

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

Turlock Irrigation District  
333 E. Canal Drive  
P. O. Box 949  
Turlock, CA 95381

September 30, 1988

Department of Fish and Game  
Region 4  
1234 E. Shaw Avenue  
Fresno, CA 93710

Attention: Mr. Laird Marshall  
Supervisor of Regional Fish Hatcheries

Re: Salmon Rearing Project in Modesto Irrigation  
District's Canal

Dear Mr. Marshall:

This will serve to evidence and confirm the agreement arrived at among Modesto Irrigation District ("Modesto"), Turlock Irrigation District ("Turlock") and the State of California, acting by and through its Department of Fish and Game ("Fish and Game"), concerning implementation of Fish and Game's proposal to rear chinook salmon in Modesto's old upper main canal (the "Rearing Project") for subsequent release into the Tuolumne River to help alleviate the impact of expected losses of Tuolumne River salmon caused by the drought of 1987-1988. Such agreement ("Agreement") is as set forth below.

The term of the Agreement ("Term") will commence as of the date of this letter and expire on the earlier of the following: (a) the date on which removal of the smolts from such canal ("Canal") for release into the Tuolumne River has been completed, or (b) May 31, 1989.

As soon as practicable, and in time to permit the commencement of the Rearing Project on January 1, 1989 as scheduled, Modesto, at the expense of Modesto and Turlock, in shares as agreed upon between them, will construct and install, the following:

(a) facilities designed to prevent surface water runoff from entering the portion of the Canal to be utilized by the Rearing Project during the rearing process;

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(b) an earthen dam ("Downstream Dam") at or near Station 17 as shown on the attached map;

(c) a drainpipe facility with its appurtenances, including, without limitation, a side gate in the Canal, to be used in conjunction with the Downstream Dam to return water passed through the Rearing Site in support of the Rearing Project to the Tuolumne River above U.S.G.S. Gaging Station No. 11289650; and

(d) a steel frame and board weir structure ("Upstream Dam"), with a vertical slide gate facility and its appurtenances, between Stations 3 and 4 as shown on the attached map.

During the Term, Fish and Game will have Modesto's permission to carry out the Rearing Project in Fish and Game's facilities in the portion of the Canal ("the "Rearing Site") situated between the Upstream Dam and the Downstream Dam, and this right will include, but not be limited to, the right of Fish and Game to install, operate and maintain at its own expense such salmon rearing facilities in the Rearing Site as Fish and Game determines to be necessary to properly implement the Rearing Project. The design of these facilities shall be subject to review and approval by Modesto prior to their installation. Such approval shall not be unreasonably withheld.

The installation of the Rearing Facilities shall be made in a manner that will avoid damage to Modesto's property, including, without limitation, the Canal, the Upstream Dam and the Downstream Dam. If Modesto's property is damaged in the course of installing the Rearing Facilities or carrying out the Rearing Project, Fish and Game will promptly repair such damage to Modesto's satisfaction and at Fish and Game's expense. At the expiration of the Term, unless Modesto, Turlock and Fish and Game agree to the contrary, Fish and Game will promptly remove the Rearing Facilities and repair at its expense and to Modesto's satisfaction any damage to Modesto's property caused by such removal.

A portion of the total amount of water that Modesto and Turlock are required to release into the Tuolumne River below La Grange Dam for fish will be passed through the Rearing Site before being released into the River. The rate of flow of the water that will be passed through the Rearing Site will not exceed 20 cfs. Fish and Game will have the right and the responsibility to operate the slide gate in the Upstream Dam so as to supply at all times during the rearing process a sufficient, continuous flow of water through the Rearing Site for the proper rearing of salmon.


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Fish and Game will expeditiously carry out and complete the Rearing Project and remove all smolts from the Rearing Site no later than May 31, 1989.

Although Modesto, Turlock and Fish and Game expect that the Rearing Project will be a success, they recognize that its success is by no means assured. Fish and Game will use its best efforts to make the Rearing Project successful. Modesto and Turlock have entered into the Agreement as an accommodation to Fish and Game, and Modesto and Turlock assume no responsibility for the success of the Rearing Project. Neither Modesto and Turlock, nor either of them, shall incur any liability whatsoever arising from any lack of success of such Project or any unexpected or excessive mortality in respect to the salmon involved in the Rearing Project from any cause.

Please indicate Fish and Game's agreement with the terms and provisions of the Agreement as set forth above by causing each of the three original copies of this letter to be properly signed on behalf of Fish and Game and by returning one of such signed copies to each of Modesto and Turlock.

Yours very truly,

  
\_\_\_\_\_  
Joseph B. Marcotte, Jr.  
Chief Executive Officer  
Modesto Irrigation District

  
\_\_\_\_\_  
Ernest Geddes  
General Manager  
Turlock Irrigation District

\_\_\_\_\_  
Peter F. Bontadelli, Director  
Department of Fish and Game

Attachment

**AGREEMENT SALMON REARING PROJECT IN  
MODESTO IRRIGATION DISTRICT'S CANAL**

This will serve to evidence and confirm the agreement arrived at among Modesto Irrigation District ("Modesto"), Turlock Irrigation District ("Turlock") and the State of California, acting by and through its Department of Fish and Game ("Fish and Game"), concerning implementation of Fish and Game's proposal to rear chinook salmon in Modesto's old upper main canal (the "Rearing Project") for subsequent release to help alleviate the impact of expected losses of San Joaquin River system salmon caused by the drought conditions of 1989. Such agreement ("Agreement") is as set forth below.

The term of the Agreement ("Term") will commence as of December 1, 1989 and expire on the earlier of the following:  
(a) the date on which removal of the smolts and yearlings from such canal ("Canal") for release has been completed, or  
(b) November 30, 1990.

