

MEMBER UNITS EXHIBIT NUMBER 13

**1995 MEMORANDUM OF UNDERSTANDING FOR  
COOPERATION IN RESEARCH AND FISH MAINTENANCE  
-SANTA YNEZ RIVER -**

THIS MEMORANDUM OF UNDERSTANDING, made and entered into as of March 15, 1995 by and between:

**THE CALIFORNIA DEPARTMENT OF FISH AND GAME,  
THE SANTA YNEZ RIVER WATER CONSERVATION  
DISTRICT, IMPROVEMENT DISTRICT NO. 1,  
THE CACHUMA CONSERVATION RELEASE BOARD,  
THE UNITED STATES BUREAU OF RECLAMATION,  
SANTA YNEZ RIVER WATER CONSERVATION DISTRICT,  
THE UNITED STATES FISH AND WILDLIFE SERVICE,  
THE NATIONAL MARINE FISHERIES SERVICE,  
SANTA BARBARA COUNTY WATER AGENCY,  
AND OTHER AGENCIES AS AGREE TO ITS TERMS,**

together referred to herein as the "parties", WITNESSETH:

WHEREAS, the United States, Department of the Interior, Bureau of Reclamation, the Santa Ynez Water Conservation District, Improvement District No. 1, the California Department of Fish and Game, the Santa Ynez River Water Conservation District, the United States Fish and Wildlife Service, the National Marine Fisheries Service, the City of Lompoc, the California Sportfishing Protection Alliance, and the member units of the Cachuma Conservation Release Board (which member units are the Goleta Water District, the City of Santa Barbara, the Montecito Water District, the Carpinteria County Water District, and the Summerland Water District) have an interest to develop the information available and to be available regarding the fishery below Bradbury Dam, and to provide for the fishery below Bradbury Dam; and,

WHEREAS, the parties wish to continue development, consideration and review of such information and to provide for the fishery in an extended program; and,

WHEREAS, many of the parties have participated in the previous, similar understandings, which provide for cooperation in development and sharing of information and

management of water resources in a manner which attempts to balance the needs of consumptive water users with the needs of the fishery downstream of Bradbury Dam,

NOW THEREFORE, THE PARTIES ENTER THIS MEMORANDUM OF UNDERSTANDING to share work and information necessary for a mutually satisfactory resolution of their respective concerns related to the protection of fish and the protection of existing domestic and agricultural uses, in accordance with the following provisions:

1. **CONSENSUS COMMITTEE** To implement this Memorandum of Understanding and to direct cooperative efforts with regard to fisheries within the Santa Ynez River below Bradbury Dam, the parties shall maintain a Consensus Committee to direct the efforts of a Technical Advisory Committee to advise on fisheries issues. The Consensus Committee shall consist of one designated representative from each party to this Memorandum of Understanding who shall meet at least once each calendar quarter to provide policy, financial, legal, engineering or other assistance to a Technical Advisory Committee (provided herein), as may be required by the parties. The United States Bureau of Reclamation shall provide a Chair to preside over and conduct the meetings of the Consensus Committee. The Consensus Committee shall have the following responsibilities:

a. The Consensus Committee shall review the work and the recommendations of the Technical Advisory Committee (provided herein) and, where requested by the Technical Advisory Committee, it shall take such action as the Consensus Committee determines is appropriate to implement the recommendations, pursuant to the purposes of this Memorandum of Understanding.

b. The Consensus Committee shall be given an accounting (to be maintained by the United States Bureau of Reclamation) of all water held in the Fish Reserve Account, described in Paragraph 7, herein, all water released in accord with this Memorandum of Understanding, and the schedule proposed for any further releases, on a regular and periodic basis, during the term hereof.

2. **TECHNICAL ADVISORY COMMITTEE** The parties will maintain a Technical Advisory Committee, composed of persons with special training or experience in the fields of fishery biology, engineering, hydrology, and/or water supply and distribution in order to enhance cooperation among the parties; to collect, analyze and share information related to Santa Ynez River Watershed fisheries; and to make recommendations for releases of water related to fisheries. The State Department of Fish and Game shall provide a Chair to preside over and conduct the meetings of the Technical Advisory Committee and of the Biology Subcommittee. Each party may appoint a member to the Technical Advisory Committee. The State Water Resources Control Board may appoint a member to serve in *ex officio* status on the Technical Advisory Committee. The Technical Advisory Committee will meet regularly, or as often as it shall deem necessary, to fully explore alternative measures for the maintenance of fish downstream of Bradbury Dam. The Technical Advisory Committee shall have the following responsibilities:

a. The Technical Advisory Committee shall establish a process for the collection of relevant fishery data, including, but not limited to temperature, flows and location of fishery resources, which information shall be made available to all parties and to all interested persons, at regular intervals.

b. The Technical Advisory Committee shall develop recommendations for long term fishery management, projects and operations for consideration by the parties and by the Consensus Committee provided for herein.

c. The Technical Advisory Committee shall provide a year end summary of the minutes of meetings and of all information gathered during each calendar year, on or before the following March 1 of each year during the term hereof.

d. The Technical Advisory Committee shall attempt to determine the location and habitat requirements of any fish located downstream of Bradbury Dam.

