do apply, then the reduced volume of the aggregate valued as a commercial reserve could decrease the project cost.

TID has been coordinating with several different agencies to obtain funding for the overall Mining Reach project. The Districts, TID, MID, and CCSF, have funded \$100,000 through the TRTAC for the Mining reach and SRP Reach CEQA, NEPA (EA/IS) documentation, permitting for the 7A11 Segment and SRP 9, and funded \$117,500 for the overall Habitat Restoration Plan and public outreach program. The USFWS through AFRP is being asked to provide for pre-project monitoring, construction design, and portions of the public works construction separate from this CALFED request.

### B. SCHEDULE

The attached Gantt chart schedule Figure 4 shows how the components that make up the work for the Warner-Deardorff Segment fit into the total restoration construction schedule for the overall Mining Reach and the SRP 9 & 10 restoration projects.

This PSP request is for the October 1999 funding cycle and is designed to assure that funds for construction are available prior to bidding for the work that starts in the summer of 2001. This will provide for a smooth continuum of construction that fits into the seasonal time limits on instream restoration construction. Such funding assurances also provide an incentive for mobilized contractors to submit lower bids for future work.

**TABLE 4 PROJECT BUDGET SUMMARY**

Tuolumne River Mining Reach Restoration

Warner-Deardorff Segment RM. 36.6 to 35.2

Construction Task from M&T Figure 10	Description of work		Cost Estimates	Option by Fund source
Phase 3A	Bio-engineering		230,000	AFRP
	Regrade Bank		20,000	CALFED
	Revegetate Bank		24,000	AFRP
Phase 3B	Bio-engineering		300,000	AFRP
	Regrade Bank		178,000	CALFED
	Revegetate Bank		41,000	AFRP
Phase 3C	Setback Dike & Restore Floodplain		1,272,000	CALFED
	Revegetate Bank		155,000	AFRP
	Mineral Rights purchase		960,000	AFRP
Phase 3D	Regrade Floodplain		195,000	CALFED
	Revegetate Floodplain		235,000	AFRP
	Mineral Rights purchase		1,300,000	CALFED
	sub total		<u>4,910,000</u>	
All Phases	Monitoring (EAIS plan: 2002 - 2003)		180,000	AFRP
All Phases	Conservation Easements		200,000	AFRP
All Phases	Design Engineering	5%	256,000	AFRP
All Phases	ROW Engineering	3%	153,000	AFRP
All Phases	NEPA, CEQA, & Permits		40,000	DISTRICTS
All Phases	Irrigation of revegetation		140,000	AFRP
	sub total		<u>969,000</u>	
All Phases	Contingency	10%	584,000	
All Phases	Construction Management	9%	239,000	
All Phases	Project Management	3%	175,000	
	sub total		<u>998,000</u>	
<b>PROJECT TOTAL</b>			<b>6,877,000</b>	

- Comments:
1. Mineral purchase costs have risen 25 % since the estimates in the original McBain & Trush report.
  2. Construction management was not in the original McBain & Trush report.
  3. Monitoring reflects the estimates developed for the EAIS on this project.
  4. Conservation easements were not in the original McBain & Trush report.
  5. Irrigation for two years was not in original McBain & Trush report.

**TABLE 5 PROJECT BUDGET SUMMARY by SOURCE**

Tuolumne River Mining Reach Restoration

Warner-Deardorff Segment RM. 36.6 to 36.2

Funding Source	Description of work		Cost Estimates	
CALFED Share	Construction	34%	1,665,000	
	Mineral Rights purchase 3D	26%	1,300,000	
		sub total	2,965,000	
	Contingency	10%	297,000	
	Construction Management	9%	150,000	
	Project Management	3%	89,000	
		<b>CALFED Total</b>	<b>51%</b>	<b>3,501,000</b>
	AFRP Share	Construction	11%	530,000
		Mineral Rights purchase 3C	20%	960,000
		Revegetation	9%	455,000
Monitoring		100%	180,000	
Conservation Easements		100%	200,000	
Design Engineering		100%	266,000	
ROW Engineering		100%	153,000	
Irrigation of revegetation		100%	140,000	
		sub total	2,874,000	
		Contingency	10%	287,000
	Construction Management	9%	89,000	
	Project Management	3%	86,000	
	<b>AFRP Total</b>	<b>48%</b>	<b>3,336,000</b>	
DISTRICTS share	NEPA, CEQA, & Permits	1%	40,000	
		<b>DISTRICTS Total</b>	<b>1%</b>	<b>40,000</b>