During the Term, Fish and Game will have Modesto's permission to carry out the Rearing Project in Fish and Game's facilities ("Rearing Facilities") in the portion of the Canal (the "Rearing Site") situated between the Upstream Dam and the Downstream Dam referred to in the letter agreement among the parties dated September 30, 1988, and this right will include, but not be limited to, the right of Fish and Game at its own expense to (a) operate and maintain its existing rearing facilities in the Rearing Site and to (b) install, operate and maintain such new rearing facilities (screen structures) in the Rearing Site as Fish and Game determines to be necessary to properly implement the Rearing Project. Any modification of the design of the Rearing Facilities shall be subject to review and approval by Modesto prior to their installation. Such approval shall not be unreasonably withheld.

The installation of Rearing Facilities shall be made in a manner that will avoid damage to Modesto's property, including, without limitation, the Canal, The Upstream Dam and the Downstream Dam. If Modesto's property is damaged in the course of installing any of the Rearing Facilities or carrying out the Rearing Project, Fish and Game will promptly repair such damage to Modesto's satisfaction and at Fish and Game's expense. At Modesto's request after expiration of the Term, Fish and Game will promptly remove the Rearing Facilities and repair at its expense and to Modesto's satisfaction any damage to Modesto's property caused by such removal.

A portion of the total amount of water that Modesto and Turlock are required to release into the Tuolumne River below

La Grange Dam for fish will be passed through the Rearing Site before being released into the River. The rate of flow of the water that will be passed through the Rearing Site will not exceed 20 cfs. Fish and Game will have the right and the responsibility to operate the slide gate in the Upstream Dam so as to supply at all times during the rearing process a sufficient, continuous flow of water through the Rearing Site for the proper rearing of salmon.

Fish and Game will expeditiously carry out and complete the Rearing Project and remove all smolts and yearlings from the Rearing Site no later than November 30, 1990.

If it is reasonably feasible to do so, Fish and Game will cause enough of the salmon reared pursuant to this Agreement to be tagged with coded-wire tags to provide a basis for a reasonable evaluation as to the percentage of such salmon that return to spawn in the Tuolumne River.

Although Modesto, Turlock and Fish and Game expect that the Rearing Project will be a success, they recognize that its success is by no means assured. Fish and Game will use its best efforts to make the Rearing Project successful. Modesto and Turlock have entered into this Agreement as an accommodation to Fish and Game, and Modesto and Turlock assume no responsibility for the success of the Rearing Project. Neither Modesto and Turlock, nor either of them, shall incur any liability whatsoever arising from any lack of success of such project or any unexpected or excessive mortality in respect to the salmon involved in the Rearing Project from any cause.

Dated: January 10, 1990



Joseph B. Marcotte, Jr.  
Chief Executive Officer  
Modesto Irrigation District



Ernest Geddes  
General Manager  
Turlock Irrigation District



Peter F. Bontadelli, Director  
Department of Fish and Game

constructing redds in larger, heavier gravels, and so potential spawning area may be reduced (Ricker 1972).

#### 4.8 TUOLUMNE RIVER REARING FACILITY

Natural production can be supplemented through the planting of hatchery fish, to compensate for high harvest rates or as mitigation for project effects. In late fall 1988, following two consecutive years of low escapements, a plan was devised to supplement the chinook salmon population in the Tuolumne River. A cooperative agreement was made between the Districts and CDFG to modify a recently abandoned section of the MID Main Canal below La Grange Dam to serve as a rearing facility for salmon fry. Approximately 1,500 feet of canal was divided into sections by constructing fish weirs at strategic locations. Up to 20 cfs of water was diverted into the fish-rearing section of the canal and then returned to the river. The facility is maintained and operated by CDFG.

In 1989, salmon eggs taken from fish trapped in sloughs of the San Joaquin River near Los Banos or from the Merced River were hatched at the Merced River Fish Facility, and about 925,000 fry were delivered to the Tuolumne River facility beginning in March 1989. After 2-3 months, these salmon had reached smolt size and were ready for release. On June 5-8, CDFG crews planted an estimated 867,700 salmon smolts, weighing 14,500 pounds, in San Francisco Bay at the Berkeley Marina.

In 1990 salmon fry were obtained from the Tuolumne River by fyke net traps operated by CDFG, and approximately 122,000 were brought to the rearing facility. Of these, about 82,500 were tagged with coded-wire-tags and released near the mouth of the Tuolumne River in May. The remaining 25,000 fish, along with 117,000 brought from the Merced River Fish Facility (MRFF), were raised to yearling size for release in fall 1990. These MRFF fish constituted the facility's entire yearling production. The Districts agreed to allow CDFG to use the Tuolumne River rearing facility for the yearlings while the MRFF was being upgraded.

During the summer of 1991, approximately 240,000 yearling salmon were transferred from the Merced River Fish Facility (MRFF) to the Tuolumne River Rearing Facility, because of concerns about Merced River water temperatures and also because of construction to improve the facilities at the MRFF. In late September, about 200,000 of these salmon were tagged by CDFG. Two groups, of 100,000 CWT yearlings each, were released in November 1991, on the Merced and Tuolumne Rivers.

The remaining 30,000-40,000 salmon will be returned to the MRFF and be combined with a similar number of salmon that remained at the hatchery. Those salmon will be tagged and released in the Merced River in February or March 1992.

## AGREEMENT

### Salmon Rearing Project in Modesto Irrigation District's Canal

This Agreement is entered into among Modesto Irrigation District ("Modesto"), Turlock Irrigation District ("Turlock") (collectively "Districts") and the State of California, acting by and through its Department of Fish and Game ("CDFG"), with reference to the following:

#### Recitals

A. Since 1988, CDFG has utilized an abandoned section of Modesto's old upper main canal ("Canal") below La Grange Dam as a rearing facility for salmon fry and as an emergency rearing facility for its Merced River Fish Facility yearling program (1990 and 1991) and for its Moccasin Fish Facility trout program (1990). The capital costs of converting the canal section to a fish rearing facility were paid by the Districts and CDFG. CDFG has paid all operating costs of the facility.

B. The primary purpose of the project has been to rear chinook salmon in Modesto's Canal for subsequent release to help alleviate the impact of expected losses of San Joaquin River system salmon caused by the extended and continuing drought conditions.

