

MINUTE ITEM

This Calendar Item No. 32 was approved as Minute Item No. 32 by the State Lands Commission by a vote of 3 to 0 at its 4/6/94 meeting.

CALENDAR ITEM

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GENERAL LEASE - PUBLIC AGENCY USE

APPLICANT:

Central Coast Water Authority
c/o Susan Petrovich,
Attorney at Law
Hatch & Parent
21 East Cabrrillo Street
Santa Barbara, California 93101

AREA, TYPE LAND AND LOCATION:

5.552 acres of sovereign land located near Vandenberg Village, Santa Barbara County.

LAND USE:

Construction, operation, and maintenance of an extension of the State water project aqueduct to deliver treated water within Santa Barbara County.

PROPOSED LEASE TERMS:

Lease period:

Forty-nine (49) years beginning April 6, 1994.

Consideration:

The public use and benefit; with the State reserving the right at any time to set a monetary rental if the Commission finds such action to be in the State's best interest and compensation for environmental impacts.

BASIS FOR CONSIDERATION:

Pursuant to 2 Cal. Code Regs. 2003.

PREREQUISITE CONDITIONS, FEES AND EXPENSES:

Filing fee and processing costs have been received.

STATUTORY AND OTHER REFERENCES:

A. P.R.C.: Div. 6, Parts 1 and 2; Div. 13.

B. Cal. Code Regs.: Title 3, Div. 3; Title 14, Div. 6.

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AB 884:

N/A

BACKGROUND:

In 1991, after several years of dry conditions, the majority of Santa Barbara residents voted to import State water by building an aqueduct to Santa Barbara. These votes were on a area by area basis, with 3 areas of the County voting to defeat the bond measures on the ballot and thereby voting to not pay for or take State water. The districts (members) voting to fund State water created the Central Coast Water Authority ("CCWA") to construct and operate the portion in Santa Barbara County. The aqueduct will run from northwest Kern County through San Luis Obispo County and into Santa Barbara County, culminating at Lake Cachuma, northerly of the City of Santa Barbara. From Lake Cachuma the water will be delivered through existing facilities to the south coast of Santa Barbara County. A portion of the proposed aqueduct will cross land under the jurisdiction of State Lands Commission. These lands were acquired in 1991 as sovereign land. The total aqueduct is 144 miles long. The Department of Water Resources will construct and operate 102 miles of the project, while CCWA will operate and construct 42 miles. The total cost of the entire project is \$502 million with CCWA's portion totalling \$129 million.

THE STATE PARCEL:

The property (State Parcel) acquired by the State in 1991 is approximately 5125 acres in size and essentially surrounds the community of Vandenberg Village. The proposed route for the project will cross State owned land utilized for cattle grazing, cultivated agricultural fields, as well as State lands containing a number of natural biological communities, including Burton Mesa Chaparral. Burton Mesa Chaparral is a unique scrubland plant community of exceptional biological diversity. There are over 150 plant species found in Burton Mesa Chaparral, including at least 10 varieties which occur nowhere else in the world. Other native plant life in the proposed project area includes grasslands, oak forest, isolated oak trees and chaparral shrubs, and coastal scrub vegetation. Wildlife includes the common residents of such habitats, including various birds, rabbits, lizards, snakes, and rodents. Larger mammals such as deer, mountain lion, bobcat, and coyotes are also found. It is possible that the American badger and the California horned lizard, California state species of concern, occupy

the area. The topography varies from flat to gentle slopes. The soil generally is sandy, being comprised of consolidated to unconsolidated sands.

The application submitted by CCWA on December 12, 1993, involved approximately 2.3 miles of land under the Commissions jurisdiction. Of the 2.3 miles, approximately 3,480 feet abutted residential parcels within Vandenberg Village. Approximately 13 homes abut the State parcel while an additional 15 homes abut non-state owned land along the route of the proposed pipeline in the vicinity. These homeowners expressed opposition to the placement of the line behind their homes. Construction of the pipeline would require the clearing of up to a 120-foot wide swath behind their homes, with the resulting loss of a significant number of native oak trees, Burton Mesa Chaparral, and other vegetation.

The homeowners filed suit challenging the adequacy of the environmental process conducted by CCWA. (Vandenberg Village Concerned Citizens v. Central Coast Water Authority, Case No. 198884, Superior Court of the State of California for the County of Santa Barbara, Case No. 198884.)

The Petitioner contended generally that the environmental review was inadequate with respect to approximately 18 miles of pipeline that was realigned from the original planned route. The court agreed with the Plaintiff that appropriate consideration to alternative realignments including the proposed route behind the homes was inadequate, and additional review should be completed with specific discussion and analysis of conditions and impacts relating to the proximity of residential development, oak trees and other vegetation, and riparian problems associated with the stream crossing and analysis regarding the nature and extent of the so called "fire break".

The CCWA has commenced the additional environmental review as required. The CCWA has requested that the portion of the lease area not affecting the proposed alignment near the residences be granted. It is staffs understanding the plaintiff has no objection to the granting of the lease as proposed herein.

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Granting of the lease would not affect any of the alternative proposals being addressed under the current environmental review.

It is believed that most of the alternatives being analyzed would also involve Commission lands, and that CCWA would apply to amend the lease to include additional area in the immediate future.

The proposed lease and temporary easement area will require the destruction of approximately 0.26 acres of Burton Mesa and 21 Oak trees.

In addition to the biological resources loss due to the construction, the preserve will suffer scenic degradation, loss of aesthetic values, noise, dust and other disturbances, which will occur because of construction.

CONSTRUCTION:

The project includes construction, operation, and maintenance of an underground water pipeline, with appurtenances thereto, some of which (such as sensors, valves, and the like) will be located at above ground level. Within the construction corridor, to the greatest extent feasible, every effort will be taken to ensure the least damage to the pristine habitat. Where feasible, the corridor will be narrowed to avoid sensitive biological resources.

A detailed Final Biological Resources Mitigation Plan and Final Mitigation Program have been incorporated into the project (see Exhibit "D"). A revegetation plan for the rehabilitation of disturbed areas is being prepared by CCWA environmental consultants and will be completed prior to construction.

The environmental mitigation measures identified through an environmental analysis which will be performed by the construction contractor will be implemented as specified in the CCWA contract bidding documents, Section 01030, Environmental Mitigation, attached as Exhibit "J". These measures and the measures identified in the Final Biological Resources Mitigation Plan and Final Mitigation Program are hereby incorporated into the proposed project on State lands, with the following exceptions:

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- A. The final preconstruction surveys on State lands shall include a representative from the State Lands Commission.
- B. A biological environmental compliance monitor to be present at all times during any construction activities on State lands. At the option of the SLC, an SLC staff representative will also be present as deemed necessary by the SLC.
- C. Any deviations from construction as planned, including, but not limited to any activities outside of the established temporary construction ROW, or alterations of previously identified clearing and grading exclusion zones, shall be subject to prior approval by SLC.

Construction on the State Parcel is scheduled to commence on or about April 11, 1994 and be completed by April 11, 1995. Construction along the entire pipeline alignment (from Vandenberg Air Force Base to Lake Cachuma) will be timed to avoid construction activities proximate to bird nesting areas during nesting season, to avoid construction within live streams, and to otherwise minimize disturbance of sensitive species during times when they are most vulnerable to injury from such a disturbance. For that reason, the precise timing of construction through the State Parcel cannot be pinpointed.

The clearing of the land and construction of the pipeline and appurtenances will temporarily change the ground contours because it involves trenching. The contours will be restored and the corridor revegetated upon completion of construction. Prior to construction, the revegetation plan for State lands will be submitted to the SLC for review and approval.

PUBLIC BENEFIT:

The project will provide a supplemental water supply to the water purveyors who have contracted with the Central Coast Water Authority to extend the Coastal Branch, Phase II, of the State Water Project aqueduct into Santa Barbara County. The present groundwater overdraft in water basins within the County exceeds 60,000 acre feet per year. At present, water purveyors within the County are reliant on purely local supplies, primarily groundwater, river and stream flow, and local reservoirs. Prolonged drought and siltation, among

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other threats to the long-term viability of these supplies, lead the participants in CCWA to seek an affordable supplemental water supply. The proposed project provides such a supplemental supply and has County-wide benefits. These benefits also extend to San Luis Obispo County, since contractors within that county also are participating in the extension of the Coastal Branch. Without participation by CCWA, such an extension would not be economically viable for San Luis Obispo County. San Luis Obispo County groundwater basins also are experiencing an overdraft in excess of 60,000 acre feet per year.

The proposed lease includes provisions in addition to those found in the attached documents to ensure the preservation of the State's resources.

The proposed lease includes only that portion of the project as agreed to by the Plaintiff and Defendant in Case No. 198884. Additional lease area if any will require additional SLC approval.

OTHER PERTINENT INFORMATION:

1. This activity involves lands which have NOT been identified as possessing significant environmental values pursuant to P.R.C. 6370, et seq. However, the Commission has declared that all tide and submerged lands are "significant" by nature of their public ownership (as opposed to "environmental significant"). Since such declaration of significance is not based upon the requirements and criteria of P.R.C. 6370, et seq., use classifications for such lands have not been designated. Therefore, the finding of the project's consistency with the use classification as required by 2 Cal. Code Regs. 2954 is not applicable.
2. The United States Army Corps of Engineers has authorized of this project under Nationwide Permit.
3. The State Water Resources Control Board granted for the project a waiver of certification and conditional certification under Clean Water Act Section 401, a copy of which is attached.

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4. United States Fish and Wildlife Service has consulted with the United States Army Corps of Engineers under Section 7 of the Endangered Species Act and has issued a Biological Opinion, upon which the Corps of Engineers has issued its authorization to proceed.
5. The California Department of Fish and Game has executed a Memorandum of Agreement with the Central Coast Water Authority addressing potential "takes" of State-listed and candidate species and their habitats under the California Endangered Species Act (Fish and Game Code Section 2081) and the two agencies have reached mutual agreement as to mitigation of impacts to listed and candidate species. A copy of the Memorandum of Understanding is attached as Exhibit "H". The California Department of Fish and Game Stream Alteration Agreement for stream crossing included in the project is attached as Exhibit "F".
6. The project is exempt from County zoning and building codes under Government Code Section 53091 and 53096.
7. The County of Santa Barbara Planning Commission has found the project to be consistent with the County's Comprehensive General Plan.

APPROVALS OBTAINED:

United States Army Corps of Engineers.

FURTHER APPROVALS REQUIRED:

State Lands Commission.

ENVIRONMENTAL COMPENSATIONS:

As compensation for loss of native oak trees, Burton Mesa Chaparral scenic degradation, aesthetic value, noise, dust and other disturbances which will occur because of construction.

EXHIBITS:

- A. Land Description - 49-year lease.
- A-1 Land Description - Temporary Easements
- B. Location Map
- B-1 Site Map
- C. Central Coast Water Authority Resolutions & CEQA Findings

CALENDAR ITEM NO. C32 (CONT'D)

- D. Final Biological Resources Mitigation Plan and Final Mitigation Program
- E. Notice of Determination
- F. Streambed Alteration Agreement 5-012-94
- G. CCWA Major Projects Milestones
- H. California Endangered Species Act Memorandum of Understanding between CCWA and California Dept. of Fish and Game
- I. Mitigation Monitoring Program
- J. CCWA Contract Documents - Volume I

IT IS RECOMMENDED THAT THE COMMISSION:

1. FIND THAT AN EIR WAS PREPARED AND CERTIFIED FOR THIS PORTION OF THE PROJECT BY THE CENTRAL COAST WATER AUTHORITY, SCH 91031071, INCLUDING A FINAL BIOLOGICAL RESOURCES MITIGATION PLAN AND FINAL MITIGATION PROGRAM, AND THAT THE COMMISSION HAS REVIEWED AND CONSIDERED THE INFORMATION CONTAINED THEREIN.
2. ADOPT THE FINDINGS MADE IN CONFORMANCE WITH SECTION 15096(h) OF THE STATE CEQA GUIDELINES FOR THIS PORTION OF THE PROJECT, AS CONTAINED IN EXHIBIT "C", ATTACHED HERETO.
3. ADOPT THE MITIGATION MONITORING PLAN FOR THIS PORTION OF THE PROJECT, AS CONTAINED IN EXHIBIT "I", ATTACHED HERETO.
4. AUTHORIZE ISSUANCE TO CENTRAL COAST WATER AUTHORITY OF A 49-YEAR GENERAL LEASE - PUBLIC AGENCY RIGHT OF WAY LEASE BEGINNING APRIL 6, 1994; IN CONSIDERATION OF THE PUBLIC USE AND BENEFIT, WITH THE STATE RESERVING THE RIGHT AT ANY TIME TO SET A MONETARY RENTAL IF THE COMMISSION FINDS SUCH ACTION TO BE IN THE STATE'S BEST INTEREST; FOR THE CONSTRUCTION OPERATION AND MAINTENANCE OF AN UNDERGROUND WATER PIPELINE AND APPURTENANCES FACILITIES ON THE LAND DESCRIBED ON EXHIBIT "A" ATTACHED AND BY REFERENCE MADE A PART HEREOF.

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EXHIBIT "A"
60 Foot Forty Nine Year Lease

A strip of land 60 feet wide, across State owned lands, within a portion of the Rancho Mission de la Purisima and the Rancho Jesus Maria and portions of Sections 21, 28, 29, 32, 33 in Township 8 North, Range 34 West, San Bernardino Base and Meridian, in the County of Santa Barbara, State of California, as shown on the Maps recorded in Book 21, Pages 153 and 154 of Records of Survey and described in a Deed to the State of California recorded June 20, 1991, as Instrument No. 91-038941 of Official Records, both recorded in the Office of the County Recorder of said County, and 30 feet on each side of the following described centerline:

BEGINNING at a point being located at California Coordinate System of 1983 (CCS 83), Zone 5, Position N 2 102 127.34, E 5 817 485.76, said point being N 48°02'21"W, a distance of 86.09 feet, more or less, from a point in a line shown on a Record of Survey, recorded in Book 115, Page 62 of Records of Survey, as having a bearing of N 28°25'46"E, and a length of 2208.88 feet, said last mentioned point being distant, S 28°26'05"W, 142.76 feet, more or less, along said line from the northeasterly terminus of said line;

Thence S 48°02'21"E, a distance of 80.54 feet;
 Thence S 34°56'36"E, a distance of 347.19 feet;
 Thence S 42°55'45"E, a distance of 855.26 feet;
 Thence S 17°27'00"E, a distance of 435.62 feet;
 Thence S 24°58'59"E, a distance of 912.93 feet;
 Thence S 61°13'32"E, a distance of 735.39 feet;
 Thence S 26°10'52"E, a distance of 204.31 feet;
 Thence S 07°53'18"E, a distance of 352.29 feet;
 Thence S 47°02'29"E, a distance of 652.98 feet;
 Thence S 53°00'13"E, a distance of 779.45 feet;
 Thence S 44°25'27"E, a distance of 510.34 feet;
 Thence S 48°23'28"E, a distance of 314.75 feet;
 Thence S 35°12'22"E, a distance of 98.48 feet;
 Thence S 26°33'19"E, a distance of 211.67 feet;
 Thence S 49°45'06"E, a distance of 161.17 feet;
 Thence S 78°59'31"E, a distance of 260.28 feet;
 Thence S 73°27'01"E, a distance of 249.26 feet;

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Thence S 49°01'38"E, a distance of 213.34 feet;
Thence S 40°13'27"E, a distance of 160.85 feet;
Thence S 30°57'32"E, a distance of 249.58 feet;
Thence S 37°38'38"E, a distance of 246.66 feet;
Thence S 18°48'49"E, a distance of 414.81 feet;
Thence S 09°13'57"E, a distance of 446.53 feet;
Thence S 48°52'33"E, a distance of 144.80 feet;
Thence S 55°24'46"E, a distance of 452.57 feet;
Thence S 74°06'56"E, a distance of 444.92 feet;
Thence S 72°11'01"E, a distance of 525.63 feet;
Thence S 58°07'50"E, a distance of 754.59 feet;
Thence S 58°07'50"E, a distance of 410.60 feet;
Thence S 35°37'50"E, a distance of 123.77 feet;
Thence S 59°30'36"E, to Station 481 + 50 and the end of the herein described centerline.