**TABLE 6**

**QUARTERLY PROJECT BUDGET ESTIMATES**

Warner-Deardorff Segment  
RM. 36.6 to 35.2

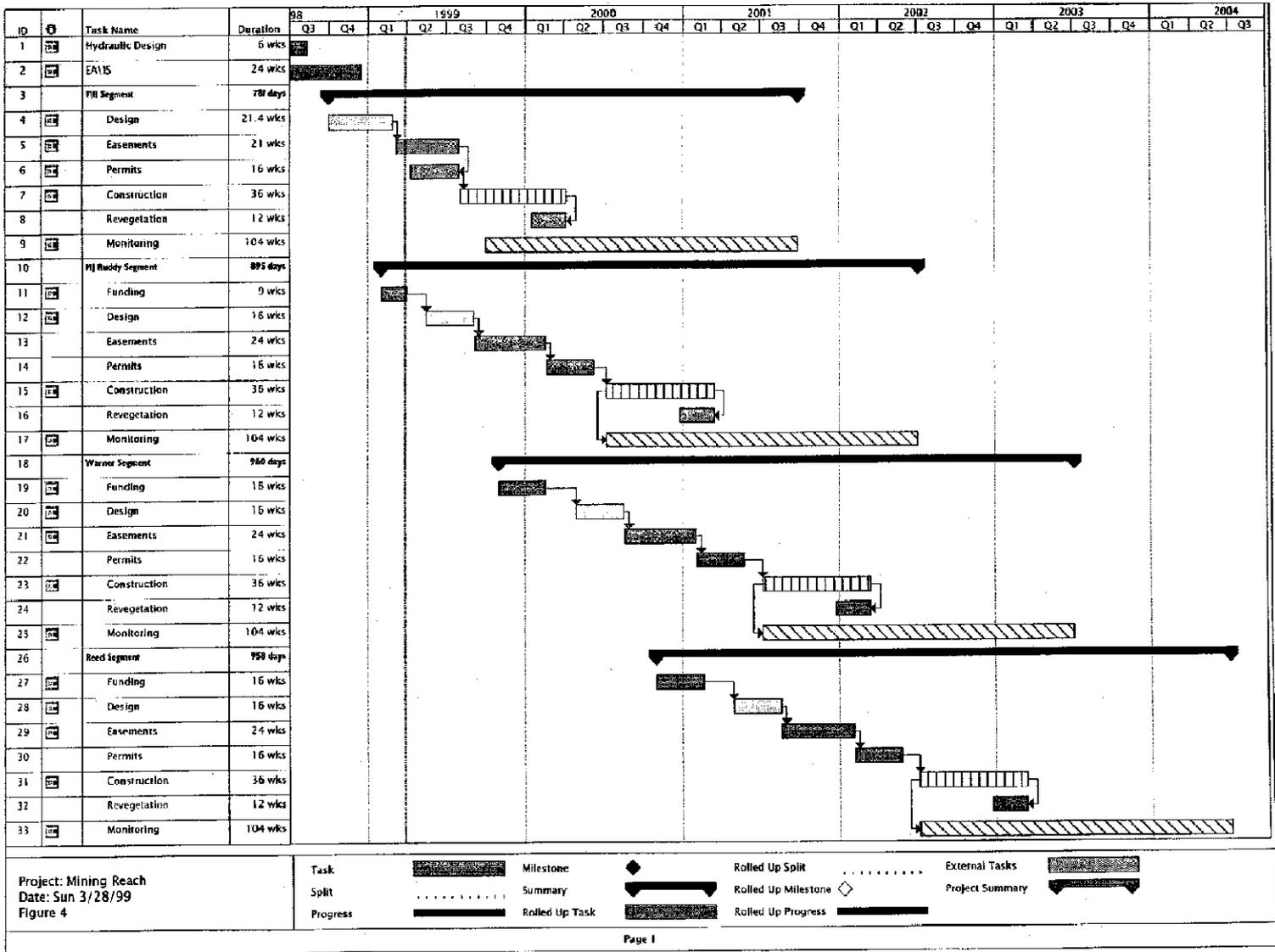
\$1,000's

Task	Description	%	2000			2001				2002		2003	Total Cost Estimates	Funding Source
			2 Qtr	3 Qtr	4 Qtr	1 Qtr	2 Qtr	3 Qtr	4 Qtr	1 Qtr	2,3 Qtr	2,3 Qtr		
3A	Bio-engineering					15			200	15			230	AFRP
	Regrade Bank							20					20	CALFED
	Revegetate Bank					4				20			24	AFRP
3B	Bio-engineering					20				30			300	AFRP
	Regrade Bank							30	70	78			178	CALFED
	Revegetate Bank									41			41	AFRP
3C	Setback Dike & FP					100	300	300	300	272			1,272	CALFED
	Revegetate Bank					30			25	100			155	AFRP
	Mineral Rights				960								960	AFRP
3D	Regrade FP							75	95	25			195	CALFED
	Revegetate FP					35			60	140			235	AFRP
	Mineral Rights				1,300								1,300	CALFED
	sub total				2,260	204	350	445	1,008	643			4,910	
	Monitoring									30	80	70	180	AFRP
	Easements			200									200	AFRP
	Design Engineering	5%	256										256	AFRP
	ROW Engineering	3%		100	53								153	AFRP
	NEPA, CEQA, Permits				40								40	DISTRICTS
	Revegetation Irrigation										70	70	140	AFRP
	sub total		256	300	93					30	150	140	969	
	Contingency	10%			130	10	35	45	47	30			297	CALFED
		10%	26	30	105	10			54	38	15	14	287	AFRP
	Construction Mgt.	9%				9	32	40	43	27			150	CALFED
		9%				9			48	31			89	AFRP
	Project Management	3%			39	3	11	13	14	9			89	CALFED
		3%	8	9	32	3			16	11	5	4	86	AFRP
	sub total		34	39	306	44	78	98	222	146	20	18	998	
	Project Total		290	339	2,659	248	428	548	1,230	819	170	158	6,882	
	<b>CALFED</b>				<b>1,469</b>	<b>122</b>	<b>428</b>	<b>543</b>	<b>577</b>	<b>363</b>			<b>3,501</b>	
	<b>AFRP</b>		290	339	1,150	126			653	456	170	158	3,336	