e. A subcommittee of the Technical Advisory Committee (referred to herein as the Biology Subcommittee) composed of the three biologists who have served through the first and second understandings of the parties, shall make recommendations (as provided in Paragraph 7, hereof) to the United States Bureau of Reclamation regarding the release of water from the Fish Reserve Account, described herein. On all other matters the Technical Advisory Committee will make recommendation to the Consensus Committee. The Biology Subcommittee shall notify other interested biologists of the meetings and determinations under consideration so that the views and opinions of such professionals are available for the purposes of this Memorandum of Understanding.

f. A subcommittee of the Technical Advisory Committee (referred to herein as the Hydrology Subcommittee) composed of representatives from the Santa Barbara County Water Agency, the Santa Ynez River Water Conservation District and the Cachuma Conservation Release Board shall make investigations, as they may, from time to time, agree is necessary.

g. The Technical Advisory Committee shall supervise and direct the work necessary to complete the 1995 Study Plan approved by the parties and attached hereto as Exhibit A.

**3. FINANCIAL ARRANGEMENTS** The parties to this Memorandum of Understanding shall provide the staff, records, information, and technical assistance available from their respective jurisdictions to implement the 1995 Study Plan. In addition:

a. The Cachuma Conservation Release Board will provide, on an annual basis during the term of this Memorandum of Understanding, 89.7% of the funds required to conduct surveys, employ consultants, and for the copies, tools, equipment, supplies, travel, and other costs of the 1995 Study Plan, according to budgets approved as provided herein.

b. The Santa Ynez River Water Conservation District, Improvement District No. 1, will provide, on an annual basis during the term of this Memorandum of Understanding, 10.3% of the funds required to conduct surveys, employ consultants, and for the copies, tools, equipment, supplies, travel, and other costs of the 1995 Study Plan, according to budgets approved herein.

c. The Santa Barbara County Water Agency shall provide funding for USGS stream gauging and water quality measurement, immediately downstream of Bradbury Dam.

d. The Administrative Support Committee may join, contract with, and/or obtain contributions from one or more public agencies, businesses or public benefit organizations for the operation, benefit and support of the work provided for herein.

e. The total to be expended to conduct surveys, employ consultants, and for the copies, tools, equipment, supplies, travel, and other costs necessary to complete the 1995 Study Plan, shall not exceed the sum of One Hundred Seventy thousand and No/100 (\$170,000.00) dollars in any calendar year, during the term of this Memorandum of Understanding, without the further separate approval of the governing boards of the Cachuma Conservation Release Board and the

Santa Ynez River Water Conservation District, Improvement District No. 1.

**4. ADMINISTRATION** The parties agree that there will be an Administrative Support Committee composed of one staff member from each of the following agencies: the City of Santa Barbara, the Montecito Water District and the Santa Ynez River Water Conservation District, Improvement District No. 1. The Administrative Support Committee shall, acting together, coordinate budgets for this Memorandum of Understanding; administer to the contracts for consultants hired for the work provided herein; and give notices, distribute documents, keep minutes, provide for meeting space, and perform such other administrative and coordination needs as the Consensus Committee and the Technical Advisory Committee may, from time to time, require. The Administrative Support Committee shall appoint an Administrator for direct support for the work undertaken by this Memorandum of Understanding. The Administrative Support Committee shall cause the studies, surveys, reports and material regarding the Santa Ynez River to be prepared through contractors, agency employees, and such other means as they shall deem appropriate. The Administrator shall keep records of financial transactions on a generally recognized accounting basis and such records shall be maintained for a period of 3 years following the completion of the work assigned. The Administrator shall provide copies of materials developed, agendas, minutes, and other significant deliverables to the State Water Resources Control Board staff as part of the work to complete the study plan.

**5. DEVELOPMENT OF LONG TERM AGREEMENT** The parties to this Memorandum of Understanding intend to develop information for, and to work toward, a long term agreement about any fishery below the Bradbury Dam.

a. The parties to this Memorandum of Understanding will convene as reasonably necessary in view of the ongoing nature of the plan of work, to discuss a long term agreement for the fishery below Bradbury Dam.

b. The parties shall cooperate in an effort to resolve differences over provisions for the fishery below Bradbury Dam by agreement for the period between March 15, 1994 and March 14, 1996 and for such further period as to which this Memorandum of Understanding may be extended (March to March).

c. The parties agree to meet to discuss such long term agreement and extension of the study at least one time per year during the period of this Memorandum of Understanding and any extension thereof. Unless another date is selected by the Chair of the Technical Advisory Committee, and notice provided of such alternate date, the parties shall meet on the first Wednesday of October.

d. If the parties are unable to reach a long term agreement for the fishery below Bradbury Dam they shall prepare a stipulation regarding those areas in which they are in agreement and, by joint presentation, submit the remaining issues as appropriate for resolution by the California State Water Resources Control Board in accord with the rules and procedures of that Board.

**6. IMPLEMENTATION** The parties to this Memorandum of Understanding shall use their best efforts to ensure that the activities outlined in this Memorandum of Understanding are carried out in accordance with the recommendations provided by the Technical Advisory Committee. In providing direction concerning this Memorandum of Understanding, the

Technical Advisory Committee shall attempt to operate by consensus. However, in the event that a consensus cannot be reached, and for the sole purpose of carrying out the approved study plan, the Administrator appointed by the Administrative Support Committee shall make final resolution of the issue. The decision of the Administrator shall be final, with no right to review or appeal.