NOW, THEREFORE, the parties agree as follows:

1. During the term of this Agreement, CDFG agrees to continue to utilize the Canal to rear salmon as needed, provided that funds are available to CDFG for such purposes and the Districts agree to continue to allow CDFG to utilize the rearing facility under the terms and conditions set forth in this Agreement. The rearing of fish species other than salmon in the Rearing Facility shall require the prior approval of the Districts, which approval shall not be unreasonably withheld.

2. The term of the Agreement ("Term") will commence as of June 1, 1993 and expire on the earlier of the following: (a) upon mutual agreement of the parties or (b) November 30, 2001.

3. During the Term, CDFG will have Modesto's permission to carry out the Rearing Project in CDFG's facilities ("Fish Facilities") in the portion of the Canal (the "Rearing Site") situated between the Upstream Dam and the Downstream Dam referred

to in the letter agreement among the parties dated September 30, 1988, and this right will include, but not be limited to, the right of CDFG at its own expense to (a) operate and maintain its existing facilities in the Rearing Site, and to (b) install, operate and maintain such new rearing facilities (screen structures) in the Rearing Site as CDFG determines to be necessary to properly implement the Rearing Project.

4. Any modification of the design of the Fish Facilities shall be subject to review and approval by Modesto prior to their installation. Such approval shall not be unreasonably withheld.

5. The installation, operation, and maintenance of the Fish Facilities shall be performed in a manner that will avoid damage to Modesto's property, including, without limitation, the Canal, the Upstream Dam and the Downstream Dam. If Modesto's property is damaged in the course of installing the Fish Facilities or carrying out the Rearing Project, CDFG will promptly repair such damage to Modesto's satisfaction and at CDFG's expense.

6. At Modesto's request after expiration of the Term, CDFG will promptly remove the Fish Facilities and repair at its expense and to Modesto's satisfaction any damage to Modesto's property caused by such removal.

7. The State does not have responsibility for loss or damage beyond the control of the State. The State's responsibility for repairs and liability for damage or loss is limited to that made necessary by or resulting from the negligent act or omission of the State, or its officers, employees or agents.


8. A portion of the total amount of water that Modesto and Turlock are required to release into the Tuolumne River below La Grange Dam for fish will be passed through the Rearing Site before being released into the River. The rate of flow of the water that will be passed through the Rearing Site will not exceed 20 cfs. CDFG will have the right and the responsibility to operate the slide gate in the Upstream Dam so as to supply at all times during the rearing process a sufficient, continuous flow of water through the Rearing Site for the proper rearing of salmon.


9. If it is reasonably feasible to do so, CDFG will cause enough of the salmon reared pursuant to this Agreement to be tagged with a coded-wire-tags to provide a basis for a reasonable evaluation as to the percentage of such salmon that return to spawn in the Tuolumne River.

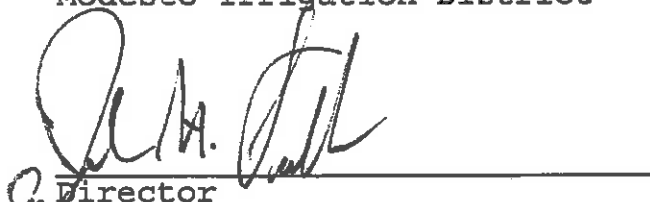


10. Although Modesto, Turlock and CDFG expect that the Rearing Project will be a success, they recognize that its success is by no means assured. CDFG will use its best efforts to make the Rearing Project successful. Modesto and Turlock have entered into this Agreement as an accommodation to CDFG, and Modesto and Turlock assume no responsibility for the success of the Rearing Project. Neither Modesto and Turlock, nor either of them, shall incur any liability whatsoever arising from any lack of success of such project or any unexpected or excessive mortality in respect to the salmon involved in the Rearing Project from any cause.

Dated: June 1, 1993.

  
Kenneth H. McKinney  
Deputy Chief Executive Officer  
Modesto Irrigation District

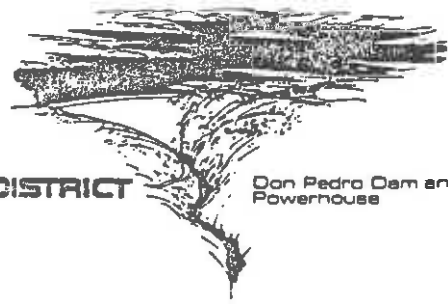
  
Joseph B. Marcotte, Jr.  
General Manager  
Turlock Irrigation District

  
Director  
Department of Fish and Game  
John H. Sullivan for Boyd Gibbons

**TURLOCK IRRIGATION DISTRICT**

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

Don Pedro Dam and  
Powerhouse



March 14, 1994

Mr. George D. Nokes  
Regional Manager  
California Department of Fish and Game  
Region 4  
1234 East Shaw Avenue  
Fresno, California 93710

Dear Mr. Nokes,

Regarding the CDFG'S proposed fish hatchery to be built on the Tuolumne River below the La Grange Dam, Turlock's technical representative to the project coordination discussions will be Wes Monier. He can be reached at 883-8321.

Please contact Wes Monier to set up a meeting to discuss the implications of the proposal and to assist in getting a plan of action installed.

If you have any questions regarding this please feel free to give me a call.

Sincerely,

TURLOCK IRRIGATION DISTRICT

Paul Elias  
General Manager

PE:FWM

cc: N.C. Boberg  
Chris Kiriakou ✓  
Randy Baysinger  
Tim Ford  
Allen Short, MID  
Wayne White, USFWS



**TURLOCK IRRIGATION DISTRICT**  
**WATER PLANNING DEPARTMENT**

**MEMORANDUM**

DATE: 4 Aug 97  
TO: Distribution  
FROM: *TJF* for Wilton Fryer  
SUBJECT: Proposal to Improve and Operate Existing Tuolumne River Fish Facility (TRFF) to Rear and Mark Up to 400,000 Tuolumne River Salmon Smolts per Year for South Delta and San Joaquin Basin Studies

Enclosed for your information is a copy of the above proposal for CALFED funding submitted by the San Joaquin River Group Authority (SJRGA). The TRFF is an existing salmon rearing facility located near the town of La Grange. Modesto ID, Turlock ID, and DFG converted a section of Modesto ID's former main canal into a rearing facility with funds from the Districts, DFG, and the Salmon Stamp program.