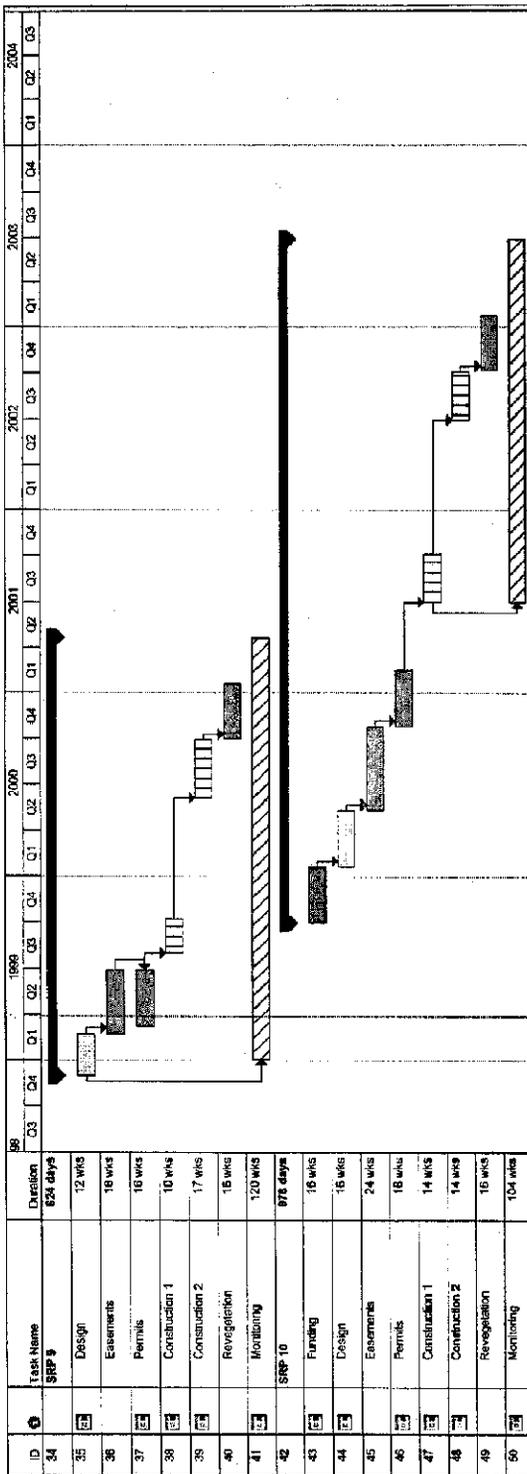
1-014262

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1-014263



1-014263



Project: Mining Reach  
 Date: Sun 3/29/99  
 Figure 4

## IX. APPLICANT QUALIFICATIONS

Since 1971, TID, MID, and CCSF have, in cooperation with DFG and USFWS, monitored river conditions and developed programs that enhance the natural production of fall-run chinook salmon in the Tuolumne River. The project manager for these activities has been TID.

### A. TRTAC and Other Local Support for Project

The firm of McBain & Trush was retained in 1996 by TID through the TRTAC to develop an integrated, long-term salmon and riparian habitat restoration plan for the Tuolumne River below La Grange Dam using fluvial geomorphology principles. They were to prepare preliminary designs for specific restoration projects, which had been approved by the TRTAC participants as high priority projects. The Mining Reach had long been identified as a portion of the river that had been substantially altered by past and present aggregate mining operations. In the aftermath of the January 1997 flood, the TRTAC participants identified the flood-impacted Mining Reach as an important time-sensitive opportunity to reconstruct this portion of river channel so as to restore more natural geomorphic processes.

### B. Project Management

The Program Manager is Wilton Fryer, P.E. Mr. Fryer graduated from the University of California at Davis with a BS in Soil & Water Science, an MS in Irrigation Science, and later an ME in Civil Engineering with an emphasis in water resources. He is currently registered as both a Civil Engineer and an Agricultural Engineer. Accomplishments: Development and implementation of the Oakdale Irrigation District Irrigation Master Plan. Directed a \$22 million canal rehabilitation project for OID where 54 miles of dirt canals were replaced with pipe. Development of the OID domestic water service system. Designer and project manager for a replacement water treatment plant for the TID La Grange Domestic Water System.

Tim Ford has been the staff aquatic biologist for TID and MID since 1981. Mr. Ford graduated from the University of California at Davis with BS in Wildlife & Fisheries Biology in 1977. He worked as a Biological Technician for the Modoc, Tahoe, and Stanislaus National Forests prior to working for the Districts. Mr. Ford is tasked with planning, coordinating and conducting the aquatic resources program for the Districts, and his responsibilities at TID include field studies, program development, consultant supervision, and coordination with Don Pedro project operations.

TID staff will provide contracting support and financial service support as needed. TID Engineering Administration will assist with providing construction management and inspection services to the project. Consultants retained during the first phase of the Mining Reach and SRP 9 projects continue to be retained for subsequent phases of the projects to insure continuity in the design and analysis. The engineering firm of HDR, Inc. has been retained to prepare detailed construction plans and specifications, and oversee construction management. The firm of HART, Inc., will provide revegetation design and native plant materials. The firm of EDWA Inc. has been retained to perform the CEQA and NEPA environmental work and to obtain

necessary permits.

### C. Consultants

The firm of McBain & Trush has performed project concept design work, and will continue to provide oversight of the civil construction design work, revegetation design and implementation, and fluvial process monitoring. McBain & Trush is a professional consulting partnership specializing in applying fluvial geomorphic and ecological research to river management and restoration, particularly in regulated river ecosystems. The principals on this project are Scott McBain, Dr. William Trush, and John Bair. Scott McBain is a hydraulic engineer and fluvial geomorphologist with an MS in Civil Engineering from the University of California at Berkeley. He specializes in effects of high stream flows on channel morphology, bedload transport, watershed sediment yields, and stream restoration. Dr. William Trush is an adjunct professor in the Humboldt State University Fisheries Department, specializing in anadromous fish ecology, anadromous fish interactions with fluvial geomorphology, channel maintenance flows and hydrology, riparian ecology, and stream restoration and management. He is also Director of the HSU Institute for River Ecosystems. John Bair is a riparian botanist with an MS in Environmental Systems from Humboldt State University. He specializes in riparian interactions with geomorphic processes and riparian restoration.