**7. FISH RESERVE ACCOUNT** To facilitate cooperative study and to maintain fish in the Santa Ynez River, below Bradbury Dam the United States Bureau of Reclamation shall establish a Fish Reserve Account to store spill water within the Cachuma Project for use as provided herein for the maintenance of fish below Bradbury Dam and to carry out necessary studies provided for in the 1995 Study Plan.

a. The Fish Reserve Account shall be used by the United States Bureau of Reclamation as necessary to maintain any fish below Bradbury Dam. Such use shall be based upon recommendation of the Biology Subcommittee of the Technical Advisory Committee.

b. The Fish Reserve Account shall be established in an amount equivalent to the amount of water stored in the Cachuma Project above elevation 750 feet, in accord with this Memorandum of Understanding.

c. In the event that the Fish Reserve Account is insufficient for purposes of the Memorandum of Understanding, and on the advice of the Technical Advisory Committee, the United States Bureau of Reclamation may make releases from the minimum pool of the Cachuma Project, up to an amount that shall not exceed 2000 acre feet during the term of the Memorandum of Understanding and an equal amount during each period of extension hereof, according to the same process as is provided for the Fish Reserve Account without further consultation with the Consensus Committee. If the 2000 acre feet is insufficient to carry out the studies identified in a current study plan, the Biology Subcommittee may request additional amounts of water from the Cachuma Conservation Release Board and the Santa Ynez River Water Conservation District, Improvement District # 1, through the Consensus Committee. The balance of any water remaining unused from previous terms of this Memorandum of Understanding shall not be added to or carried over into a present term. The water dedicated for such purpose during the current term of the understanding shall be the water approved and available under this term of the Memorandum of Understanding.

d. In the event that a consensus cannot be reached on the Biology Subcommittee, and for the sole purpose of carrying out the provisions of this Memorandum of Understanding, the chairperson of the Technical Advisory Committee shall make final resolution of the issue of release of water remaining in the Fish Reserve Account. The decision of the chairperson, regarding the recommended release, shall be final, with no right to review or appeal.

e. The Santa Ynez River Water Conservation District shall annually forecast its need for releases of water pursuant to decisions of the California State Water Resources Control Board, including, without reservation, WR 89-18 and WR 94-5. No later than May 31, 1995 the Santa Ynez River Water Conservation District shall announce whether it intends to call for release of water in calendar year 1995, as provided under such orders. The Santa Ynez River Water Conservation District shall estimate the timing (duration) and the magnitude (acre feet) of the anticipated release to be required. The Santa Ynez River Water Conservation District shall cooperate with all parties to this Memorandum of Understanding in requesting water releases and in preparation of river studies of the Santa Ynez River. As the releases referred to in this

subparagraph are reduced, the Santa Ynez River Water Conservation District shall coordinate with the Technical Advisory Committee to ensure that fishery resources are not adversely impacted by curtailment of the releases. Water released at the direction of the Santa Ynez River Water Conservation District shall be attributed to the credit obligations accruing under WR 89-18 and WR 94-5. The balance of releases which are carried out under this Memorandum of Understanding shall be from the minimum pool and the fishery reserve accounts or as otherwise specifically identified herein.

**8. FLASHBOARD MODIFICATIONS** The United States Bureau of Reclamation shall proceed forthwith to review the potential for modifying the flashboards of Bradbury Dam for the purpose of enhancing the yield of the Cachuma Project, and as may be required to control floods. The United States Bureau of Reclamation shall schedule meetings with all necessary personnel for the purpose of investigating the feasibility of modifying the flashboards in a manner which does not impair public safety. The United States Bureau of Reclamation will exercise good faith in its efforts to obtain approval for the flashboard modifications as soon as possible. Any water captured by virtue of the modified flashboards shall be added to the Fish Reserve Account and it shall be subject to use as provided above.

**9. DEPARTMENT OF FISH AND GAME** The California Department of Fish and Game will provide technical expertise and assistance in developing information and implementing alternatives which will maintain fisheries.

**10. TERM** This Memorandum of Understanding shall remain in full force and effect for the term beginning March 15, 1995 and ending March 14, 1996, and may be extended for successive one year terms ending March 15 upon the mutual approval of the parties who wish to continue the understanding.

**11. PRIMARY FORUM** All parties to this Memorandum of Understanding shall use their best efforts and good faith to develop information concerning fisheries through the provisions of this Memorandum of Understanding and the Technical Advisory Committee provided herein. The parties acknowledge that the United States Bureau of Reclamation, the Santa Barbara County Water Agency and the Cachuma Project Authority will pursue information necessary to satisfy NEPA and CEQA for the purposes of the Cachuma Project Contract Renewal. The parties desire to have the arrangements in this Memorandum of Understanding operate as the primary forum for resolution of issues related to maintaining fish, and agree:

a. The parties will use their best efforts to cooperate in the development of related information in each process to avoid overlap and duplication in other processes, including, but not limited to the Cachuma Project Contract Renewal, and the State Water Resources Control Board Consolidated Hearings on the Santa Ynez River.

b. The parties reserve their present rights and contentions related to or arising out of the impoundment and/or release of water in or through the Cachuma Project, and the impact and/or mitigation of impacts of such impoundment and/or releases of water upon fish and fish habitat in Lake Cachuma and downstream of Bradbury Dam in the Santa Ynez River, during the term of this Memorandum of Understanding, including any extension.

c. The parties agree that additional environmental information will need to be prepared

in connection with Consolidated Hearings on the Santa Ynez River before the State Water Resources Control Board. The parties acknowledge that data collection and studies for presentation of such information related to fish and fish habitat issues arising out of, or related to, the water rights issues before the State Water Resources Control Board may require three to five years to complete. The United States Bureau of Reclamation, the Cachuma Conservation Release Board and Santa Ynez River Water Conservation District, Improvement District No. 1, agree to prepare and certify a supplemental document or documents, as appropriate, for presentation to the State Water Resources Control Board including the information obtained from implementation of the 1995 Study Plan.