The sidelines of said sixty (60.00) foot wide strip shall be lengthened or shortened as necessary to meet at angle points, and to begin and terminate on the boundary lines of the land granted to the State of California in said Deed.

EXCEPTING THEREFROM any portion of said 60 foot wide strip, lying outside the boundaries of said land belonging to the State of California, as described in said Deed to the State of California recorded June 20, 1991, as Instrument No. 91-038941 of Official Records, recorded in the Office of the County Recorder of Santa Barbara County, State of California.

Coordinate positions recited herein are expressed in feet converted from meters. Bearings and distances recited herein are based on the California Coordinate System of 1983 (CCS 83), Zone 5.

END DESCRIPTION

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EXHIBIT "A-1"
TEMPORARY CONSTRUCTION EASEMENT

Nine strips of land, of varying width, within portions of the Rancho Mission de la Purisima and the Rancho Jesus Maria and portions of Sections 21, 28, 29, 32 and 33 in Township 8 North, Range 34 West, San Bernardino Base and Meridian, in the County of Santa Barbara, State of California, as shown on the Maps recorded in Book 21, Pages 153 and 154 of Records of Survey and described in a Deed to the State of California recorded June 20, 1991, as Instrument No. 91-038941 of Official Records, both recorded in the Office of the County Recorder of said County, and more particularly described within the following parcels:

PARCEL ONE

A thirty (30.00) foot wide strip of land, the northeasterly line of which is parallel and concentric with and 30.00 feet southwesterly of the following described line:

BEGINNING at a point being located at California Coordinate System of 1983 (CCS 83), Zone 5, Position N 2 102 127.34, E 5 817 485.76, said point being N 48°02'21" W, a distance of 86.09 feet, more or less, from a point in a line shown on a Record of Survey, recorded in Book 115, Page 62 of Records of Survey, as having a bearing of N 28°25'46"E, and a length of 2208.88 feet, said last mentioned point being distant, S 28°26'05" W, 142.76 feet, more or less, along said line from the northeasterly terminus of said line;

Thence S 48°02'21" E, a distance of 80.54 feet;

Thence S 34°56'36" E, a distance of 347.19 feet;

Thence S 42°55'45" E, a distance of 855.26 feet;

Thence S 17°27'00" E, a distance of 435.62 feet;

Thence S 24°58'59" E, a distance of 912.93 feet.

The sidelines of said thirty (30.00) foot wide strip shall be lengthened or shortened as necessary to meet at angle points, and to begin and terminate on the boundary lines of the land granted to the State of California in said Deed.

PARCEL TWO

A thirty (30.00) foot wide strip of land, the northeasterly line of which is described as follows:

COMMENCING at a point being located at California Coordinate System of 1983 (CCS 83), Zone 5, Position N 2 102 127.34, E 5 817 485.76, said point being N 48°02'21" W, a distance of 86.09 feet, more or less, from a point in a line shown on a Record of Survey, recorded in Book 115, Page 62 of Records of Survey, as having a bearing of N 28°25'46" E, and a length of 2208.88 feet, said last mentioned point being distant, S 218°26'05" W, 142.76 feet, more or less, along said line from the northeasterly terminus of said line;

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Thence S 48°02'21"E, a distance of 80.54 feet;
Thence S 34°56'36"E, a distance of 347.19 feet;
Thence S 42°55'45"E, a distance of 855.26 feet;
Thence S 17°27'00"E, a distance of 435.62 feet;
Thence S 24°58'59"E, a distance of 912.93 feet;
Thence S 61°13'32"E, a distance of 735.39 feet;
Thence S 26°10'52"E, a distance of 204.31 feet;
Thence S 07°53'18"E, a distance of 352.29 feet;

Thence S 62°32'07"W, a distance of 31.84 feet to an angle point in the southwesterly line of sixty (60.00) foot wide strip described hereinbefore in Exhibit "A" and the POINT OF BEGINNING of the herein described parcel;

Thence S 47°02'29" E, a distance of 665.21 feet;
Thence S 53°00'13" E, a distance of 778.76 feet.

The sidelines of said thirty (30.00) foot wide strip shall be lengthened or shortened as necessary to meet at angle points to begin on a line having a bearing of S 7°53'18" E, from the Point of Beginning and terminate on the boundary lines of the land granted to the State of California in said Deed.

PARCEL THREE

A thirty (30.00) foot wide strip of land, the easterly line of which is described as follows:

COMMENCING at a point being located at California Coordinate System of 1983 (CCS 83), Zone 5, Position N 2 102 127.34, E 5 817 485.76, said point being N 48°02'21" W, a distance of 86.09 feet, more or less, from a point in a line shown on a Record of Survey, recorded in Book 115, Page 62 of Records of Survey, as having a bearing of N 28°25'46" E, and a length of 2208.88 feet, said last mentioned point being distant, S 28°26'05" W, 142.76 feet, more or less, along said line from the northeasterly terminus of said line;

Thence S 48°02'21" E, a distance of 80.54 feet;
Thence S 34°56'36" E, a distance of 347.19 feet;
Thence S 42°55'45" E, a distance of 855.26 feet;
Thence S 17°27'00" E, a distance of 435.62 feet;
Thence S 24°58'59" E, a distance of 912.93 feet;
Thence S 61°13'32" E, a distance of 735.39 feet;

Thence S 26°10'52" E, a distance of 204.31 feet;
Thence S 07°53'18" E, a distance of 352.29 feet;
Thence S 47°02'29" E, a distance of 652.98 feet;
Thence S 53°00'13" E, a distance of 779.45 feet;
Thence S 44°25'27" E, a distance of 510.34 feet;
Thence S 48°23'28" E, a distance of 314.75 feet;
Thence S 35°12'22" E, a distance of 98.48 feet;
Thence S 26°33'19" E, a distance of 211.67 feet;
Thence S 49°45'06" E, a distance of 161.17 feet;
Thence S 78°59'31" E, a distance of 260.28 feet;
Thence S 73°27'01" E, a distance of 249.26 feet;
Thence S 49°01'38" E, a distance of 213.34 feet;
Thence S 40°13'27" E, a distance of 160.85 feet;
Thence S 30°57'32" E, a distance of 249.58 feet;
Thence S 37°38'38" E, a distance of 246.66 feet;
Thence S 18°48'49" E, a distance of 414.81 feet;

Thence S 75°58'37" W, a distance of 30.11 feet to an angle point in the westerly line of the 60.00 foot wide strip of land described hereinbefore in Exhibit "A" and the POINT OF BEGINNING of the herein described parcel.

Thence along said westerly line, S 9°13'57" E, a distance of 454.83 feet.

The sidelines of said thirty (30.00) foot wide strip shall be lengthened or shortened as necessary to meet at angle points and to begin on a line having a bearing of S 35°46'04" W, from the Point of Beginning and terminate on the boundary lines of the land granted to the State of California in said Deed.

PARCEL FOUR

A fifteen (15.00) foot wide strip of land, the northeasterly line of which is parallel and concentric with and 30.00 feet southwesterly of the following described line:

COMMENCING at a point being located at California Coordinate System of 1983 (CCS 83), Zone 5, Position N 2 102 127.34, E 5 817 485.76, said point being N 48°02'21" W, a

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distance of 86.09 feet, more or less, from a point in a line shown on a Record of Survey, recorded in Book 115, Page 62 of Records of Survey, as having a bearing of N 28°25'46" E, and a length of 2208 .88 feet, said last mentioned point being distant, S 28°26'05" W, 142.76 feet, more or less, along said line from the northeasterly terminus of said line;

- Thence S 48°02'21" E, a distance of 80.54 feet;
- Thence S 34°56'36" E, a distance of 347.19 feet;
- Thence S 42°55'45" E, a distance of 855.26 feet;
- Thence S 17°27'00" E, a distance of 435.62 feet;
- Thence S 24°58'59" E, a distance of 912.93 feet;
- Thence S 61°13'32" E, a distance of 735.39 feet;
- Thence S 26°10'52" E, a distance of 204.31 feet;
- Thence S 07°53'18" E, a distance of 352.29 feet;
- Thence S 47°02'29" E, a distance of 652.98 feet;
- Thence S 53°00'13" E, a distance of 779.45 feet;
- Thence S 44°25'27" E, a distance of 510.34 feet;
- Thence S 48°23'28" E, a distance of 314.75 feet;
- Thence S 35°12'22" E, a distance of 98.48 feet;
- Thence S 26°33'19" E, a distance of 211.67 feet;
- Thence S 49°45'06" E, a distance of 161.17 feet;
- Thence S 78°59'31" E, a distance of 260.28 feet;
- Thence S 73°27'01" E, a distance of 249.26 feet;
- Thence S 49°01'38" E, a distance of 213.34 feet;
- Thence S 40°13'27" E, a distance of 160.85 feet;
- Thence S 30°57'32" E, a distance of 249.58 feet;
- Thence S 37°38'38" E, a distance of 246.66 feet;
- Thence S 18°48'49" E, a distance of 414.81 feet;
- Thence S 09°13'57" E, a distance of 446.53 feet;
- Thence S 48°52'33" E, a distance of 144.80 feet;

Thence S 55°24'46" E, a distance of 452.57 feet;

Thence S 74°06'56" E, a distance of 444.92 feet;

Thence S 72°11'01" E, a distance of 525.63 feet and the POINT OF BEGINNING of the herein described parcel;

Thence S 58°07'50" E, a distance of 1165.19 feet;

Thence S 35°37'50" E, a distance of 123.78 feet.

The sidelines of said fifteen (15.00) foot wide strip shall be lengthened or shortened as necessary to meet at angle points, begin on the southwesterly line of the sixty (60.00) foot wide strip of land described hereinbefore in Exhibit "A" and terminate on a line which bears N 59°30'36" W, from an angle point in said southwesterly line of Exhibit "A", said angle point being distant S 42°25'47" W, 30.66 feet from the southeasterly terminus of said hereinabove described line.

PARCEL FIVE

A thirty (30.00) foot wide strip of land, the southwesterly line of which is parallel and concentric with and 30.00 feet northeasterly of the following described line:

COMMENCING at a point being located at California Coordinate System Of 1983 (CCS 83), Zone 5, Position N 2 102 127.34, E 5 817 485.76, said point being N 48°02'21" W, a distance of 86.09 feet, more or less, from a point in a line shown on a Record of Survey, recorded in Book 115, Page 62 of Records of Survey, as having a bearing of N 28°25'46" E, and a length of 2208.88 feet, said last mentioned point being distant, S 28°26'05" W, 142.76 feet, more or less, along said line from the northeasterly terminus of said line;

Thence S 48°02'21" E, a distance of 80.54 feet;

Thence S 34°56'36" E, a distance of 347.19 feet;

Thence S 42°55'45" E, a distance of 855.26 feet;

Thence S 17°27'00" E, a distance of 435.62 feet;

Thence S 24°58'59" E, a distance of 912.93 feet;

Thence S 61°13'32" E, a distance of 735.39 feet;

Thence S 26°10'52" E, a distance of 204.31 feet;

Thence S 07°53'18" E, a distance of 352.29 feet;

Thence S 47°02'29" E, a distance of 652.98 feet;

Thence S 53°00'13" E, a distance of 779.45 feet;

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Thence S 44°25'27" E, a distance of 510.34 feet;
 Thence S 48°23'28" E, a distance of 314.75 feet;
 Thence S 35°12'22" E, a distance of 98.48 feet;
 Thence S 26°33'19" E, a distance of 211.67 feet;
 Thence S 49°45'06" E, a distance of 161.17 feet;
 Thence S 78°59'31" E, a distance of 260.28 feet;
 Thence S 73°27'01" E, a distance of 249.26 feet;
 Thence S 49°01'38" E, a distance of 213.34 feet;
 Thence S 40°13'27" E, a distance of 160.85 feet;
 Thence S 30° 57'32" E, a distance of 249.58 feet;
 Thence S 37°38'38" E, a distance of 246.66 feet;
 Thence S 18°48'49" E, a distance of 414.81 feet;
 Thence S 09°13'57" E, a distance of 446.53 feet;
 Thence S 48°52'33" E, a distance of 144.80 feet;
 Thence S 55°24'46" E, a distance of 452.57 feet;
 Thence S 74°06'56" E, a distance of 444.92 feet;
 Thence S 72°11'01" E, a distance of 525.63 feet;
 Thence S 58°07'50" E, a distance of 1165.19 feet;
 Thence S 35°37'50" E, a distance of 123.77 feet;
 Thence S 59°30'36" E, a distance of 405.76 feet to the POINT OF BEGINNING of the
 herein described parcel;
 Thence S 59°30'36" E, a distance of 147.53 feet.

The sidelines of said thirty (30.00) foot wide strip of land shall be lengthened or shortened as necessary to meet at angle points, to begin on a line having a bearing of N 52°59'24" E, from the Point of Beginning and terminate on a line having a bearing of N 7°59'24" E, from the southeasterly terminus of said hereinabove described line.

PARCEL SIX

A thirty (30.00) foot wide strip of land, the northeasterly and easterly lines of which are parallel and concentric with and 30.00 feet southwesterly and westerly of the following described line:

COMMENCING at a point being located at California Coordinate System of 1983 (CCS 83), Zone 5, Position N 2 102 127.34, E 5 817 485.76, said point being N 48°02'21" W, a distance of 86.09 feet, more or less, from a point in a line shown on a Record of Survey, recorded in Book 115, Page 62 of Records of Survey, as having a bearing of N 28°25'46" E, and a length of 2208.88 feet, said last mentioned point being distant, S 28°26'05" W, 142.76 feet, more or less, along said line from the northeasterly terminus of said line;

- Thence S 48°02'21" E, a distance of 80.54 feet;
- Thence S 34°56'36" E, a distance 347.19 feet;
- Thence S 42°55'45" E, a distance 855.26 feet;
- Thence S 17°27'00" E, a distance of 435.62 feet;
- Thence S 24°58'59" E, a distance of 912.93 feet;
- Thence S 61°13'32" E, a distance of 735.39 feet;
- Thence S 26°10'52" E, a distance of 204.31 feet;
- Thence S 07°53'18" E, a distance of 352.29 feet;
- Thence S 47°02'29" E, a distance of 652.98 feet;
- Thence S 53°00'13" E, a distance of 779.45 feet;
- Thence S 44°25'27" E, a distance of 510.34 feet;
- Thence S 48°23'28" E, a distance of 314.75 feet;
- Thence S 35°12'22" E, a distance of 98.48 feet;
- Thence S 26°33'19" E, a distance of 211.67 feet;
- Thence S 49°45'06" E, a distance of 161.17 feet;
- Thence S 78°59'31" E, a distance of 260.28 feet;
- Thence S 73°27'01" E, a distance of 249.26 feet;
- Thence S 49°01'38" E, a distance of 213.34 feet;
- Thence S 40°13'27" E, a distance of 160.85 feet;
- Thence S 30°57'32" E, a distance of 249.58 feet;

Thence S 37°38'38" E, a distance of 246.66 feet;

Thence S 18°48'49" E, a distance of 414.81 feet;

Thence S 09°13'57" E, a distance of 446.53 feet;

Thence S 48°52'33" E, a distance of 144.80 feet;

Thence S 55°24'46" E, a distance of 452.57 feet;

Thence S 74°06'56" E, a distance of 444.92 feet;

Thence S 72°11'01" E, a distance of 525.63 feet;

Thence S 58°07'50" E, a distance of 1165.19 feet;

Thence S 35°37'50" E, a distance of 123.77 feet;

Thence S 59°30'36" E, a distance of 512.98 feet to the POINT OF BEGINNING of the herein described parcel;

Thence the following course along said westerly line, S 59°30'36" E, a distance of 137.52 feet; to a point on the southerly line of the sixty (60) foot wide Permanent Easement described in Exhibit "A" at station 481+50.