The firm of Stillwater Sciences has been retained to assist with the design and implementation of the fishery monitoring plan components. Stillwater Sciences is actively involved with the river wide monitoring associated with the Districts' FERC Settlement Agreement.

**X. COMPLIANCE WITH STANDARD TERMS & CONDITIONS**

Applicant is a public entity. The applicable PSP project group type is Public Works Construction.

The applicant agrees to the terms and conditions of the Proposal Solicitation Package dated February 1999 and as amended by CALFED's Responses to PSP Questions dated 16 March 1999 and applicant intends to comply with those terms and conditions.

It is anticipated that private contractors will perform a majority of the public works construction effort. The applicant will be deferring the requirement for submission of bid & payment bonds until such time as each subcontract is sought and awarded and before any work under the subcontract is performed.

Enclosed are the following completed forms:

Non-collusion Affidavit

Submitted by:

TURLOCK IRRIGATION DISTRICT

By Paul Elias By R. W. Butcher  
Paul D. Elias, General Manager

Date: 13 April 1999

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**APPLICATION FOR  
FEDERAL ASSISTANCE**

OMB Approval No. 0348-0043

<b>1. TYPE OF SUBMISSION:</b> Application <input checked="" type="checkbox"/> Construction <input type="checkbox"/> Non-Construction Preapplication <input type="checkbox"/> Construction <input type="checkbox"/> Non-Construction		<b>2. DATE SUBMITTED</b> 13 Apr 99	Applicant Identifier
		<b>3. DATE RECEIVED BY STATE</b>	State Application Identifier
		<b>4. DATE RECEIVED BY FEDERAL AGENCY</b>	Federal Identifier
<b>5. APPLICANT INFORMATION</b>			
Legal Name: <i>Turlock Irrigation District</i>		Organizational Unit: <i>Water Planning Dept.</i>	
Address (give city, county, State, and zip code): <i>PO Box 949 Turlock CA 95381</i>		Name and telephone number of person to be contacted on matters involving this application (give area code) <i>Wilton Fryer 209-883-8316</i>	
<b>6. EMPLOYER IDENTIFICATION NUMBER (EIN):</b> [ ] [ ] - [ ] [ ] [ ] [ ] [ ] [ ] [ ] [ ]		<b>7. TYPE OF APPLICANT: (enter appropriate letter in box)</b> <input checked="" type="checkbox"/> A. State <input type="checkbox"/> B. County <input type="checkbox"/> C. Municipal <input type="checkbox"/> D. Township <input type="checkbox"/> E. Interstate <input type="checkbox"/> F. Intermunicipal <input type="checkbox"/> G. Special District <input type="checkbox"/> H. Independent School Dist. <input type="checkbox"/> I. State Controlled Institution of Higher Learning <input type="checkbox"/> J. Private University <input type="checkbox"/> K. Indian Tribe <input type="checkbox"/> L. Individual <input type="checkbox"/> M. Profit Organization <input type="checkbox"/> N. Other (Specify) _____	