**12. ACCESS TO INFORMATION** Each of the parties to the memorandum of understanding shall have access to and right to use and publish any and all information, data, summaries, charts, programs and other material developed for the Santa Ynez River area. All information will be gathered, distributed and maintained in a manner to assure freedom of access and use for such material. None of the parties nor any administrators to this understanding shall be individually responsible to perfect or to defend such rights of use or access. The data collected pursuant to this Memorandum of Understanding may be referred to, used and presented, to the extent it is timely available, as part of the normal course of public hearings to be provided for the EIR/EIS as proposed or approved for the Cachuma Project Contract Renewal.

**13. COUNTERPART ORIGINALS** This agreement may be executed in one or more counterparts and each counterpart shall be evidence of participation.

**14. PROJECT BUDGETS** The project shall operate in accord with the budget prepared annually by the Administrator (not to exceed \$170,000) and approved by the Technical Advisory Committee pursuant to the provisions of Paragraph 6 of this understanding. The Administrator shall operate thereafter in accord with the approved budgets.

**15. NO WARRANTY FOR LEGAL DEFENSE** Services in legal defense of the study plan, the releases of water made herein, or in legal defense of the environmental material prepared pursuant to this Memorandum of Understanding, and other services that may be required by reason of challenges made or to be made to the project (which may include challenges on environmental grounds), are beyond the scope of service to be provided herein. Each party specifically reserves the right to participate or not participate in any such defense or challenge, from time to time, or to any extent at all, at the discretion of that party.

**16. AMENDMENT** This agreement may be amended, from time to time, with the written consent of all parties.

**17. NO INDEMNITY** No participant to this Memorandum of Understanding nor any officer or employee thereof shall be responsible for any damage or liability occurring by reason of anything done or omitted to be done by another party under or in connection with any



work, authority or jurisdiction delegated to the other party under this Memorandum of Understanding.

IN WITNESS WHEREOF, the parties hereto have executed this Agreement in as of the day and year first above written.

SANTA YNEZ RIVER WATER  
CONSERVATION DISTRICT, IMPROVEMENT  
DISTRICT NO. 1

By Thomas M. Petersen

CALIFORNIA DEPARTMENT  
OF FISH AND GAME

By \_\_\_\_\_

CACHUMA CONSERVATION  
RELEASE BOARD

By C. Charles Evans

CALIFORNIA SPORTFISHING  
PROTECTION ALLIANCE

By \_\_\_\_\_

UNITED STATES BUREAU  
OF RECLAMATION

By \_\_\_\_\_

SANTA YNEZ RIVER WATER  
CONSERVATION DISTRICT

By [Signature]

UNITED STATES FISH  
AND WILDLIFE SERVICE

By \_\_\_\_\_

SANTA BARBARA COUNTY  
WATER AGENCY

By \_\_\_\_\_

CITY OF LOMPOC

By \_\_\_\_\_

NATIONAL MARINE FISHERIES  
SERVICE

By \_\_\_\_\_

By \_\_\_\_\_

RWP/MOU/FISH/Mar15,95

By \_\_\_\_\_

work, authority or jurisdiction delegated to the other party under this Memorandum of Understanding.

IN WITNESS WHEREOF, the parties hereto have executed this Agreement in as of the day and year first above written.

SANTA YNEZ RIVER WATER  
CONSERVATION DISTRICT, IMPROVEMENT  
DISTRICT NO. 1

CALIFORNIA DEPARTMENT  
OF FISH AND GAME

By \_\_\_\_\_

By \_\_\_\_\_

CACHUMA CONSERVATION  
RELEASE BOARD

CALIFORNIA SPORTFISHING  
PROTECTION ALLIANCE

By \_\_\_\_\_

By \_\_\_\_\_

UNITED STATES BUREAU  
OF RECLAMATION

SANTA YNEZ RIVER WATER  
CONSERVATION DISTRICT

By \_\_\_\_\_

By \_\_\_\_\_

UNITED STATES FISH  
AND WILDLIFE SERVICE

SANTA BARBARA COUNTY  
WATER AGENCY

By Donald W. Stoffek 4/7/95  
Acting Field Supervisor, Ventura Co.  
CITY OF LOMPOC

By \_\_\_\_\_

NATIONAL MARINE FISHERIES  
SERVICE

By \_\_\_\_\_

By \_\_\_\_\_

By \_\_\_\_\_

RWP/MOU/FISH/Mar15,95

By \_\_\_\_\_

work, authority or jurisdiction delegated to the other party under this Memorandum of Understanding.