The sidelines of said thirty (30.00) foot wide strip of land shall be lengthened or shortened as necessary to meet at angle points, to begin on a line having a bearing of S 30°29'24"W, from the Point of Beginning and terminate on a line having a bearing of S 30°29'24"W, from the southerly terminus of said course.

Coordinate positions recited herein are expressed in feet converted from meters. Bearings and distances recited herein are based on the California Coordinate System of 1983 (CCS 83), Zone 5.

Thence S 37°38'38" E, a distance of 246.66 feet;

Thence S 18°48'49" E, a distance of 414.81 feet;

Thence S 09°13'57" E, a distance of 446.53 feet;

Thence S 48°52'33" E, a distance of 144.80 feet;

Thence S 55°24'46" E, a distance of 452.57 feet;

Thence S 74°06'56" E, a distance of 444.92 feet;

Thence S 72°11'01" E, a distance of 525.63 feet;

Thence S 58°07'50" E, a distance of 1165.19 feet;

Thence S 35°37'50" E, a distance of 123.77 feet;

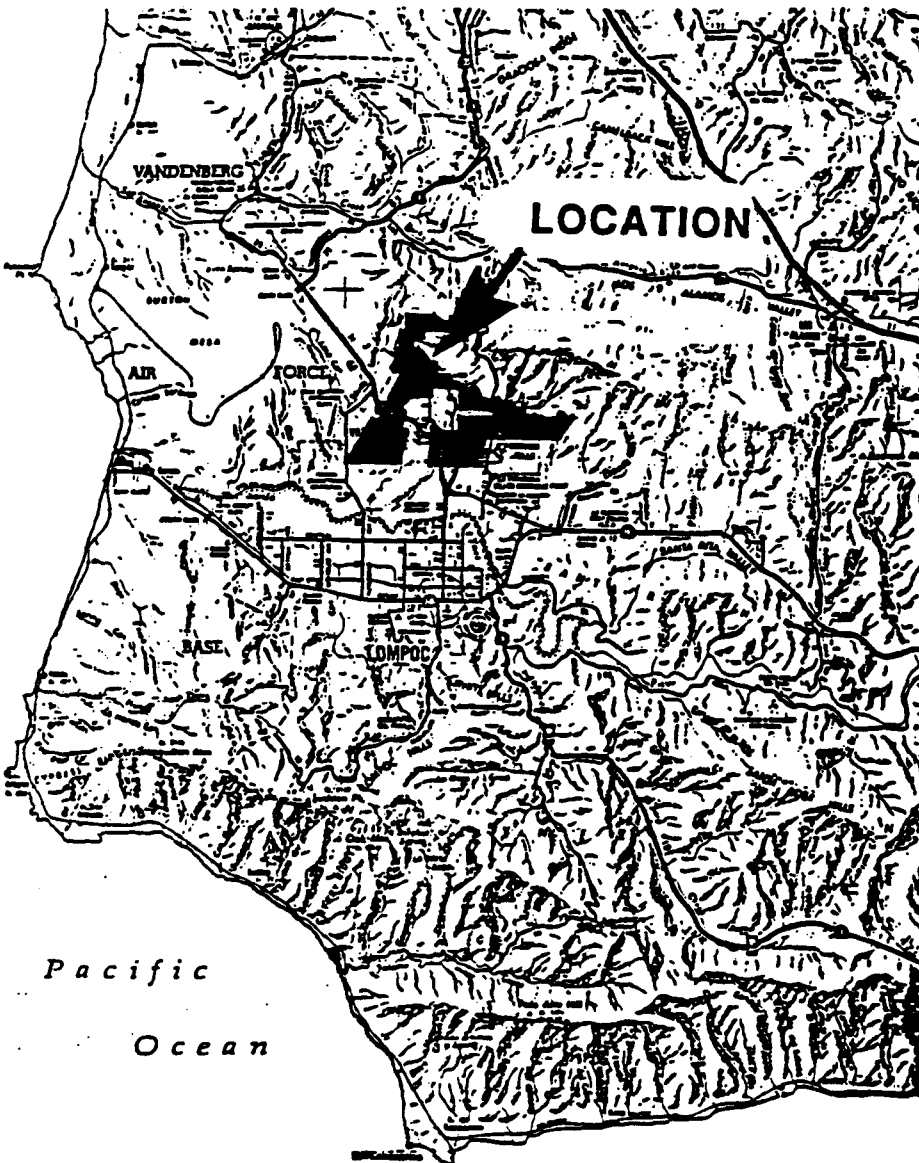
Thence S 59°30'36" E, a distance of 512.98 feet to the POINT OF BEGINNING of the herein described parcel;

Thence the following course along said westerly line, S 59°30'36" E, a distance of 137.52 feet; to a point on the southerly line of the sixty (60.00) foot wide Forty Nine Year lease described in Exhibit "A" at station 481+50.

The sidelines of said thirty (30.00) foot wide strip of land shall be lengthened or shortened as necessary to meet at angle points, to begin on a line having a bearing of S 30°29'24"W, from the Point of Beginning and terminate on a line having a bearing of S 30°29'24"W, from the southerly terminus of said course.

Coordinate positions recited herein are expressed in feet converted from meters. Bearings and distances recited herein are based on the California Coordinate System of 1983 (CCS 83), Zone 5.

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NO SCALE

EXHIBIT "B"
LOCATION MAP
 W25000
 CENTRAL COAST WATER
 AUTHORITY AQUEDUCT
 Vic. VANDENBERG VILLAGE
 SANTA BARBARA CO.



EXHIBIT "B-1"
SITE MAP W.25000

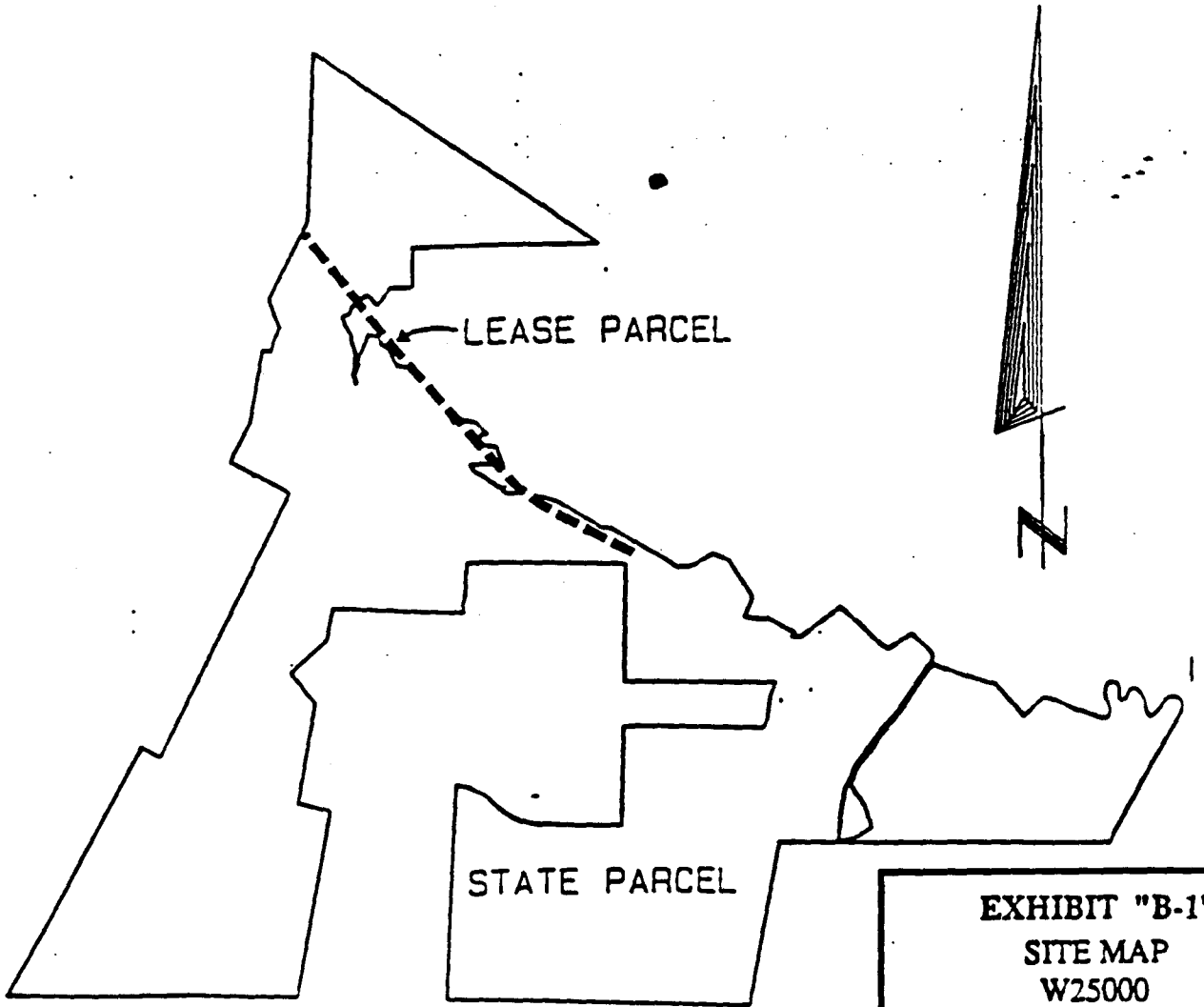


EXHIBIT "B-1"
SITE MAP
W25000
CENTRAL COAST WATER
AUTHORITY AQUEDUCT
Vic. VANDENBERG VILLAGE
SANTA BARBARA CO.



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1192.1

RESOLUTION NO. 92-1

**RESOLUTION OF THE CENTRAL COAST WATER AUTHORITY
MAKING CERTAIN FINDINGS REGARDING THE COASTAL
BRANCH (PHASE II) EXTENSION OF THE CALIFORNIA
AQUEDUCT**

WHEREAS, the Central Coast Water Authority ("the Authority") holds a majority of the Retained Rights under the Water Supply Retention Agreements ("WSRAs") with the Santa Barbara County Flood Control and Water Conservation District ("the District") and has entered into or intends to enter into Water Supply Agreements ("WSAs") assigning to the Authority entitlement rights of all WSRA Contractors who responded in a timely manner, prior to October 10, 1991, to a Notice of Intention to Request Construction of Described Project Facilities under the State Water Contract given by the City of Santa Maria on April 10, 1991, pursuant to Article 5 of the WSRAs; and

WHEREAS, a Final Environmental Impact Report, "State Water Project, Coastal Branch, Phase II, and Mission Hills Extension" ("Coastal Branch EIR") has been certified by the State of California, Department of Water Resources, and all requirements of the California Environmental Quality Act ("CEQA") have been satisfied by the Coastal Branch EIR.

NOW, THEREFORE, BE IT RESOLVED, that the Authority hereby adopts and approves the certified Coastal Branch EIR and certifies that it has considered the Coastal Branch EIR and the environmental effects of the Facilities as shown therein in reaching its conclusions and in approving the Mission Hills Extension, the Santa Ynez Extension, and the Santa Maria Valley Water Treatment Plant; and

BE IT FURTHER RESOLVED, that the Findings set forth in Attachment 1 to this Resolution, are incorporated by reference herein, and are hereby adopted and determined to be true; and

BE IT FURTHER RESOLVED, pursuant to Article 10(b) of the State Contract that: (1) the location of the initial structure for delivery of project water to the Authority shall be the terminus of the Coastal Branch (Phase II) Extension, unless otherwise designated by the Authority and approved by DWR; (2) 1996 is the time when project water is first to be delivered through the delivery structure; (3) the maximum instantaneous flow capacity in cubic feet per second to be

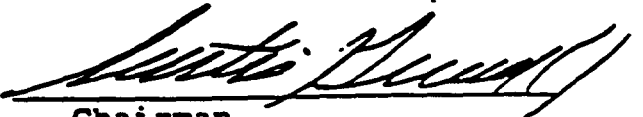
provided in the delivery structure shall be 77 cfs; (4) the maximum amount of water in acre-feet to be delivered in any one month through such delivery structure shall be 4,632 acre-feet; (5) the Annual Entitlement and Maximum Annual Entitlement, pursuant to Article 7 of the State Contract, shall be 50,078 acre-feet per year. The amounts specified herein are subject to the following conditions:

The amount of entitlements and the flow capacities set forth in this Resolution shall be increased or reduced by any amount approved by the Authority prior to a date in 1992 to be set by DWR as the final date of determination prior to actual commencement of final design and only by the Authority and DWR after that date. Increases will only be approved by the Authority and DWR after all required environmental procedures have been determined by the Authority and DWR to have been complied with in regard to such increases.

BE IT FURTHER RESOLVED, that pursuant to Article 3 (c) of the WSRAs, the Authority agrees to reimburse the District for all costs and expenses which the District becomes obligated to pay under the State Contract regarding any action which the District may take pursuant to this request; and

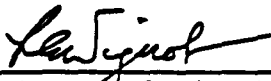
BE IT FURTHER RESOLVED, that this resolution shall take effect immediately.

I certify that the foregoing Resolution 92-1 was adopted by a vote of the Board of Directors of the Central Coast Water Authority at a regular meeting held January 23, 1992, as set forth below.


Chairman

[SEAL]

Attest:


Secretary of the Board
of Directors

| | VOTING PERCENTAGE | AYE | NAY | ABSTAIN | ABSENT |
|--|----------------------|----------|-------|---------|--------|
| Buellton Community Services District | <u>2.21%</u> | <u>X</u> | _____ | _____ | _____ |
| Carpinteria County Water District | <u>7.64</u> | <u>X</u> | _____ | _____ | _____ |
| Goleta Water District | <u>17.20</u> | <u>X</u> | _____ | _____ | _____ |
| City of Guadalupe | <u>1.15</u> | <u>X</u> | _____ | _____ | _____ |
| Montecito Water District | <u>8.35</u> | <u>X</u> | _____ | _____ | _____ |
| City of Santa Barbara | <u>11.47</u> | <u>X</u> | _____ | _____ | _____ |
| City of Santa Maria | <u>43.19</u> | <u>X</u> | _____ | _____ | _____ |
| Santa Ynez River Water Conservation District, Improvement District No. 1 | <u>7.64</u> | <u>X</u> | _____ | _____ | _____ |
| Summerland County Water District | <u>1.15</u> | <u>X</u> | _____ | _____ | _____ |

FINDINGS

**DELIVERY OF STATE WATER PROJECT WATER
TO CENTRAL COAST WATER AUTHORITY --
COASTAL BRANCH, PHASE II**

1. CCWA has reviewed and considered the Final Environmental Impact Report, State Water Project, Coastal Branch, Phase II, and Mission Hills Extension ("Coastal Branch EIR") and finds that it complies with the California Environmental Quality Act.

2. CCWA finds that the construction of the Coastal Branch, Phase II, and the mitigation of the significant adverse environmental impacts associated with the Coastal Branch, Phase II, are the responsibility of the California Department of Water Resources, and are outside CCWA's jurisdiction and control. CCWA recommends that the mitigation measures identified in the Coastal Branch EIR should be adopted by DWR and, if adopted, would substantially lessen or avoid these impacts.