<b>8. TYPE OF APPLICATION:</b> <input checked="" type="checkbox"/> New <input type="checkbox"/> Continuation <input type="checkbox"/> Revision If Revision, enter appropriate letter(s) in box(es) [ ] [ ] A. Increase Award    B. Decrease Award    C. Increase Duration D. Decrease Duration    Other (specify): _____		<b>9. NAME OF FEDERAL AGENCY:</b> <i>USB R - CALFED</i>	
<b>10. CATALOG OF FEDERAL DOMESTIC ASSISTANCE NUMBER:</b> [ ] [ ] - [ ] [ ] [ ] [ ] TITLE: _____		<b>11. DESCRIPTIVE TITLE OF APPLICANT'S PROJECT:</b> <i>Restor 1.3 miles of fall-run chinook salmon habitat and associated riparian floodway on Tuolumne River. Third part of four part project covering 6.1 miles of river restoration.</i>	
<b>12. AREAS AFFECTED BY PROJECT (Cities, Counties, States, etc.):</b> <i>Stanislaus County Calif.</i>			
<b>13. PROPOSED PROJECT</b>		<b>14. CONGRESSIONAL DISTRICTS OF:</b> <i>#18 Gary Condit</i>	
Start Date <i>May 2000</i>	Ending Date <i>Mar 2002</i>	a. Applicant <i>Turlock Irrigation District</i>	b. Project <i>Mining Road #3 - Warner-Dawdorth Segment</i>
<b>15. ESTIMATED FUNDING:</b>		<b>16. IS APPLICATION SUBJECT TO REVIEW BY STATE EXECUTIVE ORDER 12372 PROCESS?</b>	
a. Federal <i>USFWS-AFRP</i>	\$ <i>3,336,000</i>	a. YES. THIS PREAPPLICATION/APPLICATION WAS MADE AVAILABLE TO THE STATE EXECUTIVE ORDER 12372 PROCESS FOR REVIEW ON: DATE _____	
b. Applicant	\$ _____	b. No. <input type="checkbox"/> PROGRAM IS NOT COVERED BY E. O. 12372 <input type="checkbox"/> OR PROGRAM HAS NOT BEEN SELECTED BY STATE FOR REVIEW	
c. State <i>CALFED</i>	\$ <i>3,501,000</i>		
d. Local <i>Districts</i>	\$ <i>40,000</i>		
e. Other	\$ _____		
f. Program Income	\$ _____		
g. TOTAL	\$ <i>6,877,000</i>	<b>17. IS THE APPLICANT DELINQUENT ON ANY FEDERAL DEBT?</b> <input type="checkbox"/> Yes    If "Yes," attach an explanation. <input checked="" type="checkbox"/> No	
<b>18. TO THE BEST OF MY KNOWLEDGE AND BELIEF, ALL DATA IN THIS APPLICATION/PREAPPLICATION ARE TRUE AND CORRECT, THE DOCUMENT HAS BEEN DULY AUTHORIZED BY THE GOVERNING BODY OF THE APPLICANT AND THE APPLICANT WILL COMPLY WITH THE ATTACHED ASSURANCES IF THE ASSISTANCE IS AWARDED.</b>			
a. Type Name of Authorized Representative <i>Wilton B Fryer P.E.</i>		b. Title <i>Water Planning Dept. Mgr.</i>	c. Telephone Number <i>209-883-8316</i>
d. Signature of Authorized Representative <i>Wilton B Fryer</i>		e. Date Signed <i>13 Apr 99</i>	