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SANTA YNEZ RIVER WATER  
CONSERVATION DISTRICT, IMPROVEMENT  
DISTRICT NO. 1

CALIFORNIA DEPARTMENT  
OF FISH AND GAME

By \_\_\_\_\_

By \_\_\_\_\_

CACHUMA CONSERVATION  
RELEASE BOARD

CALIFORNIA SPORTFISHING  
PROTECTION ALLIANCE

By \_\_\_\_\_

By \_\_\_\_\_

UNITED STATES BUREAU  
OF RECLAMATION

SANTA YNEZ RIVER WATER  
CONSERVATION DISTRICT

By William K. Lee Jr.

By \_\_\_\_\_

UNITED STATES FISH  
AND WILDLIFE SERVICE

SANTA BARBARA COUNTY  
WATER AGENCY

By \_\_\_\_\_

By \_\_\_\_\_

CITY OF LOMPOC

NATIONAL MARINE FISHERIES  
SERVICE

By \_\_\_\_\_

By \_\_\_\_\_

By \_\_\_\_\_

RWPMOUFISHMar15.95

By \_\_\_\_\_

work, authority or jurisdiction delegated to the other party under this Memorandum of Understanding.

IN WITNESS WHEREOF, the parties hereto have executed this Agreement in as of the day and year first above written.

SANTA YNEZ RIVER WATER  
CONSERVATION DISTRICT, IMPROVEMENT  
DISTRICT NO. 1

CALIFORNIA DEPARTMENT  
OF FISH AND GAME

By \_\_\_\_\_

By \_\_\_\_\_

CACHUMA CONSERVATION  
RELEASE BOARD

CALIFORNIA SPORTFISHING  
PROTECTION ALLIANCE

By \_\_\_\_\_

By \_\_\_\_\_

UNITED STATES BUREAU  
OF RECLAMATION

SANTA YNEZ RIVER WATER  
CONSERVATION DISTRICT

By \_\_\_\_\_

By \_\_\_\_\_

UNITED STATES FISH  
AND WILDLIFE SERVICE

SANTA BARBARA COUNTY  
WATER AGENCY

By \_\_\_\_\_

By *Admiral Schwartz*

CITY OF LOMPOC

NATIONAL MARINE FISHERIES  
SERVICE

By \_\_\_\_\_

By \_\_\_\_\_

ATTEST:  
ZANDRA CHOLMONDELEY  
Clerk of the Board

APPROVE AS TO FORM:  
STEPHEN SHANE STARK  
County Counsel

By *Elizabeth Martens*  
Deputy

RWP\MOU\FISH\Mar15.95

By *Manuel Benitez*  
Deputy

work, authority or jurisdiction delegated to the other party under this Memorandum of Understanding.

IN WITNESS WHEREOF, the parties hereto have executed this Agreement in as of the day and year first above written.

SANTA YNEZ RIVER WATER  
CONSERVATION DISTRICT, IMPROVEMENT  
DISTRICT NO. 1

CALIFORNIA DEPARTMENT  
OF FISH AND GAME

By \_\_\_\_\_

By \_\_\_\_\_

CACHUMA CONSERVATION  
RELEASE BOARD

CALIFORNIA SPORTFISHING  
PROTECTION ALLIANCE

By \_\_\_\_\_

By \_\_\_\_\_

UNITED STATES BUREAU  
OF RECLAMATION

SANTA YNEZ RIVER WATER  
CONSERVATION DISTRICT

By \_\_\_\_\_

By \_\_\_\_\_

UNITED STATES FISH  
AND WILDLIFE SERVICE

SANTA BARBARA COUNTY  
WATER AGENCY

By \_\_\_\_\_

By *Adrian Schwartz*

CITY OF LOMPOC

NATIONAL MARINE FISHERIES  
SERVICE

By \_\_\_\_\_

By \_\_\_\_\_

ATTEST:  
ZANDRA CHOLMONDELEY  
Clerk of the Board

APPROVE AS TO FORM:  
STEPHEN SHANE STARK  
County Counsel

By *Elizabeth Martine*  
Deputy RWP\MOU\FISH\Mar15.95

By *Michael Benke*  
Deputy

work, authority or jurisdiction delegated to the other party under this Memorandum of Understanding.

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SANTA YNEZ RIVER WATER  
CONSERVATION DISTRICT, IMPROVEMENT  
DISTRICT NO. 1

CALIFORNIA DEPARTMENT  
OF FISH AND GAME

By \_\_\_\_\_

By \_\_\_\_\_

CACHUMA CONSERVATION  
RELEASE BOARD

CALIFORNIA SPORTFISHING  
PROTECTION ALLIANCE

By \_\_\_\_\_

By \_\_\_\_\_

UNITED STATES BUREAU  
OF RECLAMATION

SANTA YNEZ RIVER WATER  
CONSERVATION DISTRICT

By \_\_\_\_\_

By \_\_\_\_\_

UNITED STATES FISH  
AND WILDLIFE SERVICE

SANTA BARBARA COUNTY  
WATER AGENCY

By \_\_\_\_\_

By *Marni Schwartz*

CITY OF LOMPOC

NATIONAL MARINE FISHERIES  
SERVICE

By \_\_\_\_\_

By \_\_\_\_\_

ATTEST:  
ZANDRA CHOLMONDELEY  
Clerk of the Board

APPROVE AS TO FORM:  
STEPHEN SHANE STARK  
County Counsel

By *Elizabeth Martinez*  
Deputy

RWP:MOU\FISH\Mar15.95

By *Michael B. Boulton*  
Deputy

work, authority or jurisdiction delegated to the other party under this Memorandum of Understanding.