In 1989, its first year of operation, TRFF successfully reared 867,700 Merced hatchery salmon fry to smolt size. DFG has estimated TRFF's rearing capacity to be about 1,500,000 smolts. After 1989, DFG has only used TRFF to rear smaller numbers of smolts and after 1995 stopped using the facility altogether. The TRFF has had few disease problems and very little mortality or bird predation.

In 1993, DFG entered into an agreement with Modesto ID and Turlock ID wherein DFG agreed to use the TRFF "as needed" through November 30, 2001, so long as funds were available. The CALFED funding proposal is intended to assist DFG to comply with the 1993 agreement. South Delta salmon smolt survival studies, such as the San Joaquin Adaptive Management Plan (formerly VAMP), will need a firm source of San Joaquin-origin study fish for the next several years. DFG Region 4 has stated that existing commitments for Merced hatchery salmon will take priority over South Delta studies and that most likely in some years study fish will not be available for South Delta studies. This proposal would help insure the availability of San Joaquin-origin study fish for essential South Delta studies.

Distribution:

SJRGA member agencies  
Steve Ford, DWR  
Randy Brown, DWR  
George Nokes, DFG, Fresno  
Alan Baracco, DFG, Sacramento  
Martin Kjelson, USFWS, Stockton  
Wayne White, USFWS, Sacramento  
Donn Furman, CCSF

Tim Ramirez, TRPT  
Allison Boucher, FOTT  
John Farnkopf, BAWUA  
Bryon Buck, CUWA  
Pete Rhoads, MWD  
Nat Bingham, PCFFA  
Ken Lentz, USBR  
JoAnne Kipps, DWR/SJRMP

**PROPOSAL TO IMPROVE AND OPERATE  
EXISTING TUOLUMNE RIVER FISH FACILITY (TRFF)**

Project Manager  
San Joaquin River Group Authority  
P.O. Box 949  
Turlock, CA 95381

**APPLICANT:**

The San Joaquin River Group Authority (SJRGA) is organized by a Joint Exercise of Powers Agreement. SJRGA is a tax-exempt public entity.

**CONTACTS:**

For project administration:

Walter Ward  
Modesto Irrigation District  
1231 Eleventh Street  
Modesto, CA 95354  
209-526-7459  
FAX 209-526-7352  
e-mail:walterW@mid.org

For fishery and technical details:

Tim Ford  
Turlock Irrigation District  
333 East Canal Drive  
Turlock, CA 95380  
209-883-8275  
FAX 209-632-3864  
e-mail:tjford@ainet.com

**PARTICIPANTS:**

The San Joaquin River Group Authority (SJRGA) includes Merced Irrigation District, Modesto Irrigation District (ModID), Oakdale Irrigation District, South San Joaquin Irrigation District, Turlock Irrigation District (TID), Friant Water Users Authority, and the San Joaquin River Exchange Contractors Water Authority.

**COST SHARE PARTICIPANTS:**

The existing Tuolumne River Fish Facility (TRFF) was jointly developed in 1988-89 by Modesto Irrigation District, Turlock Irrigation District, and the California Department of Fish and Game (CDFG). CDFG used funding from the Salmon Stamp Program which is provided by commercial fishermen. ModID and TID will provide the water supply, storm runoff drainage, and use of District facilities for this proposal. The marked salmon would be used in evaluations cooperatively conducted by CALFED agencies and others.

**PROJECT GROUP:**

Group 1 (Public Works) - CALFED is being asked to fund the design and construction of improvements to the existing TRFF near La Grange, Stanislaus County, California.

Group 3 (Services) - CALFED is being asked to fund three years of Tuolumne River salmon egg-taking operation, incubation at Merced River Fish Facility (or potentially at the TRFF), rearing and marking at the TRFF, and transport to release sites.

**PROPOSAL TO IMPROVE AND OPERATE  
EXISTING TUOLUMNE RIVER FISH FACILITY (TRFF)**

**II. EXECUTIVE SUMMARY**

SUBMITTED BY: SAN JOAQUIN RIVER GROUP AUTHORITY (SJRGA)

**DESCRIPTION:**

This proposal addresses San Joaquin fall-run chinook salmon, a priority population, and is designed to facilitate evaluations on effects of identified stressors such as "Alteration of Flows and Other Effects of Water Management", "Water Quality", "Water Temperature", "Undesirable Species Interactions", and "Population Management." This proposal is identified by CALFED's list of example restoration actions under Item 10: "Artificial Propagation of Fish".

This is a three-year funding request. It is anticipated that operation of the TRFF may continue beyond year 2000 depending on completion of priority South Delta evaluations and artificial salmon production genetic criteria yet to be established for the San Joaquin system.

Phase I: (1) to provide operational and safety improvements to the existing Tuolumne River Fish Facility, (2) to provide for a salmon egg-taking operation in the Tuolumne River, (3) to provide for three years of operations for: egg-taking, transportation of eggs, incubation, and initial rearing at the Merced River Fish Facility (MRFF), transportation of fry, rearing and marking at the TRFF of up to 400,000 salmon per year, and transport of salmon smolts to release sites.

Phase II (optional funding request): (1) install a dual water supply within the rearing area, (2) install water treatment equipment for disease control, and (3) add egg incubation and initial rearing facilities at TRFF.