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**BUDGET INFORMATION -- Construction Programs**

NOTE: Certain Federal assistance programs require additional computations to arrive at the Federal share of project costs eligible for participation. If such is the case you will be notified.

COST CLASSIFICATION	a. Total Cost	b. Costs Not Allowable for Participation	c. Total Allowable Costs (Column a-b)
1. Administrative and legal expenses	\$ 89,000	\$	\$
2. Land, structures, rights-of-way, appraisals, etc.	\$	\$	\$
3. Relocation expenses and payments	\$	\$	\$
4. Architectural and engineering fees	\$	\$	\$
5. Other architectural and engineering fees	\$	\$	\$
6. Project inspection fees ; Construction Mgt	\$ 150,000 -	\$	\$
7. Site work	\$	\$	\$
8. Demolition and removal	\$	\$	\$
9. Construction	\$ 1,665,000 -	\$	\$
10. Equipment	\$	\$	\$
11. Miscellaneous Mineral Rights Purchase (RMs)	\$ 1,300,000 -	\$	\$
12. SUBTOTAL	\$ 3,204,000 -	\$	\$
13. Contingencies	\$ 297,000 -	\$	\$
14. SUBTOTAL	\$ 3,501,000 -	\$	\$
15. Project (program) income	\$ 0	\$	\$
16. TOTAL PROJECT COSTS (subtract #15 from #14)	\$ 3,501,000 -	\$	\$
17. Federal assistance requested, calculate as follows: (Consult Federal agency for Federal percentage share). Enter the resulting Federal share.	Enter eligible costs from line 16c Multiply X 100 %		\$ 3,501,000 -

## ASSURANCES -- CONSTRUCTION PROGRAMS

Public reporting burden for this collection of information is estimated to average 15 minutes per response, including time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information. Send comments regarding the burden estimate or any other aspect of this collection of information, including suggestions for reducing this burden, to the Office of Management and Budget, Paperwork Reduction Project (0348-0042), Washington, DC 20503.

**PLEASE DO NOT RETURN YOUR COMPLETED FORM TO THE OFFICE OF MANAGEMENT AND BUDGET.  
SEND IT TO THE ADDRESS PROVIDED BY THE SPONSORING AGENCY.**

NOTE: Certain of these assurances may not be applicable to your project or program. If you have questions, please contact the Awarding Agency. Further, certain Federal assistance awarding agencies may require applicants to certify to additional assurances. If such is the case, you will be notified.