EXHIBIT "C"

W 25000

RESOLUTION NO. 92-2

RESOLUTION OF THE CENTRAL COAST WATER AUTHORITY CERTIFYING ENVIRONMENTAL IMPACT REPORTS AND APPROVING A LOCAL FACILITIES PROJECT, INCLUDING THE MISSION HILLS EXTENSION AND SANTA YNEZ EXTENSION OF THE COASTAL BRANCH OF THE CALIFORNIA AQUEDUCT AND THE SANTA MARIA VALLEY WATER TREATMENT PLANT, AND MAKING REQUIRED FINDINGS AND STATEMENT OF OVERRIDING CONSIDERATIONS AND IMPOSING CERTAIN CONDITIONS OF APPROVAL

WHEREAS, the Central Coast Water Authority ("the Authority") holds a majority of the Retained Rights under the Water Supply Retention Agreements ("WSRAs") with the Santa Barbara County Flood Control and Water Conservation District ("the District") and has entered into or intends to enter into Water Supply Agreements ("WSAs") assigning to the Authority entitlement rights of all WSRA Contractors who responded in a timely manner, prior to October 10, 1991, to a Notice of Intention to Request Construction of Described Project Facilities under the State Water Contract given by the City of Santa Maria on April 10, 1991, pursuant to Article 5 of the WSRAs; and

WHEREAS, Preliminary Design and Final Environmental Impact Reports, including State Water Project, Coastal Branch, Phase II, and Mission Hills Extension ("Coastal Branch EIR"); the Santa Ynez Extension, a Local Facility of the Coastal Branch, Phase II ("SYE EIR"); and the Santa Maria Valley Water Treatment Plant ("SMVWTP EIR"), have been completed and all the requirements of the California Environmental Quality Act ("CEQA") have been satisfied relating to the construction of the Mission Hills Extension and the Santa Ynez Extension of the California Aqueduct and the Santa Maria Valley Water Treatment Plant ("the Local Facilities Project") and all related local turn-outs and distribution extensions; and

WHEREAS, it is the desire of the Authority to certify the EIRs, approve the Local Facilities Project, and commence the final design of the Mission Hills and Santa Ynez Extensions and the Santa Maria Valley Water Treatment Plant at this time.

NOW, THEREFORE, BE IT RESOLVED, that the Authority hereby certifies that the Coastal Branch EIR, the SYE EIR and the SMVWTP EIR have been completed in compliance with the California Environmental Quality Act and have been presented to

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the Board of Directors of the Authority as the lead agency of the Local Facilities Project and that the Board of Directors of the Authority reviewed and considered the information contained therein in approving the Local Facilities Project.

BE IT FURTHER RESOLVED, that the Findings, Conditions, and Statement of Overriding Considerations, including the Alternate Routes, set forth in Attachment 1 to this Resolution, are incorporated by reference herein, and are hereby adopted and determined to be true; and

BE IT FURTHER RESOLVED, that the Mitigation Plan set forth in Attachment 2 to this Resolution is incorporated by reference herein, and is hereby adopted; and

BE IT FURTHER RESOLVED, that the Preliminary Design of the Local Facilities Project and the commencement of Final Design are hereby approved; and

BE IT FURTHER RESOLVED, that the total Project allotments for all entities which have entered or intend to enter into WSAs with the Authority and the maximum annual entitlement is 50,078 acre-feet, subject to the following conditions:

The amount of entitlement set forth in this Resolution shall be increased or reduced by any amount approved by the Authority prior to a date in 1992 to be set by the State of California, Department of Water Resources ("DWR"), as the final date of determination prior to actual commencement of final design of the Coastal Branch (Phase II) and only by the Authority and DWR after that date. Increases will only be approved by the Authority after all required environmental procedures have been determined by the Authority to have been complied with in regard to such increases.

BE IT FURTHER RESOLVED, that pursuant to Article 3 (c) of the WSRAs, the Authority agrees to reimburse the District for all costs and expenses which the District becomes obligated to pay under the State Contract regarding any action which the District may take pursuant to this request; and

BE IT FURTHER RESOLVED, that the Authority's Consulting Engineer and Executive Director are hereby authorized and directed to communicate and transmit this determination to any and all interested parties.

BE IT FURTHER RESOLVED, that this resolution shall take effect immediately.

DRAFT

FINDINGS, CONDITIONS, AND STATEMENT OF
OVERRIDING CONSIDERATIONS

DELIVERY OF STATE WATER PROJECT WATER
TO CENTRAL COAST WATER AUTHORITY --
MISSION HILLS EXTENSION, SANTA YNEZ EXTENSION,
AND SANTA MARIA VALLEY WATER TREATMENT PLANT

PROJECT DESCRIPTION

The project consists of a series of related projects intended to deliver water from the existing State Water Project terminus to the various participating water purveyors and users within Santa Barbara County.

The project presently under consideration by the Central Coast Water Authority ("CCWA") is comprised of the following potential components, one of which may not be constructed:

1. Mission Hills Extension -- a local distribution facility which commences at the terminus of the Coastal Branch, Phase II, and terminates within Santa Barbara County at the Mission Hills terminus.
2. Santa Maria Valley Water Treatment Plant ("SMVWTP") -- a treatment plant which would be designed to treat only water delivered to some or all of the Santa Barbara County water purveyors and users, in the event that the Polonio Pass water treatment facility either is not constructed or Santa Barbara County water purveyors and users elect not to use that facility.
3. Santa Ynez Extension -- a local distribution facility which would commence at the terminus of the Mission Hills Extension and would pass through the northern portion of Santa Barbara County, terminating at Lake Cachuma or at Tecolote Tunnel.

The project approved by CCWA is described in more detail in the Final Environmental Impact Report, State Water Project, Coastal Branch, Phase II, and Mission Hills Extension, and the Final Environmental Impact Report, Santa Ynez Extension, a Local Facility of the Coastal Branch, Phase II, and Addendum thereto, and the Final Santa Maria Valley Water

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Treatment Plant Environmental Impact Report; the project includes the mitigation measures described herein.

Individual purveyors also propose local projects designed to deliver water from the project to their existing distribution systems. These local projects are not part of the project approved by CCWA, but the environmental impacts of those local projects have been considered by CCWA in its decision to approve the project.

Pursuant to the requirements of the California Environmental Quality Act ("CEQA"), the Central Coast Water Authority, successor agency to the Santa Barbara Water Purveyors Agency ("SBWPA"), hereby adopts the following findings:

I. TIERED/PROGRAM ENVIRONMENTAL IMPACT REPORT

CEQA, and the Guidelines adopted to implement CEQA, describe the concept of a "program" or "tiered" environmental impact report, whereby a series of environmental documents, ultimately comprising a whole, are prepared for a series of actions which can be characterized as one large project and are related geographically or as a part of a chain of contemplated actions. The purpose of the program or tiered environmental impact report is to ensure complete analysis and disclosure of the environmental impacts of the related actions and the cumulative impacts of the whole of those actions. CEQA contemplates that the first environmental impact report discloses the impacts of the general program; that document is followed by narrower or site-specific environmental documents (either environmental impact reports or negative declarations or a combination of both) which incorporate by reference discussion of the impacts of the prior, general document. Subsequent environmental documents need not re-examine environmental impacts which have already been examined in a prior document within the tiered structure. Public Resources Code sections 21068.5, 21094; CEQA Guidelines section 15168.

The California Department of Water Resources ("DWR") prepared the first document of the program or tiers, entitled Final Environmental Impact Report, State Water Project, Coastal Branch, Phase II, and Mission Hills Extension, May 1991 ("Coastal Branch EIR"). The Coastal Branch EIR studied the overall program and the specific potential environmental impacts of construction of the Coastal Branch and Mission Hills Extension. This study included cumulative impacts and various growth inducement scenarios. DWR will construct the Coastal Branch extension to its terminus in Santa Barbara County as a

State-sponsored project. In May 1991, DWR certified that the Coastal Branch EIR complied with CEQA.

DWR and SBWPA jointly sponsored preparation of the Final Environmental Impact Report, Santa Ynez Extension, a Local Facility of the Coastal Branch, Phase II, October 1991, with an Addendum thereto, November 1991 ("SYE EIR"), which constitutes another tier within the program environmental impact report. This document addressed the environmental consequences of the Santa Ynez Extension and compared those impacts to the potential impacts of various project alternatives, and provided additional information regarding growth inducement not included in the Coastal Branch EIR.

SBWPA and CCWA (as its successor) sponsored preparation of the Final Santa Maria Valley Water Treatment Plant Environmental Impact Report, October, 1991 with an addendum thereto, November 1991 ("SMWTP EIR"), which studied the impacts of the water treatment plant which, if constructed in lieu of or in addition to the Polonio Pass Water Treatment Plant, would provide treated water to water purveyors and users within Santa Barbara County only. The SMWTP EIR also included supplemental information on growth inducement, gathered since publication of the Coastal Branch EIR.

Individual water purveyors within the County have had prepared through agreement with the CCWA, or have individually prepared, the following environmental documents studying the potential impacts of their local delivery facilities:

- a. Proposed Negative Declaration Guadalupe Connection, October 1991.
- b. Proposed Negative Declaration Santa Maria Connection, October 1991.
- c. Proposed Negative Declaration Mission Hills Connection, October 1991.
- d. Proposed Negative Declaration Vandenberg Village Connection, October 1991.
- e. Negative Declaration Local Santa Ynez and Solvang Turn-outs from Santa Ynez Extension Pipeline of the Coastal Aqueduct (Santa Ynez River Water Conservation District, Improvement District #1), October 1991.

The Buellton Community Services District has prepared a notice of exemption for its proposed local facilities

permitting it to connect to the Santa Ynez Extension. As such proposed facilities consist of a turn-out and pipeline of less than one mile in length located entirely within a public right-of-way, they are statutorily exempt from environmental review. (Cal. Pub. Resources Code § 21080.21 and CEQA Guidelines § 15303.)

II. CEQA FINDINGS -- GENERAL

1. The Board of Directors of CCWA has read and considered the following environmental documents, including any Appendices and Addenda:

Final Environmental Impact Report, State Water Project, Coastal Branch, Phase II, and Mission Hills Extension, May 1991 ("Coastal Branch EIR")

Final Environmental Impact Report, Santa Ynez Extension, a Local Facility of the Coastal Branch, Phase II, with an Addendum thereto, dated October 1991, ("SYE EIR")

Final Santa Maria Valley Water Treatment Plant Environmental Impact Report, October 1991, with an Addendum thereto dated November 1991 ("SMVWTP EIR")

Proposed Negative Declaration Guadalupe Connection, October 1991.

Proposed Negative Declaration Santa Maria Connection, October 1991.

Proposed Negative Declaration Mission Hills Connection, October 1991.

Proposed Negative Declaration Vandenberg Village Connection, October 1991.

Proposed Negative Declaration Santa Ynez and Solvang Turnouts from the Santa Ynez Extension Pipeline of the Coastal Aqueduct (Santa Ynez River Water Conservation District, Improvement District #1), October 1991.

Buellton CSD Notice of Exemption, October 1991.

2. CEQA requires analysis not only of direct or primary impacts, but also of indirect or secondary impacts which are caused by the project and are later in time or are further removed in distance, but are reasonably foreseeable. In light of these principles, each of the three (3) EIRs reviewed by CCWA analyzes the indirect, secondary impacts

arising from cumulative development which may occur as a result of the program and from other projects expected to occur in the vicinity at the same time that the program components are under construction.

3. CEQA requires analysis of the potential which the project may have to induce growth. Each of the three (3) EIRs reviewed by CCWA analyzes the potential for growth inducement from the project and the impacts which could result from growth related to the project.

4. CEQA requires the evaluation of reasonable and feasible alternatives to the project, as well as evaluation of the impacts which would result if the project were not implemented (the "No Action" alternative). The three EIRs, taken together, analyze the "No Action" alternative, various alternative pipeline routes, and various alternative water sources which might be considered in lieu of the project. In addition, the SMVWTP EIR examines alternate treatment plant locations, including the Polonio Pass site in San Luis Obispo County, and a scenario involving a series of individual treatment plants for individual purveyors. The project as mitigated pursuant to the recommendations in the EIRs includes mitigation of potentially significant impacts so that those impacts are avoided or substantially lessened as required by CEQA. The remaining significant environmental impacts are acceptable due to the overriding concerns described in the Statement of Overriding Considerations. It is this mitigated alternative which has become the project as approved by CCWA.

5. The revised project mitigates the potentially significant environmental impacts to an acceptable level. Changes and alterations have been incorporated into the project where feasible; and these changes and alterations to avoid and substantially lessen the significant environmental impacts, as identified in the EIR. These changes include adjustments in the route alignment to avoid or reduce impacts, design features to avoid or reduce impacts, and a mitigation monitoring program which mitigates potentially significant impacts to an acceptable level.

6. As part of its approval of the project, CCWA hereby adopts a mitigation and monitoring program pursuant to the requirements of Public Resources Code section 21081.6 for the Mission Hills Extension, the Santa Ynez Extension and the SMVWTP. As lead agency for the Coastal Branch, Phase II Extension, DWR will be required to adopt a mitigation and monitoring program for that Extension. It is too early in the design process to make more specific recommendations for mitigation, but the mitigation monitoring program incorporates

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the most specific information now available, and the principles upon which site-specific mitigation will be implemented. The mitigation monitoring program has been formulated based upon the premise that the earlier in the process environmental review occurs, the greater the potential for designing an environmentally sensitive project.

63 7. Formulation of mitigation measures which are more precise than those included in the mitigation monitoring program is infeasible and impractical at this time. CCWA commits itself to devising more specific mitigation measures prior to commencement of construction, which measures will incorporate the principles set forth in the mitigation monitoring program adopted herewith. The more specific mitigation measures will be formulated with input from the County of Santa Barbara, Department of Fish & Game, Fish & Wildlife Service, Department of Water Resources, and U.S. Corps of Engineers.

8. The revised project as proposed by the CCWA is in the interest of providing a safe and reliable water source to the users and customers of the individual purveyors who are members of CCWA, or have Water Supply Agreements with CCWA, for the following reasons:

a. Nearly every water purveyor within the County of Santa Barbara participates in overdrafting of groundwater basins within the county. If SWP water had been available beginning in 1990, water purveyors with SWP entitlements could presently be using SWP water to offset existing overdrafts and to meet drought emergency needs.

b. The overdrafting of some groundwater basins is causing the level of total dissolved solids (TDS) to increase in the groundwater basins. The increases in TDS levels translate into lower quality deliveries of water.

c. Because of the existing water shortage, four South Coast water districts (Goleta, Montecito, Carpinteria and Summerland) have imposed moratoria on new water connections. Other water purveyors are facing steady declines in the quality of their water supplies. In some cases, this decline is so dramatic that the purveyors anticipate not being able to meet applicable health standards in the foreseeable future.

d. All water purveyors within Santa Barbara County face the potential that their present water supplies could be reduced as a result of natural or legal limitations. For instance, all purveyors who use surface water (captured and stored in reservoirs) as part of their supplies face a steady

decline in storage capacity due to siltation. Under drought conditions, this could cause purveyors to rely so heavily on groundwater supplies that they "mine" their basins (extract more water than the safe yield), and thus risk damaging the aquifers which contain their groundwater if their extraction reduces the water bearing capacity of those aquifers. This type of damage cannot be readily detected and may take years to discover. Additionally, litigation has been threatened concerning watershed of origin, enhancement of habitat, groundwater basin rights, and various other water rights issues which could adversely affect the quantity of water being delivered from the Santa Ynez River to most, if not all, of the purveyors participating in this project.

e. In addition, because Santa Barbara County periodically suffers from drought, purveyors' long-term planning for the allocation of supplies often incorporates a drought buffer. This decreases the usable supply in normal to wet years by a set amount which is kept in reserve for use during droughts.

f. Some water purveyors base their planning upon the supply and demand during critical drought periods and, therefore, they need supplemental supplies in order to consider their total available supply to be adequate.

g. During the current drought period, several water purveyors have imposed severe restrictions on their customers' water usage. The City of Santa Barbara, County of Santa Barbara, and State of California have declared states of emergency because of the drought's impact upon local urban water supplies within the county. The restrictions during this drought emergency have resulted in shortages which have disrupted interior uses of water, have damaged landscaping, and have threatened the health, safety, and welfare of the water purveyors' customers. Droughts of this severity are expected to recur and to cause similar shortages if additional water supplies, such as the State Water Project, are not obtained to supplement existing supplies.