IN WITNESS WHEREOF, the parties hereto have executed this Agreement in as of the day and year first above written.

SANTA YNEZ RIVER WATER  
CONSERVATION DISTRICT, IMPROVEMENT  
DISTRICT NO. 1

By \_\_\_\_\_

CACHUMA CONSERVATION  
RELEASE BOARD

By \_\_\_\_\_

UNITED STATES BUREAU  
OF RECLAMATION

By \_\_\_\_\_

UNITED STATES FISH  
AND WILDLIFE SERVICE

By \_\_\_\_\_

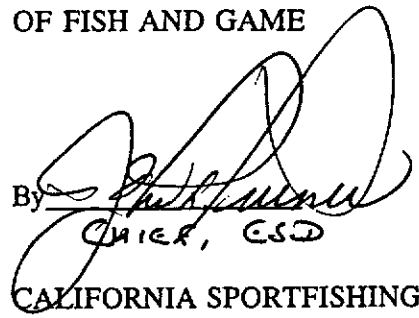
CITY OF LOMPOC

By \_\_\_\_\_

By \_\_\_\_\_

RWPMOU\FISH\Mar15,95

CALIFORNIA DEPARTMENT  
OF FISH AND GAME

By   
CHIER, CSD

CALIFORNIA SPORTFISHING  
PROTECTION ALLIANCE

By \_\_\_\_\_

SANTA YNEZ RIVER WATER  
CONSERVATION DISTRICT

By \_\_\_\_\_

SANTA BARBARA COUNTY  
WATER AGENCY

By \_\_\_\_\_

NATIONAL MARINE FISHERIES  
SERVICE

By \_\_\_\_\_

By \_\_\_\_\_

# 1995-96 Study Plan for the Santa Ynez River

## FISH ACCOUNT USAGE

As part of the Memorandum of Understanding (MOU), the Technical Advisory Committee (TAC) was allocated 2,000 acre feet (af) of water from Lake Cachuma. The Biological Subcommittee of the TAC developed a hierarchy for the use of the fish account. Uses of the MOU fish account are: 1) to maintain aquatic resources, especially steelhead/rainbow trout, threatened or endangered species, and/or their habitat, in the portion of the Santa Ynez River (SYR) immediately downstream of Bradbury Dam; 2) to utilize water for the conducting of flow related studies deemed by the TAC to be important for addressing questions relative to the State Water Resources Control Board hearing process; and 3) to utilize the water at the end of peak storm flows to improve or lengthen the migration period or corridor for upstream passage of adult steelhead/rainbow trout.

The Biological Subcommittee has used the water during the past two years: 1) to alleviate adverse environmental conditions for steelhead/rainbow trout observed to be holding in pools downstream of Bradbury Dam particularly in the Long Pool immediately downstream of the spill basin; 2) to conduct fish abundance and distribution/movement studies among habitats in the mainstem during low flow conditions; and 3) to collect water temperature information during low flow periods. These uses of water have added greatly to the knowledge of existing aquatic resources and habitats in the SYR and were used in the development of the Cachuma Project EIR/EIS. The TAC will continue to gather this type of "baseline" data, where necessary. Moreover, the TAC intends to collect habitat, temperature, and flow base data to better understand the SYR system under different flow regimes. The TAC also intends to build upon the information collected and analyzed for the Cachuma Project EIR/EIS. Fish account water will be utilized to collect these type of data as will.

It will also be the intent of the TAC to, whenever possible, take advantage of planned or non-planned releases from Cachuma Reservoir. For example, in 1994-95 the TAC had intended to gather information regarding passage flows using fish account water "piggybacked" on to peak storm events. However, two situations precluded this study; 1) the 1995 storms and 2) the need to release water from storage because of dam safety issues. Therefore, the TAC studies focused on upstream passage into tributaries since mainstem flows would be continuous throughout the upstream migration period. More upstream migrant traps were utilized this year, resulting in more information being gathered to describe tributary utilization by adult steelhead/rainbow trout than in past years. Further, more scale samples and tissue



samples have also been collected from adult fish this year than in past years. In addition, tributary flow data during upstream migration is being collected. Moreover, depth and velocity data from redds were collected for the first time.

#### ADULT TROUT/FISHERY SURVEYS

Due to the flashy nature of water flows in the Santa Ynez River Watershed, two separate study strategies are planned for 1995 for the surveys within the Santa Ynez River and its tributaries. These strategies address the level of survey effort between wet years (lagoon breaches), and dry years (lagoon does not breach).

##### Wet Years

A monitoring program will be initiated for the period from January-March (or sooner if the lagoon is breached) with the objectives of (1) documenting and quantifying the seasonal timing and numbers of adult trout and other fish species migrating from the ocean into the Santa Ynez River and other tributaries including but not limited to Hilton Creek, Salsipuedes Creek, El Jaro Creek, Alisal Creek, Quiota Creek, and possibly Alamo Pintado Creek and (2) documenting the geographic location, and numbers of trout and other fish species spawning within the mainstem and tributaries. The monitoring program includes deployment of upstream and downstream migrant traps on the mainstem SYR and most of the tributaries listed above. The trapping program on some of the creeks listed above is pending on property owner permission. Weir and panel construction have been completed and are ready for deployment in most of the above tributaries. Depending on conditions, the weirs will be checked and maintained on a daily basis by the TAC project biologist with help from the USFWS fisheries biologist, the TAC biologist seasonal aide, and interested volunteers and members involved with the TAC.