As the duly authorized representative of the applicant I certify that the applicant:

1. Has the legal authority to apply for Federal assistance, and the institutional, managerial and financial capability (including funds sufficient to pay the non-Federal share of project cost) to ensure proper planning, management and completion of the project described in this application.
2. Will give the awarding agency, the Comptroller General of the United States, and if appropriate, the State, through any authorized representative, access to and the right to examine all records, books, papers, or documents related to the assistance; and will establish a proper accounting system in accordance with generally accepted accounting standards or agency directives.
3. Will not dispose of, modify the use of, or change the terms of the real property title, or other interest in the site and facilities without permission and instructions from the awarding agency. Will record the Federal interest in the title of real property in accordance with awarding agency directives and will include a covenant in the title of real property acquired in whole or in part with Federal assistance funds to assure non-discrimination during the useful life of the project.
4. Will comply with the requirements of the assistance awarding agency with regard to the drafting, review and approval of construction plans and specifications.
5. Will provide and maintain competent and adequate engineering supervision at the construction site to ensure that the complete work conforms with the approved plans and specifications and will furnish progress reports and such other information as may be required by the assistance awarding agency or State.
6. Will initiate and complete the work within the applicable time frame after receipt of approval of the awarding agency.
7. Will establish safeguards to prohibit employees from using their positions for a purpose that constitutes or presents the appearance of personal or organizational conflict of interest, or personal gain.
8. Will comply with the Intergovernmental Personnel Act of 1970 (42 U.S.C. Secs. 4728-4763) relating to prescribed standards for merit systems for programs funded under one of the nineteen statutes or regulations specified in Appendix A of OPM's Standards for a Merit System of Personnel Administration (5 C.F.R. 900, Subpart F).
9. Will comply with the Lead-Based Paint Poisoning Prevention Act (42 U.S.C. Secs. 4801 et seq.) which prohibits the use of lead based paint in construction or rehabilitation of residence structures.
10. Will comply with all Federal statutes relating to non-discrimination. These include but are not limited to: (a) Title VI of the Civil Rights Act of 1964 (P.L. 88-352) which prohibits discrimination on the basis of race, color or national origin; (b) Title IX of the Education Amendments of 1972, as amended (20 U.S.C. Secs. 1681-1683, and 1685-1686), which prohibits discrimination on the basis of sex; (c) Section 504 of the Rehabilitation Act of 1973, as amended (29 U.S.C. Secs. 794), which prohibits discrimination on the basis of handicaps; (d) the Age Discrimination Act of 1975, as amended (42 U.S.C. Secs. 6101-6107), which prohibits discrimination on the basis of age; (e) the Drug Abuse Office and Treatment Act of 1972 (P.L. 92-255), as amended, relating to nondiscrimination on the basis of drug abuse; (f) the Comprehensive Alcohol Abuse and Alcoholism Prevention, Treatment and Rehabilitation Act of 1970 (P.L. 91-616), as amended, relating to nondiscrimination on the basis of alcohol abuse or alcoholism; (g) Secs. 523 and 527 of the Public Health Service Act of 1912 (42 U.S.C. 290 dd-3 and 290 ee-3), as amended, relating to confidentiality of alcohol and drug abuse patient records; (h) Title VIII of the Civil Rights Act of 1968 (42 U.S.C. Secs. 3601 et seq.), as amended, relating to non-discrimination in the sale, rental or financing of housing; (i) any other non-discrimination provisions in the specific statute(s) under which application for Federal assistance is being made, and (j) the requirements of any other non-discrimination Statute(s) which may apply to the application.