**BIOLOGICAL OBJECTIVES:**

1. Provide up to 400,000 marked salmon per year for studies to evaluate survival of natural salmon in the South Delta in a program to be determined by consensus among South Delta, San Joaquin interests, and federal and state agencies. Salmon reared and marked at the TRFF could also be used if any salmon are needed for Tuolumne River evaluations or for gear efficiency assessments.
2. Eliminate the need to use salmon from the Feather River Hatchery in South Delta evaluations thereby reducing the number of out-of-basin fish returning as adults to the San Joaquin system.
3. Improve maintenance of any existing genetic integrity of Tuolumne River salmon by eliminating the existing practice of using salmon of Merced River origin in Tuolumne River evaluations.
4. Providing an alternate source of salmon eggs and smolts for evaluations in the South Delta will allow for more adaptive management by reducing reliance on MRFF and providing an opportunity to modify MRFF operations to better utilize sound biological and genetic management protocols.

**TASKS & SCHEDULES:**

- |          |  |                                   |
|----------|--|-----------------------------------|
| Phase I: | 1. Preliminary project scoping and design: | Completed                         |
|          | 2. Civil design for construction elements: | Oct-Dec 1997                      |
|          | 3. Construction and installation at TRFF:  | Dec 1997-Feb 1998                 |
|          | 4. Egg-taking installation and operation:  | Oct through Dec 1997-1999         |
|          | 5. MRFF incubation and initial rearing:    | Oct through Feb 1997/98-1999/2000 |
|          | 6. TRFF rearing, marking, and transport:   | Feb through May 1998-2000         |

## JUSTIFICATION:

There is a recognized need to better understand the factors influencing the survival of naturally produced salmon from the San Joaquin River system through the Delta. The SJRGA and others have proposed augmenting existing IEP South Delta salmon studies to specifically address the effects on salmon survival under various conditions of springtime San Joaquin River flow at Vernalis, State and Federal Delta export rates, and with a fishery protection barrier at the head of Old River. DFG has expressed concerns about (1) their ability to provide study salmon from the MRFF for studies in the South Delta and (2) about some operational aspects of the existing TRFF. This project would help ensure that marked Tuolumne River salmon are available for South Delta studies. Alternatively, if any salmon are used in Tuolumne River studies, those from the TRFF would allow MRFF salmon to be available for any Merced River and South Delta studies.

## BUDGET:

The CALFED is being asked to fund the costs of upgrading the existing TRFF (\$237,000), adult trapping and egg-taking equipment (\$75,000), marking equipment (\$150,000), three years operations for egg-taking, incubation, rearing, marking, and release of salmon (\$691,000), and construction/project management (\$115,000) for a total Phase I cost of \$ 1,268,000. Phase II is an optional funding request of \$806,000.

## APPLICANT QUALIFICATIONS:

The SJRGA includes member organizations which have been involved with cooperative studies of San Joaquin River fall-run chinook salmon since 1971. These studies include funding numerous salmon rearing and marking evaluations conducted in cooperation with DFG and U.S. Fish and Wildlife Service. The SJRGA has retained Joseph McMichael who has over 30 years of experience with the U. S. Army Corps of Engineers on a wide range of fish facilities, including design and project management of salmon trapping, rearing, acclimation, and hatchery facilities. Tim Ford has been the staff biologist for the Turlock and Modesto Irrigation Districts since 1981 and has focused on the biology and habitat of salmon in the San Joaquin River system, especially in the Tuolumne River. DFG has operated the existing TRFF since 1989 with the MRFF.

## MONITORING PLAN:

The monitoring plan would primarily consist of the inland and ocean recoveries of marked salmon.

## LOCAL SUPPORT; COORDINATION WITH OTHER PROGRAMS

Use of the TRFF as an interim measure to provide study fish for important South Delta studies is supported by TID, ModID, and other San Joaquin River Group Authority members as well as CCSF. The Pacific Coast Federation of Fishermen's Association has long supported use of the TRFF for salmon. PCFFA support was instrumental in obtaining the initial Salmon Stamp funding for the facility. In a March 3, 1997 letter opposing DFG's proposed new Tuolumne River hatchery and written to the DFG Region 4 manager, Wayne White, USFWS Field Supervisor, stated: "Tuolumne River Fish Facility--Continued use of the Modesto Irrigation District's (MID) canal to rear salmon. Although this is incompatible with natural rearing concepts, using the MID canal is an alternative if additional salmon for studies or other purposes is deemed absolutely necessary."

The use of TRFF study fish will be coordinated with required Tuolumne River FERC smolt survival studies and with the appropriate IEP agencies on South Delta studies.

# PROPOSAL TO IMPROVE AND OPERATE TUOLUMNE RIVER FISH FACILITY

## III. PROJECT DESCRIPTION

### PROJECT DESCRIPTION AND APPROACH

This proposal is divided into two phases. The first phase consists of the high priority elements to improve safety and operational flexibility of the existing TRFF. The Phase 1 proposal is essentially the same proposal as the Interim Artificial Propagation Program (#15) submitted by DFG, including the Hatchery Fish Marking Program (#32), contained in the Joint CALFED & SJRMP San Joaquin River Fishery Technical Team Workshop Report dated 2 April 1997. The Phase 1 proposal is for three years, but it is anticipated that operation of the TRFF may continue beyond year 2000. Future use of the TRFF, after the completion of priority South Delta studies, is anticipated to be adjusted to reflect those study needs or as salmon genetic criteria yet to be established for the San Joaquin system may require.

Phase I of this proposal has the following elements:

- (1) provide operational and safety improvements to the existing TRFF,
- (2) provide for a salmon egg-taking operation in the Tuolumne River,
- (3) provide for three years (1997-1999) of operations for egg-taking and transportation to the Merced River Fish Facility (MRFF), incubation and initial rearing at the MRFF, transportation to, rearing, and marking at the TRFF (1998-2000), and transportation to release sites of up to 400,000 salmon per year.

Phase II is being presented as an optional funding request. Phase II element are:

- (1) install a dual water supply within the rearing area,
- (2) install water treatment equipment, and
- (3) add egg incubation and initial rearing facilities at TRFF.