9. CCWA has considered water sources which potentially could provide additional water to the members of CCWA, in lieu of the project. CCWA finds that said alternative water sources, individually and cumulatively, do not provide sufficient water to satisfy the needs of CCWA contractors as a whole and therefore do not provide a acceptable alternative to the project:

a. No Action -- the water purveyors and users would continue to depend on existing water supplies. Under

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this alternative, the impacts of the project would be avoided, but the benefits of the project would be lost. Deficit water use, declining water quality, and potential damage to aquifers would result. In addition, customers would suffer constraints on their life style, particularly in drought years. Economic losses also would occur as a result of drought stress upon existing large trees and landscaping. The cost of removing and replacing dead or damaged vegetation would be borne by individual customers and, in the case of vegetation on public lands, by the taxpayers. Recent experience in Santa Barbara and Oakland urban and suburban neighborhoods, as well as others in Southern California, has shown that fire hazard in urban and suburban areas increases during drought periods as a result of residents reducing or ceasing irrigation of landscaping due to lack of available water. In addition, purveyors would have to take steps to protect the yield of their reservoirs by dredging or sluicing, both of which (when viable) are costly and have adverse environmental impacts. In some cases, neither approach is viable. The No Action alternative would leave purveyors with no offsetting water supply in the event that threatened legal challenges to their existing supplies result in reduction of existing supplies. For these reasons, this alternative is rejected.

b. Urban conservation -- in the short term (during drought periods), urban water demand reduction is very effective. In the long term, however, the members of CCWA estimate (based upon past experience locally and elsewhere in the State) that urban conservation is capable of reducing consumption by approximately 10%, the achievement of which is assumed. All members of CCWA routinely and historically encourage conservation and many offer financial incentive programs to their customers. CCWA will encourage its Water Supply Agreement Contractors to implement applicable and feasible urban conservation best management practices and policies similar to those developed in the Memorandum of Understanding regarding urban water conservation dated September 1991. Some of CCWA's members already have executed or otherwise approved the Memorandum of Understanding. The County of Santa Barbara has adopted the Memorandum of Understanding. As the cost of water rises, rates increase, further encouraging conservation. A long term 10% water savings, however, is not capable of offsetting predicted shortfalls. Urban conservation is expected to occur with or without the project. For this reason, urban conservation is not an acceptable alternative to the project. It is simply a supplement to the project.

c. Agricultural Conservation -- the project does not deliver water for agricultural use. Although Santa

Barbara County encourages agricultural water conservation, there is no program presently in place to enforce agricultural water conservation. Under existing laws, farmers are entitled to pump groundwater for reasonable use on their overlying property. Without a means to enforce agricultural conservation, this is not an acceptable alternative to the project.

d. Waste Water Reclamation -- most of the communities in Santa Barbara County which can feasibly implement waste water reclamation projects either have done so or are in the process of exploring this option. It is not feasible for many of the members of CCWA (e.g., in areas where the level of total dissolved solids in the groundwater already is high, the introduction of reclaimed water would increase these levels even further, threatening the water purveyor's ability to meet safe drinking water standards; in non-coastal communities, wastewater is returned to the groundwater rather than being discharged into the ocean, so it is part of the total water supply already). For this reason, it is considered to be a possible addition to, but not an alternative for, the project.

e. Desalination -- most of the communities in Santa Barbara County which can feasibly implement desalination projects either have done so, have considered and rejected this option as too expensive, or are in the process of exploring this option. It requires existing ocean intake and outfall lines, or construction of new, very expensive, intake and outfall lines, and consequently is not physically possible for many of the members of CCWA. It is considered to be a possible addition to, but not an alternative for, the project.

f. Cachuma Reservoir Enlargement -- this alternative would increase the yield of Lake Cachuma by raising the dam approximately 50 feet. A number of members of CCWA do not participate in the water supply from Lake Cachuma so, for them, this is not a feasible alternative to the project. In addition, the combination of the potential significant environmental impacts of enlargement of this reservoir and water rights concerns have caused processing of this project to be suspended. For this reason, Cachuma reservoir enlargement is not considered to be an acceptable alternative at this time to the project.

g. Other Reservoir Projects -- other reservoir projects considered by CCWA (and reviewed in the Coastal Branch EIR) include construction of a new Gibraltar Reservoir, construction of a new Round Corral Reservoir, construction of a new Hot Springs Reservoir, construction of a new Camuesa

Reservoir, and construction of a new Salsipuedes Reservoir. Each of these projects would serve only limited populations, would have adverse impacts on downstream users, and would have significant environmental impacts. For these reasons, they are not acceptable alternatives to the project.

h. Purchase of Agricultural Water Rights to Reduce Agricultural Water Usage -- because of the possibility of significant adverse economic and environmental impacts, legal issues pertaining to water rights, and the impacts upon third parties not involved in the transfer of these rights, this option is not an acceptable alternative to the project.

i. Conjunctive Use -- few, if any of the members of CCWA have the necessary physical conditions of surface and ground water supply necessary to implement conjunctive use effectively. Even for those who do, the difficulties associated with sharing the groundwater resources with other users, where those conditions exist, limits the utility of conjunctive use and limits the quantities of water available from this operational technique. It is, therefore, not an acceptable alternative to the water supplied by this project.

j. Importation by Tanker -- this option is potentially feasible only for purveyors located close to the ocean (certain inland communities could enjoy the benefits of tankered water by negotiating a water exchange agreement with a coastal water purveyor, but only a limited number of inland communities could benefit from such an agreement). In addition, tankering costs are high and tankers consume a substantial amount of fuel, causing energy and air quality impacts. For these reasons, this is not an acceptable alternative to the project.

k. South Coast Emergency Water Delivery System -- through a complex set of agreements between the Santa Barbara County Water Agency and a number of other purveyors, a temporary delivery of SWP entitlements held by those other purveyors was made. This was an emergency response to the shortages suffered by South Coast purveyors and, because it depends upon excess capacity in several other Southern California water systems, it is not available on a permanent basis in the future. As a result, it is not an acceptable alternative to the project.

Even considered together, the alternatives described above do not present an acceptable alternative to the project. Those alternatives which are physically and economically feasible and do not have significant environmental impacts

together cannot provide to all of the members of CCWA a water supply comparable to the project. The alternatives are incapable of providing the improved water quality which the project provides. Lake Cachuma does not serve the Santa Maria/San Antonio area. These same areas also cannot be served feasibly by desalination (the extreme cost of transporting and lifting the water from the coast to this area makes it economically infeasible), conjunctive use (these areas depend almost exclusively upon groundwater already, so they lack a supplemental supply to use conjunctively), conservation (conservation simply cannot generate enough savings to offset existing deficits), water tankers (the same cost issues as those mentioned for desalination render this option infeasible as well), reclamation (this will provide additional water only where the community is using ocean outfalls -- effluent in the Santa Maria/San Antonio area already is returned to the groundwater or used for agricultural irrigation), the South Coast Emergency Water Delivery System (this serves only the South Coast area), and other reservoirs (the only reservoir which would serve this area is Round Corral -- it would have environmental impacts, poor water quality, and technical difficulties in recharge conflicts with Twitchell Reservoir, so it is not an acceptable alternative).

10. The alternatives fail to satisfy an important project objective, that of providing a means by which the water systems serving major population centers within the County can be linked so that purveyors have a means to provide one another with emergency backup water and to complete water exchanges.

11. Although the introduction of a new water supply into Santa Barbara County has a potential to induce growth, CCWA finds that the degree to which growth will be induced would be limited, and the potential secondary impacts of induced growth have been reduced to an acceptable level as a result of changes and alterations incorporated into the project, those changes having been included in the conditions of approval of the project.

12. CCWA finds and determines that the requirements of CEQA have been satisfied for this project. The requirements of Section 26 of the CCWA's Water Supply Agreements with individual purveyors regarding CEQA, therefore, have been satisfied.

III. CEQA FINDINGS -- SPECIFIC FOR MISSION HILLS EXTENSION

A. The Coastal Branch EIR identifies the following potentially significant environmental impacts associated with construction of the Mission Hills Extension: biological,

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cultural resources, water quality, noise, traffic, air quality, aesthetics, land use, and geological.

B. CCWA makes the following findings regarding those impacts:

1. Biology -- simultaneously with the adoption of these Findings and Statement of Overriding Considerations, CCWA is adopting a biological mitigation program. Because final design of the Mission Hills Extension has not begun, the final field details of the mitigation program have not been determined. It is too soon in the process to make more site-specific recommendations for mitigation. Detailed field information, including the site-specific mitigation of impacts, will be incorporated into the final project design and construction contracts. Field monitors will be present to enforce the mitigation measures when construction begins, and will remain until construction terminates. Mitigation target areas and a formula for accomplishing mitigation of every potentially significant biological impact have been incorporated into the mitigation program. Biological monitors will be present during construction and will have authority to halt and reroute construction to ensure field compliance with the mitigation program, subject to override by the onsite field supervisor. A narrow corridor, within which no trees or deep-rooted plants will be planted or allowed to grow, will be maintained directly over and adjacent to the pipeline. This is necessary to avoid damage the pipeline. Implementation of the mitigation program will substantially lessen or avoid biological impacts, the remaining significant impacts are acceptable, and the mitigation program satisfies current laws and State guidelines [Coastal Branch EIR, pp. 29, 35 through 38, 60].

2. Cultural resources -- a cultural resources study was conducted as part of preparation of the Coastal Branch EIR. Six (6) sites were discovered along the proposed route for the Mission Hills Extension. To the extent feasible, final design will include avoidance of the sites. Where avoidance is infeasible, the pipeline will be placed on the surface to the extent feasible. In any event, an archaeological monitor (with authority to halt and reroute construction, subject to override by the field construction supervisor) will be onsite during all construction through potentially sensitive areas to assist construction workers in minimizing damage to cultural resources. Where sensitive sites cannot be avoided or damage reduced to insignificant levels in the field, mitigation consistent with State guidelines will be implemented. In addition, there may be undiscovered significant cultural resources along the route. The studies

which are part of the final design process for the project include sub-surface probes of areas along the alignment likely to have buried sites. The information gathered from these studies will be used to avoid these sites to the extent feasible and to formulate site-specific mitigation as part of the design, consistent with State guidelines, if avoidance is infeasible. If additional undiscovered significant cultural resources are discovered during construction, construction in the area of the resources will halt temporarily and an archaeological consultant will be called in to propose realignment or mitigation measures necessary to avoid or substantially lessen the impacts to the site, or to accomplish recovery and preservation consistent with State guidelines.

With the adoption of this mitigation program, and its implementation in the field, including the employment of monitors authorized to halt and reroute construction to avoid sensitive sites or to reduce impacts upon them to insignificance, or to provide for recovery and preservation of resources, CCWA finds that the impacts of the Mission Hills Extension upon cultural resources are mitigated to an acceptable level [Coastal Branch EIR, p. 42]. In making this finding, CCWA recognizes that, even with mitigation which satisfies applicable laws and guidelines, damage to some cultural resource sites will occur. This damage will be irreversible but is not significant.

3. Water quality -- the project crosses several creeks, some of which have perennial flows. Others have seasonal flows. Construction over seasonal creeks will be scheduled to the extent feasible for periods of low or no flow, and the surface will be restored to pre-construction conditions. Flows, if present, will be diverted around the construction site and sedimentation basins will be used to decrease turbidity. One crossing over a perennial creek will use a bridge to span the stream. Erosion control and dust reduction measures as outlined in the mitigation program will be implemented to reduce the potential for the project causing turbidity and siltation in streams. Fuels will be stored away from streams and refueling will not occur near streams.

With the described approach to construction of creek crossings, and adoption of the mitigation program, CCWA finds that the potential adverse impacts of the Mission Hills Extension upon water quality will be reduced to an acceptable level [Coastal Branch EIR, p. 44].

The project water supply will have a long-term beneficial impact upon water quality in most of the communities which it serves [Coastal Branch EIR, p. 44] by importing a

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supplemental water supply which has lower total dissolved solids than the water presently delivered by most local water purveyors.

4. Noise -- construction noise and noise related to construction vehicles have a potential for creating short-term potentially significant impacts upon land uses adjacent to the pipeline corridor. Most construction areas are remote, but some residences and other noise-sensitive uses are located near the construction corridor. Wildlife may be temporarily displaced as a result of construction noise and activity, but this impact is not lasting or significant. In areas along the pipeline corridor which are considered to be sensitive under federal and state regulations, noise levels will be closely monitored to reduce the noise to the degree feasible. A noise mitigation program is adopted simultaneously herewith.

With the adoption of the mitigation program, CCWA finds that the noise impacts of construction of the Mission Hills Extension are avoided or substantially lessened but remain residually significant; these residually significant impacts are acceptable by reason of the overriding concerns set forth in the Statement of Overriding Considerations; operational noise impacts are insignificant [Coastal Branch EIR, pp. 45, 61].

5. Traffic -- the construction activity will generate traffic from workers, construction vehicles and materials suppliers. The Mission Hills Extension will cross State highways as well as county roads and railroad tracks. Some residents' driveways will be briefly disrupted, but detours will be provided so that access to their homes will be open at all times. Disruption of heavily travelled roadways will be avoided by jacking the pipeline under these roads. For more lightly travelled roadways, detours will be provided, resulting in minimal delays. Construction workers will be encouraged to carpool. With these measures, CCWA finds that the impacts of the Mission Hills Extension construction upon traffic are mitigated to insignificance; operational traffic impacts are insignificant [Coastal Branch EIR, p. 46].

6. Air Quality -- Santa Barbara County is in attainment of federal air quality standards for CO, SO₂, NO₂ and PM₁₀, and has been designated as a nonattainment area under state standards for O₃ and PM₁₀ and for the federal ozone standard. Construction of the Mission Hills Extension will result in construction equipment emissions, delivery vehicles emissions, and dust. These impacts will be significant but short-term. A mitigation program is adopted simultaneously

herewith, which avoids or substantially lessens those impacts, but short-term construction-related air quality impacts are residually significant. These residually significant impacts are acceptable by reason of the overriding concerns set forth in the Statement of Overriding Considerations. Operational air quality impacts are insignificant [Coastal Branch EIR, pp.48-49, 61].

7. Aesthetics -- Santa Barbara County has identified three (3) travel corridors of scenic values which cross the proposed Mission Hills Extension alignment. A highly scenic area, La Purisima Mission State Historical Park, is located near the terminus of the Mission Hills Extension. Construction of the pipeline will have short-term impacts upon aesthetic resources as a result of dust, construction equipment movement, exhaust, temporary structures, and the like, which contribute to an unnatural appearance. CCWA finds that these impacts are unavoidable, short-term, and not significant. Four (4) major surface facilities of the Mission Hills Extension will be visible from adjacent roads. These facilities will be partially buried to reduce visibility, will be landscaped, and will be painted a low-contrast color. CCWA finds that these mitigation measures will reduce the daytime long-term aesthetic impacts of the Mission Hills Extension to a level of insignificance. Little or no night lighting of these facilities will be used unless necessary for security or to conduct repair and maintenance activities. The loss of large oak trees and the removal of Burton Mesa Chaparral has a potential to create significant long-term aesthetic impacts, particularly when the removal is on densely vegetated slopes. To minimize this impact, only a narrow corridor directly over the pipeline will be kept clear of large trees and other deep-rooted plants. This is necessary to avoid damage to the pipeline. Oak tree removal will be reduced to the greatest extent feasible, and replacement oak trees will be planted where possible to reduce visual impacts. Burton Mesa Chaparral will be restored using the techniques described in the biological mitigation program.