The fishery surveys (described below) will be performed throughout the monitoring program period through use of weirs on the mainstem and tributaries to monitor adult upstream migration, direct observation techniques provided water velocities are safe and water clarity is good, and walking surveys along the mainstem and tributaries to document spawning habitat steelhead/rainbow trout utilize. If spawning areas are observed, they will be flagged and studied (possibly using emergence traps) to determine conditions surrounding fry emergence. Photographs, scale and tissue samples will be collected from all captured trout for evidence of saltwater residence.

Length of captured fish will be recorded and relative condition assessed and documented for both upmigrating and outmigrating adults.

## Methods

A-Frame Alaskan Style Weirs will be constructed and deployed spanning the Santa Ynez River approximately 1.5 miles above Refugio Road on the Gainey Winery Property and upstream of the lagoon. These weirs will be in operation during the period that the lagoon is breached, and dismantled and stored when the flows recede and the lagoon spit is reformed. Lagoon breaching will be monitored during storm events. Time of weir installation will depend on the existence of a live stream from Refugio Road downstream to the ocean. Installation time will also depend on flow magnitude. A scaled down and altered version of the Alaskan Style Weir will be deployed on the tributaries. These weirs will be deployed during the same duration as the mainstem trapping. After upstream migration by adults has been observed, downstream traps will be added to capture the adults as they migrate back to the ocean. Captured adult steelhead/rainbow trout will be marked using fin clips to determine upon possible later capture if data has already been collected for that fish. Lengths will be measured and recorded for each fish captured.

Scale samples will be collected below the anterior end of the dorsal fin, just above the lateral line. A small tissue sample (1/4 inch square piece) will be removed from the right pectoral fin for future analysis. Water quality (temperature, dissolved oxygen, conductivity, alkalinity, and hardness) and water flow will be measured at trap sites periodically in order to evaluate conditions upmigrants and downmigrants prefer.

## **Dry Years**

The level of upstream trapping will be scaled down to downstream migrant trapping in the event the lagoon is not breached. Downstream trapping will allow enumeration and timing of any downstream migrating smolts. During the winter when the lagoon is not breached the effort will focus on identifying habitat in the Santa Ynez River Watershed capable of supporting steelhead/rainbow trout during these dry years. Surveys will be conducted along the tributaries and mainstem to seek out likely habitats (refuge pools) where steelhead/rainbow trout might be found. Physical habitat and water chemistry will be evaluated in order to assess the conditions necessary to support steelhead/rainbow trout.

## JUVENILE TROUT/FISHERY PRODUCTION

### Wet Years

Surveys (electroshocking, snorkeling, walking) will be performed during the period from March through June with the objectives of (1) documenting the abundance of juvenile trout and other fish species in the mainstem and tributaries for use in evaluating hatching and reproductive success, (2) determining the geographic distribution of juvenile trout and other fish species within the mainstem and tributaries which can subsequently be related to information on habitat conditions, flow, and water temperature, (3) collecting data on growth, survival, and conditions of fish inhabiting various areas within the mainstem and tributaries, and (4) determining timing, numbers, flow, and water quality parameters associated with any outmigrating smolts through use of weirs to trap outmigrants and the use of water quality equipment and flow meters. The fishery surveys will be performed to characterize the relative abundance of various fish species and life stages within various habitat areas.

### Methods

Previous study locations utilized in 1994 will be sampled to gain data on present trout population age structure, and any observed changes. New study sites will be located through electrofishing, snorkel surveys, and walking surveys to determine additional areas which might house remnant populations of steelhead/rainbow trout. If new areas of trout populations are identified by any surveys, the reaches will be quantitatively sampled, habitat mapped, water quality tested and flow measured. This data will be compared with other trout population areas to see if there are any similarities in habitat requirements. No areas will be disturbed which show evidence of recent spawning until enough time has passed to assure fry have emerged.

Salsipuedes and El Jaro Creeks are two tributaries that have a remnant populations of steelhead/rainbow trout. A weir will be deployed on Salsipuedes Creek to determine if a portion of the trout population will undergo smoltification and migrate to the ocean. The weir will be put in place during the month of December 1995. The reason for the early placement of the weir is to answer the question if steelhead/rainbow trout in this watershed outmigrate at the earliest convenience (i.e., the first major storm event) or wait until the spring. Length and weight will be measured and condition will be assessed on all captured trout prior to release downstream. Flow and water quality will be measured when any outmigrants are captured to evaluate the stream conditions outmigrants prefer.

A marking program may be developed (upon further discussion with the Biological Subcommittee) using freeze brand, pan jet, or fin

clip. Marking a representative sample of the juvenile fish with individualized marks would enable more effective monitoring of growth and movement throughout the year.

#### Dry Years

Little will change in the 1995 sampling methods or effort to find new areas of remnant steelhead/rainbow trout populations or continuing the historical data collection of known trout population areas in dry years. In the event of a dry rain year, the effort will focus on the surveying tributaries which have water, the lagoon, and areas of the mainstem that might serve as refuge areas.