The TRFF has successfully reared over 800,000 smolts without the proposed Phase II dual water supply and water treatment equipment; however, these are prudent improvements which would better insure successful annual operations at the TRFF. The egg incubation and initial rearing facility would allow Tuolumne River study salmon to be reared from egg to smolt entirely in Tuolumne River water and allow TRFF to operate independently from the MRFF thereby providing insurance against any major failure of MRFF's egg incubation or initial rearing operations. We request that CALFED consider the advisability of funding the Phase II improvements in 1997, especially if CALFED concurs with our belief that requirements for study salmon from TRFF will extend beyond the year 2000.

All salmon would be marked and released according to consensus-based protocols among South Delta and San Joaquin interests and applicable federal and state agencies for specific studies to be determined annually. All data related to the egg-taking and TRFF operation will be made readily available to all interested parties.

## LOCATION

The TRFF is located at the head of an unused portion of the Modesto Irrigation District main canal near La Grange Dam at River Mile 52 on the Tuolumne River about 32 miles east of Modesto in Stanislaus County. See Figure 1. The adult trapping operation would take place on the Tuolumne River at a suitable location or locations, e.g. at the Turlock Lake State Recreation Area about 10 miles downstream of La Grange Dam where power is available and a small trailer can be located for a 24-hour staff presence. A high percentage of the migrating salmon pass through this point of the river.

## EXPECTED BENEFITS

1. Provide up to 400,000 marked salmon per year for priority survival evaluations in the South Delta.
2. Reduce or eliminate the use of Feather River salmon in South Delta studies.
3. Provide an alternative to Merced River salmon for use in any Tuolumne River studies.
4. Reduce reliance on Merced River Fish Facility for providing salmon for all San Joaquin system studies.

## BACKGROUND & TECHNICAL JUSTIFICATION

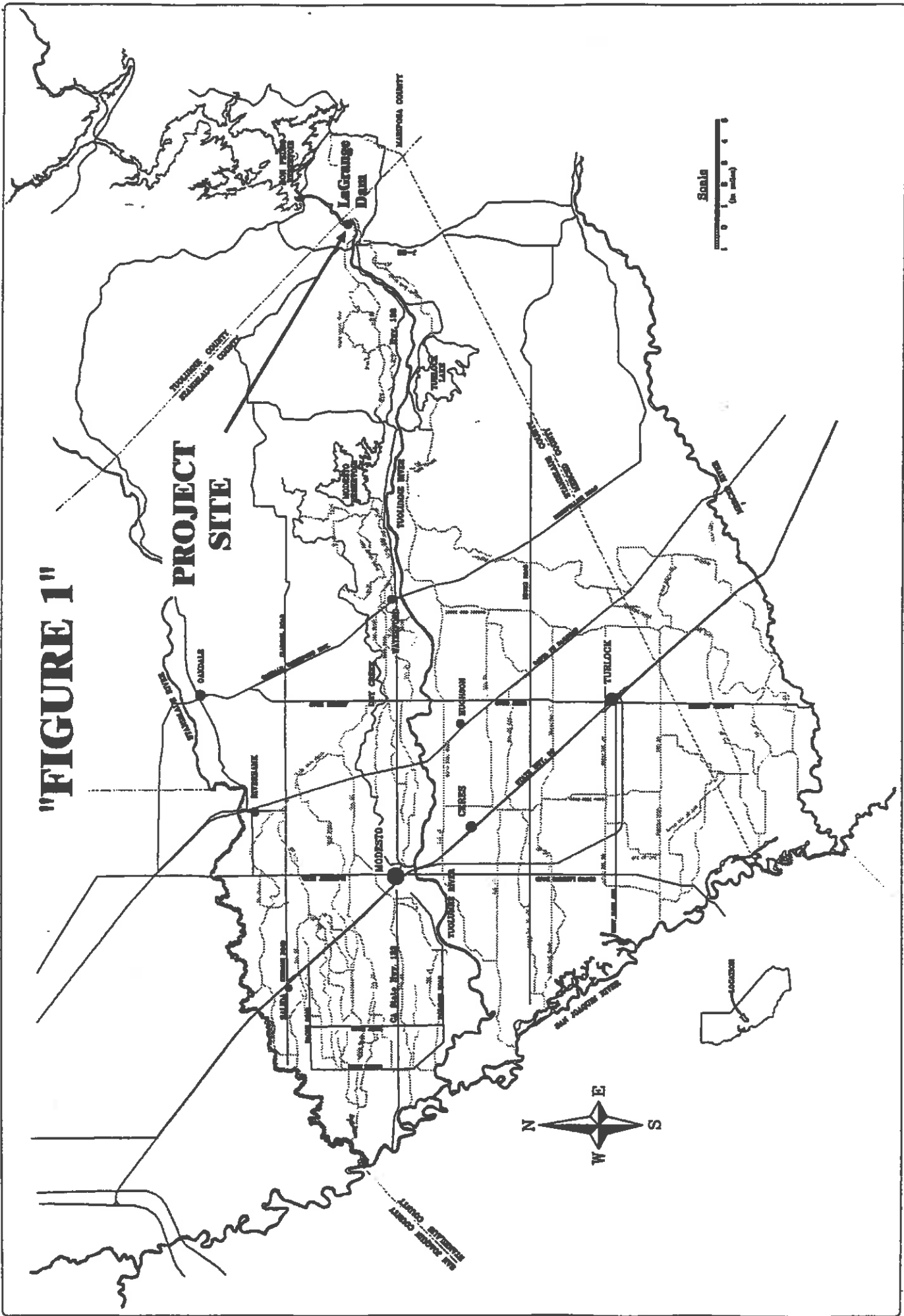
There is a recognized need to better understand the factors influencing the survival of naturally produced salmon from the San Joaquin River system through the Delta. The SJRGA and others have proposed augmenting existing IEP South Delta salmon studies to specifically address effects on salmon survival from various conditions of springtime San Joaquin River flow at Vernalis, State and Federal Delta export rates, along with a fishery protection barrier at the head of Old River. DFG has expressed concerns about (1) its ability to provide study salmon from the MRFF for South Delta studies because of its MRFF yearling program and other San Joaquin Basin studies which DFG states have priority and (2) some operational aspects of the existing TRFF. This project would help insure that study salmon, primarily marked with coded-wire tags (CWT), are available for South Delta studies by providing Tuolumne River salmon reared at an improved TRFF. Alternatively, if any salmon are used in Tuolumne River studies, those from the TRFF would allow MRFF salmon to be available for the South Delta studies.