With the measures described, and the biological mitigation program, CCWA finds that the adverse aesthetic impacts of the Mission Hills Extension are substantially lessened and the remaining significant impacts are acceptable by reason of the overriding concerns set forth in the Statement of Overriding Considerations [Coastal Branch EIR, pp. 55, 61].

8. Land Use -- land uses along the Mission Hills Extension alignment are predominantly agriculture and open lands. Some residential, commercial, and industrial land also will be affected. In the croplands, one season's crop

will be lost along the alignment. Where the pipeline crosses vineyards and orchards, no trees or vines can be replanted in the permanent pipeline corridor. One (1) house may have to be removed within the right-of-way. The home owner will be compensated if this removal occurs and any occupants will be provided relocation assistance. Agricultural operators will be compensated appropriately for the disruption to their farming operations.

A mitigation measure has been included in the mitigation monitoring program, requiring that the pipeline alignment be adjusted to avoid producing agricultural fields, orchards, and vineyards where feasible. Where these producing lands cannot be avoided, the alignment will be adjusted to follow fencelines and roads to the extent feasible. In addition, construction will be scheduled, when possible, to minimize interference with agricultural operations affected by the alignment. With these mitigation measures and the compensation required to be paid to farmers for lost production, the land use impacts to agriculture will be avoided or substantially lessened, and any remaining significant impacts are acceptable by reason of the overriding concerns set forth in the Statement of Overriding Considerations [Coastal Branch EIR, p. 54].

CCWA finds that the impacts upon land use will be adverse but not significant once affected landowners have been compensated and occupants provided relocation assistance, including moving costs.

9. Geological -- the project is subject to earthquake and landslide damage, resulting in rupture of the pipeline and water spillage. Rupture also would cause temporary disruption of delivery to local purveyors. Purveyors have other available supplies to continue deliveries to their customers. Repairs will be undertaken promptly, so disruption of service is not a potentially significant impact of the geological hazard. The project design will include automatic emergency valves to isolate sections of pipeline subject to geological hazard, thereby limiting the volume of spillage. This will reduce the possibility of erosion impacts from escaping water. Periodic inspections and regular maintenance of facilities, as well as state-of-the-art pipeline design will be incorporated into the design and operation of the pipeline, thereby avoiding or substantially lessening the potential significant impacts from geological hazard; the remaining impacts are acceptable [Coastal Branch EIR, p. 27].

10. Certain impacts analyzed by the Coastal Branch EIR for the MHE were determined not to be potentially significant:

a. Socioeconomic impacts of construction -- construction of the project is expected to provide average employment of 115 construction personnel and 15 State employees, resulting in an estimated population increase on a temporary basis in the Santa Maria-Lompoc area of 300 people. This additional population is well within present housing vacancy rates in the area, so no significant impacts on public services and utilities are anticipated and no mitigation measures are necessary or proposed [Coastal Branch EIR, p.63].

b. Energy consumption -- construction and operation of the MHE will require use of both petroleum fuels and electricity. A portion of the electricity will be recovered, but the rest of the energy used for construction and operation is an irretrievable commitment of resources. Total fuel consumption for construction of the MHE is estimated at 580,000 gallons of diesel fuel and 250,000 gallons of gasoline. The fuel demands of the MHE project represent a de minimis impact upon petroleum fuels used in California. Certain of the air quality mitigation measures set forth in the mitigation monitoring program also will mitigate impacts of the project upon petroleum fuel usage (e.g., using construction equipment with engines of minimum practical size for the task, using electric construction equipment when feasible, maintaining equipment in tune, limiting idling time when feasible, car pooling, etc.). No other mitigation measures are feasible to reduce energy demand during construction. The energy demand during construction is insignificant [Coastal Branch EIR, p. 63].

The electricity demands of project operation would be ten percent of the total demand for the Coastal Branch project and are minimal compared to the SWP project in its entirety. No additional SWP generating facilities are necessary to support the project. PG&E will supply power for the Mission Hills Extension. The MHE will use about .007 percent of the PG&E capacity and, therefore, will have a minimal impact upon non-renewable energy sources and upon SWP demand in general. This impact, therefore, is insignificant and no mitigation measure is necessary [Coastal Branch EIR, p. 64].

c. Surface water and groundwater movement -- the pipeline trench will be backfilled, compacted, and graded to the pre-construction contour upon completion of construction. Access roads will be designed to avoid interfering with surface drainage. If groundwater is encountered in the trench, backfill and compaction will allow for continuity of flow. No further mitigation is feasible or necessary [Coastal Branch EIR, p. 64].

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d. Water percolation rates -- the trench will not affect sizable areas, will be compacted and revegetated and would have no significant impact on percolation so no additional mitigation measure is required [Coastal Branch EIR, p. 64].

e. Agricultural water supply -- the project will not reduce agricultural water supply, but will result in increased recharge of water with low TDS. The project will have a beneficial impact upon agricultural water supply, if it has any impact at all [Coastal Branch EIR, pp. 64-65].

f. Rodenticide use -- none will be used for the proposed project [Coastal Branch EIR, p. 65].

g. Fish importation -- the water treatment plant proposed as part of the project will remove all possibility of introduction of new fish species through the project pipeline [Coastal Branch EIR, p. 65].

C. CCWA has considered certain alternative routes to the proposed route for the Mission Hills Extension and makes the following findings:

Four (4) alternative routes were considered. Three were rejected because of increased potential for biological impacts. The fourth (the Highway 101 alternative) was rejected because it bypasses Casmalia, Vandenberg AFB, Vandenberg Village, Mission Hills, and Lompoc. One of the objectives of the project, in addition to delivering State Water Project water, is to connect the water systems of the major urban communities within Santa Barbara County in a manner which allows each community to provide an emergency water supply to others and facilitates water exchanges. The Highway 101 route, since it bypasses major population areas, would not satisfy this important project objective.

IV. CEQA FINDINGS -- SPECIFIC FOR SANTA YNEZ EXTENSION

A. The Santa Ynez Extension EIR identifies the following potentially significant environmental impacts associated with construction of the project: biological, archaeological resources, water quality, noise, transportation, air quality, aesthetics, land use, utilities, and geological.

B. CCWA makes the following findings regarding those impacts:

1. Biological -- the project will result in the loss of approximately 36 acres of Burton Mesa Chaparral, 36 acres of riparian/wetland vegetation, and 57 acres of oak woodland during construction, as well as a permanent (long-term) loss of native vegetation as a result of maintaining a permanent corridor above the pipeline. A mitigation program is adopted simultaneously herewith, which will mitigate all biological impacts to a level of insignificance in the long term. Short-term significant impacts to oak and riparian woodlands would remain until the restored vegetation matures. These residually significant impacts are substantially lessened by the mitigation monitoring program, and the measures described therein, and the remaining adverse environmental impacts of the project are acceptable by reason of the overriding concerns set forth in the Statement of Overriding Considerations [SYE EIR, p.4.4-40].

2. Archaeological resources -- a survey of the pipeline corridor reveals nine (9) archaeological sites and three (3) isolated artifacts within the corridor. One site is significant; the eight (8) other sites and one isolated artifact are potentially significant. Other known potentially significant sites are located nearby but not within the corridor. The SYE EIR discusses five (5) potential reroutes of the pipeline to mitigate the impacts of the project upon cultural resources. A cultural resource mitigation program is adopted simultaneously herewith. That program includes further field reconnaissance for areas of the corridor which haven't been field surveyed due to denied access or heavy vegetation, and the presence of a monitoring archaeologist and Native American representative during all earth disturbance work. The monitoring archaeologist has authority to halt and reroute construction to avoid or reduce impacts to cultural resources, subject to override by the field construction supervisor. If new significant sites are discovered, prior to or during construction, site specific measures will be implemented, in consultation with the archaeologist, to avoid or reduce to insignificance impacts to the site, or to accomplish recovery and preservation consistent with State guidelines.

With the adoption of the mitigation routes described in more detail below and the mitigation program, CCWA finds that the impacts of the Santa Ynez Extension upon cultural resources are substantially lessened or avoided, as required by CEQA, and the remaining adverse environmental impacts are acceptable by reason of the overriding concerns set forth in the Statement of Overriding Considerations [SY EIR, p. 4.5-20].

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3. Water resources -- construction of the project could adversely affect surface waters through erosion from areas disturbed by grading and trenching. In addition, accidental fuel spills during equipment refueling could result in contamination of surface and/or groundwaters. Erosion impacts would be insignificant, but fuel spills could be potentially significant. The mitigation program outlined above for the Mission Hills Extension for water quality (Para. 3) will be used to mitigate the adverse impacts of both components of the project upon water resources, thereby avoiding or substantially lessening them. The remaining adverse environmental impacts of the project are acceptable by reason of the overriding concerns set forth in the Statement of Overriding Considerations [SYE EIR, p. 4.2-11]. Delivery of the project water to water purveyors and users within Santa Barbara County will have a beneficial impact upon water quality by improving the quality of delivered water. The project water generally contains a lower level of total dissolved solids than the water currently provided by the water purveyors to be served by the project [SYE EIR, pp. 4.2-6, 4.2-7, 4.2-11].

4. Noise -- construction noise has the potential for significant impacts on a short term basis, in that a number of residences and noise sensitive receptors lie close to the corridor. During operation, no potentially significant noise impacts are anticipated. The noise mitigation program, described in more detail in the findings for the Mission Hills Extension, will be used to avoid or substantially lessen noise impacts from the project. There remains a potential for short term significant impact from construction noise [SYE EIR, p. 4.9-4-4.9-6]. This short-term impact is acceptable by reason of the overriding concerns set forth in the Statement of Overriding Considerations.

5. Transportation -- all of the transportation impacts of the project will be short term, related to construction workers, construction equipment, and materials suppliers. The pipeline will cross Highway 246 three times and U.S. 101 and Highway 154 once each. Highways and major roads would be crossed by jacking the pipe under the roadway to prevent interruption of traffic flow. Lightly travelled public roads, private roads, and private driveways would be trenched. Detours would be provided so that only minimal delays would be experienced. Residents would have continuous access to their homes.

Five (5) mitigation routes have been proposed for the pipeline. Four (4) would affect construction activities on some roadways. With the adoption of the mitigation routes, as well as the transportation mitigation program adopted herewith,

CCWA finds that the impacts of the project upon transportation are avoided or substantially lessened by the mitigation measures incorporated into the project, and the remaining adverse impacts are acceptable by reason of the overriding concerns set forth in the Statement of Overriding Considerations [SYE EIR p. 4.7-7].

6. Air quality -- air quality impacts from construction of the project would be significant in the short term, even with adoption of all feasible mitigation measures which have been included in the mitigation program. Those impacts which can be mitigated are mitigated by implementation of the mitigation program [SYE EIR, p. 4.3-13]. No significant air quality impacts are anticipated from operation of the project [SYE EIR, p. 4.3-13].

7. Aesthetics -- the project has a potential for significant aesthetic impacts during construction as a result of the clearing of and grading in riparian woodlands, oak woodlands, chaparral, and steep slopes [SYE EIR, p. 4.8-2 through 4.8-5]. With the implementation of the mitigation program adopted herewith, CCWA finds that the construction related impacts of the project upon aesthetics are avoided or substantially lessened, and the remaining adverse impacts are acceptable by reason of the overriding concerns set forth in the Statement of Overriding Considerations. During operation, there is a potential for significant aesthetic impact where facilities would be located within scenic viewsheds (from public roadways and recreational trails). The mitigation program adopted herewith mitigates the operational impacts to insignificance [SYE EIR, p. 4.8-10-4.8-11].

8. Land use -- most of the impacts of the project would be temporary, related to the construction activity. Almost all of the area of disturbance, with a few exceptions (river and road crossings and the Santa Ynez Indian Reservation) is in agricultural production or is open land. No residences would be displaced by the construction, although numerous residences are located nearby. In croplands, one season's crop will be lost along the alignment. Where the pipeline crosses vineyards and orchards, no trees or vines can be replanted in the permanent pipeline corridor. Agricultural operators will be compensated for the disruption to their farming operations. Residents in nearby houses will be disturbed, but only in the short term. The pipeline operation is not incompatible with any land use in the area.

A mitigation measure has been included in the mitigation monitoring program, requiring that the pipeline alignment be adjusted to avoid producing agricultural fields,

orchards, and vineyards where feasible. Where these producing lands cannot be avoided, the alignment will be adjusted to follow fencelines and roads to the extent feasible. In addition, construction will be scheduled, when possible, to minimize interference with agricultural operations affected by the alignment, or the affected farmer(s) will be compensated for the crop loss resulting from such interference. With these mitigation measures and the compensation required to be paid to farmers for lost production, the land use impacts to agriculture will be avoided or substantially lessened and any residual impacts are acceptable by reason of the overriding concerns set forth in the Statement of Overriding Considerations [SYE EIR, p. 4.6-6].

In order to reduce potential impacts upon agricultural production on the Gainey Ranch, CCWA finds that it is appropriate during final design to study the possibility of an alignment shift in the portion of the SYE which is shown in the SYE EIR Appendix D, page D-8, for the purpose of avoiding placing the pipeline through productive agricultural fields. Any such alignment shift will require site specific review and mitigation to ensure that its environmental impacts are properly assessed prior construction.

Certain mitigation routes have been proposed for the pipeline. Two of these reroutes (B and D) would mitigate potential land use impacts of the project alignment as proposed. Both of these mitigated routes are approved by CCWA as a part of this action.

CCWA finds that the compensation of affected farmers and ranchers and the selection of the mitigated routes B and D mitigates the land use impacts of the project to a level of insignificance [SYE EIR, pp. 4.6-5-4.6-6].

9. Geological -- the project has a potential for significant impacts upon geology as a result of modification of topography and drainage during grading and construction, the potential for fault-related ground rupture, potential damage to structures as a result of seismic shaking and liquefaction, potential for landslides, and potential for soil contamination due to fuel spills and vehicle maintenance. The mitigation program adopted herewith results in all of these impacts being mitigated [SYE EIR, pp. 4.1-11-4.1-12], thereby being avoided or substantially lessened. The remaining adverse environmental impacts are acceptable by reason of the overriding concerns set forth in the Statement of Overriding Considerations.

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10. Utilities -- increased fuel consumption will occur during construction, but the impact of this increase would be insignificant. With the use of carpooling, van pools, and efficient use of well-maintained construction equipment as required in the mitigation plan, the impacts would be further reduced [SYE EIR, pp. 4.10-1-4.10-2].

11. Certain impacts analyzed by the SYE EIR for the SYE were determined not to be potentially significant:

a. Socioeconomics -- the project will generate jobs for construction workers. The peak impact will be 119 workers. The county has a considerable construction workforce (about 10,000 workers). The permanent population of the county is unlikely to be affected by the project. Local construction workers could fill most of the project's employment requirements. It is unlikely that any appreciable in-migration of workers will result from the project. The project construction will have little or no impact upon the demand for local housing, because no permanent in-migration is expected to occur. There are sufficient hotel/motel rooms within the county to accommodate whatever transient workers are employed for the project. No mitigation measures are necessary for this impact because it is insignificant [SYE EIR, p. 4.11-1].

C. CCWA has considered certain alternative routes to the proposed route for the Santa Ynez Extension:

1. Buellton Alternative -- this route would eliminate two river crossings but would necessitate construction along Highway 246 through Buellton, resulting in substantial traffic disruption, noise impacts, and loss of buildings. This alternative is not acceptable because of the technical problems associated with crossing Highway 101 in a cut area and the disruption, noise impacts, and technical problems related to construction in a densely populated area (commercial and residential).