#### SUMMER AND FALL POPULATION SURVEYS

##### Wet and Dry Years

Fishery surveys will be performed periodically throughout the period from July through December with the objective of documenting (1) species composition of the fisheries community inhabiting various reaches of the mainstem Santa Ynez River, tributaries which have water in them, and the lagoon, (2) the relative abundance of various fish species and their health and condition by habitat area and the relative importance of the various habitat areas, (3) the response of various fish species to seasonal variations in environmental conditions including instream flow and water temperatures, and (4) scientific information regarding life history characteristics and habitat requirements for various fish species inhabiting the Santa Ynez River system.

##### Methods

The surveys will be performed using electrofishing, direct observation techniques, and trapping. Three pass removal or mark and recapture methods will be used. When utilizing direct observation techniques, observers will pay close attention along margin areas where juvenile steelhead/rainbow trout may be utilizing algae mats or other aquatic vegetation for cover. Location of study areas will be those areas already identified as having trout populations present (i.e., confluence area of Salsipuedes and El Jaro Creeks). New study areas will be located during the adult and juvenile trout surveys. Water quality (temperature, dissolved oxygen) and flow will be measured at locations where steelhead/rainbow trout have been observed.

Lagoon sampling will take place, conditions permitting. Lagoon sampling methodology that may be employed include direct observation techniques (water clarity allowing), seining, trawling, and other non-destructive methods.

## FLOW MONITORING

Flow monitoring will be performed at each weir site during and after storm events, or in the event of fish migrant capture, using both cross-sectional measurements to establish stage-discharge relationships and routine monitoring from established staff gauges. The purpose of this monitoring is to evaluate flow conditions which favor up or outmigration.

Flow will also be measured at the temperature units each time a temperature check is performed or during different flow releases (i.e., WR 89-18, Fish Reserve Account, or releases resulting from dam safety issues). The purpose is to correlate water releases from Bradbury with water temperatures in the mainstem.

## WATER QUALITY MONITORING

Water quality monitoring will be performed throughout the year with the objective of documenting water temperature and dissolved oxygen at various locations within the mainstem and major tributaries. Water temperature monitoring will be an extension of the ongoing data collection program initiated in 1993 by DFG and Hanson Environmental. Temperature monitoring will continue at the six mainstem locations using DFG and Hanson Environmental equipment (three DFG and three Hanson Environmental). Additional locations will be identified during adult steelhead/rainbow trout surveys in the mainstem. At least one additional monitoring site may be added at the Cargaschi Ranch. This will be the lower most temperature unit in the river (not counting the lagoon). Temperature units will also be deployed in the tributaries, specifically those reaches which have remnant steelhead/trout populations. Deployment of temperature units in these areas will give a more thorough understanding of the conditions present for steelhead and other fish species throughout the year. Periodically, manual temperature readings will be made at the location of the temperature units at the time the units are set to record in order to assess their accuracy.

Vertical water temperatures will be measured within the mainstem and tributaries (deep pools) six times per year. Location of some of these pool measurements will be where temperature units are currently deployed and other sites (locations where steelhead/rainbow trout are known to inhabit, sites of cool water upwelling). Vertical profiles of dissolved oxygen will also be monitored within deeper pools within the mainstem and tributaries six times per year in addition to water temperature and dissolved oxygen monitoring conducted at these sites and at each location where fisheries surveys are performed. Vertical temperature, dissolved oxygen, and salinity measurements will be made at several set locations from the head of the lagoon to the lagoon mouth six times per year. Vertical profiles of temperature, dissolved oxygen, salinity will also be made along transect lines

bank to bank at the locations of the previously mentioned sites three times per year. Vertical profiles of temperature and dissolved oxygen will be performed in Lake Cachuma at three locations six times per year.

A study of the relationship between level of flows and habitat for fish will be undertaken together with an assessment of the extent of habitat available during the hot summer months. A combination of temperature and other water quality measurements will be conducted during flows from releases made to satisfy seismic safety concerns, from downstream rights (WR 89-18) releases, and where it will add measurably to the study efforts, through releases from water provided under Section 7 of the 1995 MOU, to make this assessment. Successive flow levels (i.e. 30, 20, 15, 10, 5 cubic feet per second) will be maintained between Bradbury Dam and Alisal Bridge. Each of these flow levels will be maintained constant for such a period of time, not to exceed five days, as the biologists concerned agree are necessary to gather this data. An effort will be made to coordinate such work with WR 89-18 releases and other flows, in preference to use of the water provided under Section 7 of the 1995 MOU. Water and air temperatures and dissolved oxygen will be measured at different locations (including potential cool water refuge sites) at intervals throughout each 24 hour period. In addition, information will be provided from in-place temperature thermographs. All measurements will be repeated during the course of each of the successive flow levels. During the course of any such flows, if it is determined that water is entering the lagoon, vertical temperature, dissolved oxygen, and salinity measurements will be made at the lagoon to investigate changes in water quality that may be more conducive for juvenile steelhead rearing.

#### HABITAT MAPPING AND INVENTORY

Aerial photos will be taken of the mainstem of the Santa Ynez River to assess areas of passage bottlenecks. Once these areas are identified, habitat mapping will be performed using DFG habitat typing criteria to validate photo interpretation of bottlenecks. The habitat mapping information will be used in conjunction with flow studies to determine when flows become insufficient to upstream passage.

Habitat mapping will be performed at the survey locations in which steelhead/trout populations are observed. These and future sites will be mapped during inventory surveys and population estimates of trout are observed.