The existing Tuolumne River Fish Facility was jointly developed in 1988-89 by Modesto Irrigation District, Turlock Irrigation District, and the California Department of Fish and Game (DFG). In the first year, 1989, DFG transferred 925,000 fry from MRFF and reared them at TRFF until June when DFG released 867,700 unmarked smolts into San Francisco Bay. DFG estimated the rearing capacity of TRFF to be about 1.5 million smolts because the entire rearing facility was not utilized. The facility was used to rear smaller numbers of salmon in 1990, 1991, 1993, 1994, and 1995. From time to time, DFG has used the TRFF to rear MRFF salmon when there were water quality concerns at the MRFF and on one occasion to rear trout from the



**"FIGURE 1"**

**PROJECT  
SITE**



## Moccasin hatchery.

The facility normally uses about 5 cfs, but has a flow capacity of up to 20 cfs, has suitable water temperatures, few disease problems, and very little mortality or bird predation. TID and ModID constructed the inlet and outlet structures and a bypass for local storm runoff. DFG installed weirs to create several segregated rearing sections and a loading platform on the access ramp. There is a power supply on site, security is good because of restricted access and regular patrol by ModID staff, and DFG has housing and an office within 2 miles of the site.

The MRFF has an existing egg incubation capability of more than four million eggs which is not used to capacity. DFG has previously operated egg-taking operations on the Stanislaus River and on stream channels near Los Banos. Recently DFG has suggested an egg-taking operation on the Tuolumne River.

## PROPOSED SCOPE OF WORK

### PHASE I

- A. Provide the following items at the present rearing site:
1. The necessary safety devices to meet State of California and OSHA requirements. This would include safety fencing, locking access gates, access ladders, and passageways.
  2. Truck ramp improvements for access and work areas.
  3. New bulkheads, fish screens, and walkway & work area gratings for the existing fish rearing inlet and outlet structures.
  4. Fingerling transfer pipes from each rearing pond.
  5. Auxiliary 4-inch water supply line from head water with multiple outlets for miscellaneous uses.
  6. Feeders at each rearing pond.
  7. Emergency low level alarms.
  8. Electrical service throughout the length of the rearing ponds.
  9. Metal building for food storage, office, toilet facilities, etc.
  10. Purchase five new Mark IV CWT machines and associated equipment and supplies.
  11. Miscellaneous equipment for operation and maintenance of the rearing facility.
- B. Provide the following items at the proposed adult trap and egg-taking facility:
1. River barrier to guide fish.
  2. Trap structure.
  3. Personnel trailer on site.
  4. Miscellaneous equipment for operation, egg taking, and transportation of the eggs.

- C. Provide operational monies necessary for three years operation of egg-taking, incubation, rearing, marking, and transportation to release sites of up to 400,000 salmon per year.

## PHASE 2

- A. Provide additional rearing capacity within the facility if required.
- B. Provide incubation and early rearing facilities on site for disease control and maintaining Tuolumne River stock.
- C. Provide water treatment facilities to assure water quality for incubation and early rearing. This treatment will make use of either ultraviolet or ozone for water born diseases and aeration for oxygen requirements.
- D. Provide a dual water supply system in the rearing ponds to completely separate one-half the fish from the other for disease control.

## MONITORING PLAN

The monitoring would primarily be associated with the existing inland and ocean recoveries of marked salmon. Juvenile salmon are recovered at several sampling locations in the San Joaquin River Delta, including the State and Federal water export facilities. Adult salmon are recovered in the ocean commercial and sport fisheries, in spawning stream carcass surveys, and in hatchery and trapping facilities. Onsite monitoring would be typical for a salmon rearing facility, including water temperature, salmon growth rate, and salmon survival. Genetic monitoring would be performed as part of a basin-wide program proposed by DFG.

## IMPLEMENTABILITY

DFG has stated it intentions to submit a proposal to CALFED for construction of an entirely new "interim" rearing facility downstream of the TRFF at DFG's proposed new hatchery site near the town of La Grange. Environmental groups have already indicated their opposition to DFG's proposal.

By an agreement between ModID, TID and DFG dated 1 June 1993, DFG has already agreed to continue to utilize the TRFF to rear salmon as needed through November 30, 2001, so long as funds are available to DFG for such purpose. This proposal would provide the necessary funds to DFG. As indicated above, this proposal is essentially the same as the Interim Artificial Propagation Program (#15) DFG itself submitted to the Joint CALFED/SJRMP San Joaquin River Technical Team Workshop at Bass Lake. It is hoped that DFG will recognize the practicality and cost effectiveness of this proposal and that DFG will agree to perform the following tasks which would be funded under the proposal: Tuolumne River egg-taking operations and transport of eggs to MRFF, incubation and initial rearing at MRFF, transport of

fry to TRFF, rearing salmon at TRFF, and transport of salmon smolts to release sites. CWT or other marking would be done by a contractor under DFG supervision.

If DFG declines to perform those tasks, then DFG will be requested to issue a permit to SJRGA to perform those tasks. Construction of improvements to the TRFF will be contracted out by SJRGA.

#### IV. COSTS AND SCHEDULES

##### BUDGET COSTS

The following budget costs are included for both Phase 1 and Phase 2 of the proposed project costs. Funding is only requested for Phase 1 work.