2. Highway 101 Alternative -- this alternative would require multiple crossings of Highway 101, would result in much longer distribution lines to Santa Ynez Valley and Buellton, would use significantly more energy because of the changes in elevation, and would require two additional pumping plants with associated tanks, located along a scenic highway. The aesthetic impacts of the construction and of the facilities once in operation would be significant, in the short-term and in the long-term. This route intersects an active and a potentially active fault and, as such, would be more subject to rupture from seismic activity than would the project. The

Highway 101 alternative would reduce impacts to Burton Mesa Chaparral, but would increase oak tree loss. This alternative involves the technical difficulties associated with construction in proximity to Highway 101 (e.g., repeated crossings under the roadway, operation of construction vehicles and equipment close to a heavily travelled highway, and the like). This alternative also would not fulfill an important purpose of the project -- to provide an integrated aqueduct system which links the major population centers within Santa Barbara County, and which connects the County water systems with water systems in other parts of California. At present, in times of critical shortage due to emergency, Santa Barbara County water purveyors and users are isolated. By providing such a link, the project also provides a method for water exchanges and sale or transfer of project water among the users within the County. The Highway 101 Alternative would preclude the inclusion of a major segment of the County population in such a system. With the Highway 101 Alternative, connector pipelines to Buellton and Vandenberg AFB would be significantly longer. For all of the above reasons, and because of the potentially significant long-term aesthetic impacts involved with this alternative, this alternative is not acceptable.

3. Tecolote Tunnel Alternative -- to avoid discharge of project water into Lake Cachuma, the pipeline would continue to, and possibly through, Tecolote Tunnel. Discharge of the water directly into Tecolote Tunnel would lower total dissolved solids levels in water delivered to all South Coast purveyors; connection to Goleta Water District's Corona Del Mar water treatment facility would benefit only Goleta Water District users. Two optional routes were considered.

a. Option A -- continue the pipeline along Highway 154 to Tecolote Tunnel.

b. Option B -- continue the pipeline from Bradbury Dam, submerged, across Lake Cachuma to Tecolote Tunnel.

Under either option, the pipeline either would end at Tecolote Tunnel or continue through and follow the South Coast Conduit corridor. Either option avoids the mixing of project water with Lake Cachuma water thereby avoiding dilution of the higher quality project water. Because construction of Option A would result in significant impacts upon oak woodlands and riparian/wetland habitats, Option B is the environmentally superior alternative.

Because one of the project objectives is to improve water quality for all participants, CCWA finds that

terminating the pipeline at Tecolote Tunnel is the preferred alternative; and using the Option B route to extend the pipeline to Tecolote Tunnel is the environmentally superior route.

4. Mitigated Route A -- moves the pipeline south to avoid an archaeological site at La Purisima Mission.

5. Mitigated Route B -- moves the western crossing of the Santa Ynez River east to the upstream side of the All American oil pipeline corridor, reducing impacts on riparian habitat.

6. Mitigated Route C -- moves the Santa Ynez River crossing at Solvang eastward to be suspended from the Alisal Road bridge. The engineering feasibility of this alternative has not yet been determined. This route would reduce potential disturbance of riparian habitat and archaeological sites. Within a portion of Mitigated Route C, two alternatives have been studied -- Route C1 and Route C2. Either alternative could have potentially significant impacts upon cultural resources. In addition, they would pass directly through an area planned for residential construction. Route C2 avoids potential conflict with a proposed golf course and has fewer potential impacts upon the residential project, but has greater potential impacts upon cultural resources than C1 and the original proposed route. The original proposed route crosses a golf course under construction. The Solvang Planning Commission has refused to find C1 and C2 consistent with their general plan policy pertaining to the protection of cultural resources. The original proposed route, with a slight field modification as described in the mitigation program (to avoid impacts to a cultural resource), is, therefore, the preferred alternative to either C1 or C2. If suspension of the pipeline from the Alisal Bridge later proves to be feasible, the portion of the C route which includes the Alisal Bridge shall be rerouted to adopt the suspension alternative. Otherwise, the original proposed route is the feasible route which is the environmentally superior alternative.

7. Mitigated Route D -- moves the Zanja de Cota Creek crossing south of the Santa Ynez Indian Reservation, minimizing disturbance of riparian habitat.

8. Mitigated Route E -- would connect the Santa Ynez Extension pipeline to the Santa Ynez River Water Conservation District ID#1 pipeline, thereby eliminating the need to construct approximately 5 miles of new pipeline with two Santa Ynez River crossings. The engineering feasibility of this alternative is not yet known. In addition, there are

legal issues which have not been resolved. As a consequence, this alternative is not feasible at this time.

CCWA hereby adopts the Project with mitigated Routes A, B, and D. The project route, as mitigated by routes A, B, and D, and including Tecolote Tunnel Option B, includes mitigation measures which avoid and substantially lessen significant environmental impacts of the project. The remaining environmental impacts of the project are acceptable by reason of the overriding concerns set forth in the Statement of Overriding Considerations.

V. CEQA FINDINGS -- SPECIFIC FOR SANTA MARIA VALLEY WATER TREATMENT PLANT

A. The Santa Maria Valley Water Treatment Plant EIR identifies the following potentially significant environmental impacts associated with construction of the project: air quality and geological.

B. CCWA makes the following findings regarding these impacts:

1. Air quality -- air quality impacts from construction of the project would be significant in the short term, even with mitigation. Air quality impacts have been avoided or substantially lessened by implementation of the mitigation program, which includes the use of low NOx-emitting engines, use of electric construction equipment where feasible, and watering/revegetating of graded areas or use of soil binders, among other measures [SMVWTP EIR, pp. 4.3-15-4.3-16]. The residually significant air quality impacts of the project are acceptable by reason of the overriding concerns set forth in the Statement of Overriding Considerations. No significant air quality impacts are anticipated from operation of the project [SMVWTP EIR, p. 4.3-16].

2. Geology -- the project has a potential for significant impacts due to geologic hazards which pose a threat to plant facilities and the potential for other accidents resulting in the release of chemicals. In addition, construction of the project could result in potential degradation of sensitive off-site habitat due to erosion and sedimentation. The mitigation program adopted herewith, which includes the preparation and implementation of a spills response plan and the implementation of proper erosion control measures, results in these impacts being mitigated to insignificance [SMVWTP EIR, p. 4.1-5].

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C. The Santa Maria Valley Water Treatment Plant EIR identifies insignificant adverse impacts created by the project and additional recommended mitigation measures, as follows:

1. Geology -- recommended mitigation includes the performance of proper soils engineering and foundation design and implementation of responsive measures [SMVWTP EIR, p. 4.1-7].

2. Water Quality -- recommended mitigation includes the adoption of treatment methods to optimize reduction of asbestos fibers [SMVWTP EIR, p. 4.2-11].

3. Biology -- the project description provides that water runoff to the adjacent agricultural pond will not be reduced [SMVWTP EIR, p. 4.4-8].

4. Land Use -- the recommended mitigation includes the provision of open space and screening between land uses [SMVWTP EIR, p. 4.6-4].

5. Transportation -- recommended mitigation includes rerouting of the access road and bikeway north of the site [SMVWTP EIR, p. 4.7-10].

6. Aesthetics -- recommended mitigation includes the provision of visual screens between the site and potential viewers [SMVWTP EIR, p. 4.8-2].

7. Noise -- recommended mitigation includes limitation on hours of construction activities and on locations of construction equipment [SMVWTP EIR, p. 4.9-4].

8. Community Services -- recommended mitigation includes the testing of sludge samples to meet disposal and groundwater protection requirements [SMVWTP EIR, p. 4.10-4].

9. System Safety -- recommended mitigation includes the preparation of a Preliminary Hazard Analysis and, if required, a Hazard and Operability Study as part of the preliminary design process and the implementation of measures recommended in such studies [SMVWTP EIR, p. 4.12-8].

D. CCWA has considered certain alternatives to the location of a regional water treatment plant on the Santa Maria Airport property, and makes the following determinations that such alternatives not acceptable at this time:

1. Location of the regional treatment plant at any of the alternative sites examined in the SMVWTP EIR is not

acceptable because such location would involve greater environmental impacts than location on the Santa Maria Airport site.

2. As pointed out above, the "no action" alternative of failing to construct the Coastal Aqueduct will increase groundwater overdraft and water quality deterioration in areas served by Santa Barbara County purveyors.

3. Location of the regional treatment plant at Polonio Pass will not substantially lessen the environmental impacts of the SMWTP, particularly in the area of air quality, geology and visual resources. Furthermore, it is unknown at this time whether San Luis Obispo County will be participating in the program and, therefore, whether the Polonio Pass Water Treatment Plant will be built.

4. The multiple treatment plant alternative will not substantially lessen the environmental impact of the SMWTP and poses greater impacts in the area of air quality and systems safety.

5. The proposed plant design can accommodate alternative treatment technologies if required by future regulations; use of such alternative technologies is not required to meet current regulatory standards. The site can accommodate alternative facility designs if required by final engineering. The facility design chosen is a conventional one typical of modern treatment facilities. Modifications, if appropriate, may be included in future permit applications during the final design process.

VI. FINDINGS IN RESPONSE TO LATE COMMENTS TO ENVIRONMENTAL DOCUMENTS

By letters dated October 14 and 25, 1991, the Environmental Defense Center and the Citizens Planning Association have provided certain comments to the CCWA subsequent to the expiration of the comment period of the Draft EIRs and publication of the final EIRs for SYE and SMWTP. As to these comments, the CCWA finds as follows:

1. The potential listing of the Delta Smelt as a candidate for threatened or endangered status was discussed in newspapers, including the Los Angeles Times, as early as August 6, 1991. The Coastal Branch EIR addressed the issue of revised Delta standards, including those underlying the EPA's rejection of the Bay/Delta plan; in addition, EPA's rejection of the Bay/Delta Plan was discussed in newspapers, including the Los Angeles Times, as early as September 4, 1991. Thus, neither of

these items constitutes new information which was not known or could not have been known prior to and including September 27, 1991, the deadline for comments on the Draft EIR for the SMVWTP. In addition, neither of these items shows new or substantially more severe impacts, demonstrates the feasibility of important mitigation measures or alternatives previously found infeasible, or discloses important new mitigation measures or alternatives. The Coastal Branch EIR states that diversions from the Delta will in no event be increased even if new standards are adopted. Reduction of deliveries, if this were to occur, would decrease, not increase, environmental impacts and growth inducement caused by the project. In any event, the water proposed to be delivered by the project is not "new" water. It has been subscribed for years and actually used by other SWP contractors during the years since CCWA contractors gained their entitlements to it. This water represents a de minimis portion of the total water delivered by the SWP and, as such, its delivery is not capable of causing any detectable environmental change in or impact upon the SWP.

2. As set forth in Section I of these findings, the SYE and SMVWTP EIRs are part of a series of tiered EIRs for the extension of the State Water Project ("SWP"). The Coastal Branch EIR has been properly incorporated by reference into the SYE EIR, and the SYE EIR has been properly incorporated by reference into the SMVWTP EIR. The CEQA Guidelines recognize the appropriateness of incorporating by reference a program EIR for regional influences, secondary effects, cumulative impacts, broad alternatives, and other factors that apply to the program as a whole.

3. The conditions adopted by CCWA in approving the project encourage the individual purveyors to adopt a variety of measures to offset their proportionate share of groundwater basin overdraft and to improve water quality. Mitigation measures recommended in the Growth Inducement section of the SYE EIR and the SMVWTP EIR are consistent with Resolution 90-7 of the Santa Barbara Water Purveyors Agency, which states the participants' commitment to give first priority to offsetting groundwater overdraft attributable to extraction of groundwater. Given this commitment, the two Cosby Reports which are appendices to the Coastal Branch EIR and the SMVWTP EIR, respectively, present a reasonable worst case scenario for potential growth inducement using the most current data available. The SYE and SMVWTP EIRs determined that population growth inducement caused by the project would be insignificant; analysis of other impacts would be speculative at this time.

4. The SMVWTP EIR summarizes the Polonio Pass alternative in sufficient detail to justify a conclusion that

it would not substantially lessen the environmental impacts of the SMVWTP.

5. Alternative discharge options for the SYE do not raise issues relevant to the environmental impacts created by the SMVWTP. The distributed treatment plant and alternative site analysis contained in the SMVWTP EIR is sufficiently detailed to justify a conclusion that these alternatives would not substantially lessen the environmental impacts of the SMVWTP. There is no evidence that alternative (i.e., non-conventional) treatment technologies are required to meet current standards; the plant will be designed to accommodate alternative technologies should future standards require their use.

6. The EDC letters suggest that the discussion of operational air quality impacts have not been adequately addressed in the SYE EIR and the SMVWTP EIR. The air quality impacts from the project are largely generated during construction. These are recognized as being cumulatively significant after mitigation. No potentially significant air quality impacts were identified for the project operation phase. The project will use relatively little energy and the existing power sources are known to be adequate to serve the project's needs. Without evidence of potentially significant energy consumption, and the secondary air quality impacts which can result from the consumption of significant energy (and from the production of that energy), there is no basis for questioning the conclusions of the EIRs.

7. The SYE and SMVWTP EIRs conform to CEQA in their incorporation by reference of the existing general plans and their related environmental impact reports. CEQA does not require that information available in earlier EIRs be repeated in later environmental documents. Incorporation by reference is adequate. The general plan EIRs for communities which receive enough project water that, taken with their present supplies, will have excess over present demand (after adjustment for water quality improvement and groundwater overdraft offset) provide valuable analysis of the potential impacts of the growth which could result from the importation of project water. General plans plan for growth and assume that it will occur. General plans direct growth into the areas which are preferred by the community based, in large part, upon the information and conclusions in the general plan EIRs. CEQA mandates that the community, in adopting its general plan, avoid or substantially lessen significant environmental impacts where feasible. For that reason, incorporation of general plan EIRs by reference into the SYE and SMVWTP EIRs is consistent with CEQA and constitutes a valid tool in analyzing the

potential impacts of growth induced by the project. The EIR writers are correct in refraining from speculating as to secondary impacts of growth induced by the project beyond general plan buildout. The possibility that local communities would allow growth beyond their general plans is speculative at best. Furthermore, those communities are required by CEQA to analyze the impacts of any amendment to their existing general plans. At that time, the precise growth proposed to be allowed (beyond general plan limits) will be identifiable and, therefore, capable of study. There is no possible way to identify and analyze these speculative impacts at this time for this project.

8. While it is true that the two communities within Santa Barbara County which have growth management plans (Goleta and Montecito) base those growth restrictions upon lack of available water supply, neither of these plans is based solely upon water shortage. Basing growth limits solely upon water shortage generally results in pressure to develop irrigated agricultural lands, since their conversion to urban uses ordinarily results in no increase in overall water consumption on the converted land. This pressure is considered by land planners in Santa Barbara County to be a negative trend.

9. Although water reduction of up to 45% has been achieved in the short-term (during the drought) in some local communities, such a reduction has not been part of any long-term plan, nor is it acceptable to water users in those districts; it has resulted in wide-spread damage and destruction to landscaping and has required the waiver by local agencies of applicable health and safety standards. It is, in short, an emergency measure, not long-term conservation. The 10% overall conservation factor utilized in the EIR is the more correct figure over the long-term and more accurately reflects the savings which purveyors would expect to achieve through implementation of some or all of the policies which are part of the Memorandum of Understanding described in Section II, Paragraph 9.b. of these Findings. It is based upon the historic experience locally and elsewhere in Southern California.

10. The CCWA has performed environmental analysis as early as possible in the planning process before final plans are prepared, consistent with CEQA. Preparation of final plans will involve a significant commitment of time and money by CCWA.