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11. Will comply, or has already complied, with the requirements of Titles II and III of the Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970 (P.L. 91-646) which provides for fair and equitable treatment of persons displaced or whose property is acquired as a result of Federal and federally assisted programs. These requirements apply to all interests in real property acquired for project purposes regardless of Federal participation in purchases.
12. Will comply with the provisions of the Hatch Act (5 U.S.C. Secs. 1501-1508 and 7324-7328) which limit the political activities of employees whose principal employment activities are funded in whole or in part with Federal funds.
13. Will comply, as applicable, with the provisions of the Davis-Bacon Act (40 U.S.C. Secs. 276a to 276a - 7), the Copeland Act (40 U.S.C. Secs. 276c and 18 U.S.C. Sec. 874), the Contract Work Hours and Safety Standards Act (40 U.S.C. Secs. 327-333), regarding labor standards for federally assisted construction subagreements.
14. Will comply with flood insurance purchase requirements of Section 102(a) of the Flood Disaster Protection Act of 1973 (P.L. 93-234) which requires recipients in a special flood hazard area to participate in the program and to purchase flood insurance if the total cost of insurable construction and acquisition is \$10,000 or more.
15. Will comply with environmental standards which may be prescribed pursuant to the following: (a) institution of environmental quality control measures under the National Environmental Policy Act of 1969 (P.L. 91-190) and Executive Order (EO) 11514; (b) notification of violating facilities pursuant to EO 11738; (c) protection of wetlands pursuant to EO 11990; (d) evaluation of flood hazards in floodplains in accordance with EO 11988; (e) assurance of project consistency with the approved State management program developed under the Coastal Zone Management Act of 1972 (16 U.S.C. Secs. 1451 et seq.); (f) conformity of Federal actions to State (Clear Air) Implementation Plans under Section 176(c) of the Clear Air Act of 1955, as amended (42 U.S.C. Secs. 7401 et seq.); (g) protection of underground sources of drinking water under the Safe Drinking Water Act of 1974, as amended, (P.L. 93-523); and (h) protection of endangered species under the Endangered Species Act of 1973, as amended, (P.L. 93-205).
16. Will comply with the Wild and Scenic Rivers Act of 1968 (16 U.S.C. Secs. 1271 et seq.) related to protecting components or potential components of the national wild and scenic rivers system.
17. Will assist the awarding agency in assuring compliance with Section 106 of the National Historic Preservation Act of 1966, as amended (16 U.S.C. Sec. 470), EO 11593 (identification and preservation of historic properties), and the Archaeological and Historic Preservation Act of 1974 (16 U.S.C. 469a-1 et seq.).
18. Will cause to be performed the required financial and compliance audits in accordance with the Single Audit Act of 1984.
19. Will comply with all applicable requirements of all other Federal laws, Executive Orders, regulations and policies governing this program.

SIGNATURE OF AUTHORIZED CERTIFYING OFFICIAL <i>Carlton B. Peyer</i>		TITLE <i>Water Planning Dept. Mgr.</i>
APPLICANT ORGANIZATION <i>Turtle Creek Irrigation District</i>		DATE SUBMITTED <i>13 Apr 99</i>

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**NONCOLLUSION AFFIDAVIT TO BE EXECUTED BY  
BIDDER AND SUBMITTED WITH BID FOR PUBLIC WORKS**

STATE OF CALIFORNIA )  
 )as  
COUNTY OF Stanislaus )

Wilton B. Fryer , being first duly sworn, deposes and  
(name)  
says that he or she is Water Planning Dept. Manager of  
(position title)  
Turlock Irrigation District  
(the bidder)

the party making the foregoing bid that the bid is not made in the interest of, or on behalf of, any undisclosed person, partnership, company, association, organization, or corporation; that the bid is genuine and not collusive or sham; that the bidder has not directly or indirectly induced or solicited any other bidder to put in a false sham bid, and has not directly or indirectly colluded, conspired, connived, or agreed with any bidder or anyone else to put in a sham bid, or that anyone shall refrain from bidding; that the bidder has not in any manner, directly or indirectly, sought by agreement, communication, or conference with anyone to fix the bid price of the bidder or any other bidder, or to fix any overhead, profit, or cost element of the bid price, or of that of any other bidder, or to secure any advantage against the public body awarding the contract of anyone interested in the proposed contract; that all statements contained in the bid are true; and, further, that the bidder has not, directly or indirectly, submitted his or her bid price or any breakdown thereof, or the contents thereof, or divulged information or data relative thereto, or paid, and will not pay, any fee to any corporation, partnership, company, association, organization, bid depository, or to any member or agent thereof to effectuate a collusive or sham bid.

DATED: 14 Apr 99

By Wilton B Fryer  
(person signing for bidder)



(Notarial Seal)

Subscribed and sworn to before me on  
4/14/99  
Diane R. Pickering  
(Notary Public)