##### PHASE I (Funding Requested)

1.	Operational and safety improvements of existing facility	\$237,000
2.	River barrier and adult trap	\$ 75,000
3.	Four Mark IV CWT machines & support equipment	\$150,000
4.	Three year operation of rearing facility	\$292,000
5.	Three year operation of adult trap and egg-taking facility	\$105,000
6.	Three years incubation and early rearing	\$112,000
7.	Three years fish marking	\$132,000
8.	Three years smolt transportation and release	\$ 50,000
9.	Construction/Project Management	<u>\$115,000</u>
	Total	\$1,268,000

##### PHASE II (Optional Funding Request)

1.	Incubation facilities	\$218,000
2.	Dual water supply system	\$140,000
3.	Additional rearing ponds	\$245,000
4.	Water treatment equipment	\$130,000
5.	Construction/Project Management	<u>\$ 73,000</u>
	Total	\$806,000

##### SCHEDULE

The schedule below shows the various components of this proposal. Early assurance of funding will facilitate adult trapping and egg-taking starting in the fall of 1997.

##### Phase I:

1.	Preliminary project scoping and design	Completed
2.	Civil design for construction elements	Oct-Dec 1997
3.	Construction and installation at TRFF	Dec 1997-Feb 1998
4.	Egg-taking installation and operation	Oct through Dec 1997-1999
5.	MRFF incubation and initial rearing	Oct through Feb 1997/98-1999/2000
6.	TRFF rearing, marking, and transport	Feb through May 1998-2000

##### Phase II (assumes CALFED approval of optional funding request in 1997):

1.	Preliminary project scoping	Completed
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- |    |  |                                   |
|----|--|-----------------------------------|
| 2. | Civil design for construction elements | Oct 1997-Mar 1998                 |
| 3. | Construction and installation at TRFF  | Dec 1997-Oct 1998                 |
| 4. | Incubation and initial rearing at TRFF | Oct through Feb 1998/99-1999/2000 |

### THIRD PARTY IMPACTS

A potential minor impact to boating (e.g. canoes and kayaks) traffic during the egg-taking operations. This may necessitate a short portage.

## V. APPLICANT QUALIFICATIONS

The SJRGA includes member organizations which have been involved with both cooperative and independent studies of San Joaquin River fall-run chinook salmon since 1971. These include funding numerous salmon rearing and marking studies conducted in cooperation with DFG and U.S. Fish and Wildlife Service. The SJRGA has retained the consulting firm of S. P. Cramer & Associates, specifically engineer Joseph McMichael, to assist in developing this proposal. Mr. McMichael has over 30 years of experience with the U. S. Army Corps of Engineers on a wide range of fish facilities, including design and project management of salmon trapping, rearing, acclimation, and hatchery facilities. DFG has utilized the existing TRFF since 1989 as a satellite facility of the MRFF.

Tim Ford has been the staff aquatic biologist for TID and ModID since 1981 and has focused on the biology and habitat of salmon in the San Joaquin River system, especially in the Tuolumne River. Mr. Ford graduated from the University of California at Davis with a B.S. 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.

Contracting support and financial service support as needed will be provided by ModID staff. ModID Engineering will provide construction management and inspection services to the project. It is anticipated that a licensed professional civil engineer will be assigned to perform these duties.

## VI. COMPLIANCE WITH STANDARD TERMS & CONDITIONS

Applicant is a public entity. The applicable RFP project group types are Group 1, Public Works Construction for facilities construction and Group 3, Public Services for funding of operations of the facilities.

The applicant agrees to the terms and conditions of the Request for Proposals as amended by CALFED's Responses to RFP Questions dated 14 July 1997, and applicant intends to comply with those terms and conditions.

It is anticipated that some of the public works construction effort will be performed by private contractors. Pursuant to Question and Response 25 of the above CALFED Responses, 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:

Nondiscrimination Compliance Statement, RFP Item No. 8  
Noncollusion Affidavit - Public Works, RFP Item No. 11

Submitted by

SAN JOAQUIN RIVER GROUP AUTHORITY

By *Barbara A. Hetrick*  
Barbara A. Hetrick, Secretary

Dated: July 25, 1997.



# NONDISCRIMINATION COMPLIANCE STATEMENT

COMPANY NAME

San Joaquin River Group Authority (SJRGA)

The company named above (hereinafter referred to as "prospective contractor") hereby certifies, specifically exempted, compliance with Government Code Section 12990 (a-f) and California Code of Regulations, Title 2, Division 4, Chapter 5 in matters relating to reporting requirements and development, implementation and maintenance of a Nondiscrimination Program. Prospective contractor agrees not to unlawfully discriminate, harass or allow harassment against any employee or applicant for employment because of sex, race, color, ancestry, religious creed, national origin, disability (including HIV and AIDS), medical condition (cancer), age, marital status, denial of family and medical care leave and denial of pregnancy disability leave.

## CERTIFICATION

*I, the official named below, hereby swear that I am duly authorized to legally bind the prospective contractor to the above described certification. I am fully aware that this certification, executed on the date and in the county below, is made under penalty of perjury under the laws of the State of California.*

OFFICIAL'S NAME

Barbara A. Hetrick, Secretary SJRGA

DATE EXECUTED

July 25, 1997

EXECUTED IN THE COUNTY OF

Stanislaus

PROSPECTIVE CONTRACTOR'S SIGNATURE



PROSPECTIVE CONTRACTOR'S TITLE

San Joaquin River Group Authority

PROSPECTIVE CONTRACTOR'S LEGAL BUSINESS NAME

San Joaquin River Group Authority

Agreement No. \_\_\_\_\_

Exhibit \_\_\_\_\_

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

STATE OF CALIFORNIA )

)ss

COUNTY OF STANISLAUS )

Barbara A. Hetrick, being first duly sworn, deposes and  
(name)

says that he or she is Secretary of  
(position title)

the San Joaquin River Group Authority  
(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: July 25, 1997 By Barbara A. Hetrick  
Barbara A. Hetrick (person signing for bidder)



(Notarial Seal)

Subscribed and sworn to before me on

July 25, 1997  
Gail Humphrey  
(Notary Public)