The mitigation monitoring program is as specific as possible at this stage in the project. Implementation of the mitigation monitoring program will involve greater detail and specificity, during the final design stage, than is now

possible. The SMVWTP EIR requires that certain mitigation plans be prepared as part of the drafting of final project plans (i.e., fuel oil spill prevention and response plan, Preliminary Hazard Analysis). The SMVWTP EIR sets performance criteria for these mitigation plans, which are analogous to the preparation of other plans which are required by law at the final design stage (i.e., Emergency Response Plan, Hazardous Waste Management Plan). If impacts created by such mitigation plans are beyond those identified in the EIR, additional environmental review of those impacts may be required.

11. Because CCWA has determined that the preferred option for the Tecolote Tunnel Alternative is Option B (with the SYE pipeline ending at the Tunnel rather than passing through it), the question regarding polyethylene pipe in the Tunnel is moot. The effect of depositing SWP water into the Tunnel so that it mixes with tunnel water will be to reduce the TDS levels in the tunnel water, since the TDS levels in the SWP water, which will be treated when it enters the Tunnel, will be relatively low in comparison to tunnel water.

VII. CEQA FINDINGS--CUMULATIVE IMPACTS

A. The project, local distribution facilities, and other development projects will have cumulative impacts in San Luis Obispo and Santa Barbara counties. Together, these projects could have potentially significant cumulative impacts on erosion and sedimentation potential, biological, geological, cultural resources, water balance, noise, traffic, air quality, land use, aesthetics, socioeconomic conditions and energy use. Impacts of the project have been avoided or substantially lessened with the incorporation of mitigation measures, but some residual cumulative impacts may occur in San Luis Obispo and Santa Barbara counties.

Cumulative impacts of the project, together with local projects which are part of the program, and other projects occurring in the same region at approximately the same time, would result in short-term significant cumulative impacts to noise, traffic, air quality, biology, and aesthetics. The mitigation program adopted as part of the project will incrementally reduce the project's contribution to cumulative impacts, but complete mitigation of cumulative impacts requires area-wide solutions which are outside CCWA's responsibility, control and jurisdiction. These solutions are the responsibility of, and fall within the jurisdiction of, the cities and County, which should implement such solutions. CCWA can and will cooperate in any plan to implement such solutions. The project will contribute cumulatively to the following impacts:

1. Geologic hazards -- the project would contribute cumulatively to erosion, sedimentation, and landslide problems unless proper drainage and runoff control measures are implemented. In addition, seismic shaking and liquefaction can cause pipeline rupture, resulting in runoff, erosion, sedimentation, and landslide problems. The mitigation program includes measures for controlling drainage and runoff. Pipe design will reduce the potential for rupture. With these measures, the project will not contribute significantly to cumulative geologic hazards in the region.

2. Biological -- a net loss of habitat areas, caused by development activities, including the project, could occur in San Luis Obispo and Santa Barbara counties. Most of the habitat disturbance attributable to the project will be short-term and related to construction activity. The project will not significantly contribute to cumulative impacts upon biology in the long term, but the project will make a significant contribution in the short term to cumulative impacts upon biology. The cumulative biological impacts of the project upon biology will continue until the restored vegetation which is part of the mitigation program grows to maturity or otherwise becomes substantially established.

3. Cultural resources -- the project will contribute to cumulative disturbance of cultural resources. With the mitigation measures which are part of the mitigation program, the project's contribution to this cumulative impact has been avoided or substantially lessened by the mitigation program.

4. Water quality -- the impacts of the project on water quality cumulatively will be beneficial, since the quality of the delivered water is high. The project will contribute cumulatively to water quality degradation in streams if proper construction methods are not implemented to control turbidity and sedimentation. These construction methods are part of the mitigation program and will be implemented. With these mitigation measures, the project's contribution to cumulative impacts on surface water quality in the region will be insignificant. Overall, the project's contribution to the quality of water delivered to customers, and to groundwater quality, will be beneficial.

5. Noise -- during construction, the project will contribute significantly to cumulative noise impacts, even with the mitigation measures which are included in the mitigation program. During operation, the project's contribution to cumulative noise impacts in the region will be insignificant.

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6. Traffic -- during construction, the project will contribute significantly to cumulative traffic impacts, even with the mitigation measures which are included in the mitigation program. During operation, the project's contribution to cumulative traffic impacts in the region will be insignificant.

7. Land use -- during construction, the project will disrupt nearby land uses, although to an insignificant degree. In the short term and in the long term, the project will not contribute to cumulative land use impacts in the region.

8. Aesthetics -- the project, even with the mitigation measures proposed, will contribute significantly to cumulative aesthetic impacts in the region in the short term due to the construction activities. This short term cumulative impact will continue until construction has ceased and revegetated areas have grown to maturity or become substantially established. Although a narrow corridor directly over the pipeline will not be replanted to trees, other vegetation will be restored in this corridor. The result, over the long term, will be an insignificant cumulative impact upon aesthetics in the region.

9. Air quality -- during construction, the project will contribute significantly to cumulative air quality impacts, even with the mitigation program proposed. During operations, the project will not contribute significantly to cumulative air quality impacts.

10. Socioeconomic -- the construction activity will require a labor force. CCWA anticipates that this labor force will be drawn from the local existing population. It is possible that if significant other demands upon the labor force occur during the construction period for the project, additional labor would have to come in from outside the project area, resulting in impacts upon the local housing stock. The degree to which this could occur, if at all, is not capable of assessment at this time.

11. Energy -- during construction and operation, the cumulative local energy demand will increase as a result of the project. With the mitigation measure of encouraging carpooling for construction workers where feasible, plus the use of energy efficient construction equipment and vehicles, the project will not contribute significantly to cumulative energy demand in the area.

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B. The project is independent of any additional modifications to State Water Project facilities. The water delivered by the project has been reserved for many years for this delivery. Existing State Water Project supplies will be reallocated to accommodate the delivery. The delivery through this project represents only about 3% of present State Water Project deliveries, so the impact of the reallocation is minimal. The Coastal Branch project has been part of SWP planning since its inception in the 1960's and facilities within the SWP have been sized to accommodate the eventual operation of the project.

VIII. CEQA FINDINGS -- GROWTH INDUCEMENT

1. The introduction of a new water supply to Santa Barbara County could result in new growth. Growth results in environmental impacts. In most communities to be served by the project, existing and projected (based upon historical growth rates without the project water) water demand currently exceeds available supply. Even with the project, most communities still will not have sufficient supply to meet demand. There are a few exceptions. If growth occurs as a result of the project, it will result in a loss of open space, increased traffic, air quality degradation, and potential impacts on biology, cultural resources, noise levels, public services and utilities, aesthetics, land use, energy use, water quality, geological hazards, and erosion/sedimentation potential. As described in more detail in the EIRs, all of the potentially affected communities have general plans in place, limiting the types of change which can occur as a result of pressure for growth. These general plans were prepared after undergoing CEQA review and were intended to plan for the growth projected for each community, based upon historic trends. The environmental impacts of the growth provided for in the general plans have been studied and mitigated or overridden as required by CEQA. These general plans cannot be amended to provide for growth above general plan buildout without CEQA review. New development likewise must undergo CEQA review. Two communities within the County -- Goleta and Montecito -- have growth limitations in place which are based only in part upon lack of adequate water supply. In both instances, other constraint(s) provide a basis for continuing the growth limitations after delivery of project water.

2. The following general plan EIRs are incorporated by reference into these findings and into the administrative record for this project:

Santa Barbara County Comprehensive Plan EIR, Local Coastal Plan EIR, and Montecito Community Plan EIR

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City of Carpinteria General Plan Update EIR

City of Solvang General Plan EIR

City of Santa Barbara General Plan EIR

City of Santa Maria General Plan EIR

City of Guadalupe Comprehensive General Plan EIR

3. Control of growth and mitigation of potential environmental impacts resulting from growth is outside CCWA's jurisdiction, and lies within the jurisdiction and control of other public agencies. Changes or alterations could be made in public policy, in those areas where growth could occur as a result of the project, to control, direct, and time the growth, which would mitigate or avoid environmental impacts from growth, but such changes or alterations are within the responsibility and jurisdiction of the County and cities, which can and should adopt such policies if they have not done so. The County of Santa Barbara already has a comprehensive general plan in effect which includes a wide range of policies which require mitigation of growth impacts.

4. CCWA has been authorized by its contractors to include Condition No. 3 in the project. CCWA's Water Supply Agreement contractors voluntarily have agreed to commit that, if applicable, they will use project water first to offset their respective proportionate shares of groundwater overdraft (overdraft issues do not apply to all contractors). The adoption of Condition No. 3 modifies the project to mitigate the potential growth inducement analyzed as one possible "worst case" in the Coastal Branch EIR.

5. CCWA is a joint powers agency with limited jurisdiction and authority. CCWA is obligated to provide project water to its contractors under the Water Supply Agreements. It has no jurisdiction or authority to impose land use restrictions on individual purveyors or on other governmental entities or to preclude them from the issuance of service connections. For the same reason, CCWA has no power to adopt formulae which set limits on the amount of project water which can be deemed to be available to contractors pursuant to the Water Supply Agreements.

The Environmental Defense Center has proposed a condition which would (a) prohibit new water hookups unless specified conditions were met and (b) set a limit on how much project water may be considered to be "available" for new hookups. The CCWA finds that such proposed conditions are

infeasible because they are beyond CCWA's legal authority to compel.

6. CCWA contractors have agreed to make the commitment required by Condition No. 3 and the SYE EIR and SMVWTP EIR (as well as the two Cosby Reports referenced therein), which analyzed growth inducement potential assuming that such a commitment would be part of the project as approved.

7. CCWA has no legal authority to enforce the commitment required of its contractors in Condition No. 3, but such enforcement measures are within the responsibility and jurisdiction of other public agencies and either have been adopted by such public agencies or can and should be adopted by them. The City of Santa Maria, the Goleta Water District and the City of Santa Barbara have already adopted long term water management programs. Other contractors are developing water management programs at this time. Any significant new development for which the Water Supply Agreement contractors would be called upon to provide "can and will serve" letters would require discretionary approval, including environmental review in compliance with CEQA. Any public agency contractor which fails to comply with its commitment to use project water first to offset its share of groundwater overdraft and to improve water quality for its customers would be required to perform CEQA review of its decision not to honor its commitment. A failure to perform such CEQA review would subject the agency to legal challenge. CCWA finds, therefore, that the commitment required by Condition No. 3 constitutes a binding obligation on the part of its contractors.

8. CCWA recognizes that circumstances may change, rendering Condition No. 3 no longer necessary or appropriate to mitigate potential impacts of growth inducement, in individual cases. CCWA also acknowledges and confirms that its public agency contractors are required to comply with CEQA, should they consider rescinding or modifying the commitment described in Condition No. 3.

9. The most appropriate and enforceable mitigation for potential growth inducement lies within the jurisdiction and responsibility of the County of Santa Barbara and the cities which lie within the county. The county and cities have responsibility and jurisdiction to impose growth limitations where resource constraints exist and significant environmental impacts could result from growth. All of the cities and the county have adopted general plans which control the total buildout within their respective jurisdictions. CCWA has no power to impose land use controls.

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10. Growth inducement, as used in CEQA, is not an environmental impact per se. It must be evaluated as to potential, magnitude, and possible secondary impacts. This analysis depends, at least in part, upon the extent of the anticipated growth attributable to the project. Growth and the availability of water are not directly related. Growth has occurred in Santa Barbara County for many years despite the absence of a firm, long term supply of water to sustain both the population and agriculture that exist in the area. Similarly, areas of the state which clearly have surplus water supplies remain largely undeveloped.

11. The environmental documentation dealing with construction of the extensions to deliver State Project Water to Santa Barbara County includes analyses of "worst case scenarios," one of which assumes that all the water delivered would be used for the development of new homes to house new people in the area. It is calculated that the water could support as many as 234,160 new residents in Santa Barbara County. The purpose of CEQA is to evaluate the reasonable worst case, not the improbable worst case. Because of the commitment described in Condition No. 3, this first scenario does not represent the reasonable worst case for this project.

Another worst case scenario analyzed assumes that project water would be used to offset urban groundwater usage. Yet another worst case scenario analyzed assumes that project water would be used to offset the participants' proportionate share of groundwater overdraft.

In the case of Santa Barbara County, the county has a well documented existing water deficit that is in excess of 60,000 acre feet per year. That deficit has been met for years by the overdrafting of the area's groundwater supplies. These supplies are approaching dangerously low levels, thereby creating water quantity and water quality risks which the community is no longer willing to tolerate. The result is that the water suppliers of the area have sought and obtained a substitute supply of water, which will allow them to decrease their dependence on the local groundwater supplies and allow the basins to rest and recover. The totality of the water to be imported into the area is significantly less than the existing deficit on a county wide basis. Consequently, the likelihood that the first worst case scenario analyzed will occur is improbable.

12. Nothing in Condition No. 3, or these Findings, Conditions, and Statement of Overriding Considerations shall be construed to impair or limit any rights to water held by any contractor, including but not limited to overlying,

prescriptive or pueblo rights, nor shall it be construed to result in any relinquishment or adjustment of any such water rights or claims thereto.

13. The SYE EIR and the SMVWTP EIR include certain suggested mitigation measures for CCWA's consideration in mitigating potential impacts related to growth which could be induced by the project. CCWA has adopted the first suggested measure as Condition No. 3 to the project. Implementation of the remaining suggested measures falls within the responsibility and jurisdiction of the individual contractors. CCWA encourages its contractors to consider implementing some or all of these measures, as applicable.

14. The SYE EIR and the SMVWTP EIR also include suggested measures for sharing water between contractors and for limiting groundwater extractions and for injection of project water into the groundwater. Implementation of these measures falls within the responsibility and jurisdiction of individual contractors. CCWA encourages its contractors to consider implementing these measures, as applicable.

15. The CCWA concludes, based on the evidence before it, that the likelihood of growth inducement based on the water made available by this project will be minimal. Therefore, the impacts which could be said to be associated with new growth are not potentially significant. Even if it were determined that the secondary impacts of growth which could be associated with this project are potentially significant, the CCWA concludes that there are clear, convincing and imperative overriding considerations which dictate the approval of this project at this time. These overriding considerations are set forth in detail in the Statement of Overriding Considerations. Additional mitigation measures which have been proposed to address growth inducement have been determined to be infeasible for CCWA to implement.

IX. CEQA FINDING -- THE PROJECT AS MITIGATED INCLUDES MEASURES THAT AVOID OR SUBSTANTIALLY LESSEN SIGNIFICANT IMPACTS. THE REMAINING IMPACTS ARE ACCEPTABLE.

CCWA finds that the project as approved includes the mitigation program adopted simultaneously herewith, which mitigation program includes measures which avoid or substantially lessen the significant project impacts, as required by CEQA.

Having balanced the environmental risks with the benefits of the mitigated project, CCWA finds that the revised

project description is appropriate to achieve the goals of CCWA of providing a safe and reliable water supply to its contractors and their customers and that the remaining environmental impacts of the project are acceptable by reason of the overriding concerns set forth in the Statement of Overriding Considerations.

Although the approved project, mitigation program, and conditions of approval adopted by CCWA mitigate the potentially significant environmental impacts as required by CEQA, there will be residually significant short-term impacts in the following categories: construction-related noise, construction-related traffic, construction-related air quality, construction-related aesthetics, and construction-related biological impacts. These impacts have been substantially lessened through the mitigation measures included in the project as required by CEQA, and the remaining adverse environmental impacts are acceptable by reason of the overriding concerns set forth in the Statement of Overriding Considerations.

X. CEQA FINDING UNDER PUBLIC RESOURCES CODE SECTION 21081

CCWA finds that changes or alterations have been incorporated into the project to mitigate or avoid significant impacts. These changes or alterations include re-routings and the mitigation measures outlined herein and set forth in more detail in the mitigation monitoring program, adopted herewith, and in the project EIRs. Some of these changes or alterations have been incorporated into the conditions of approval set forth herein.

CCWA further finds that some changes or alterations are within the responsibility and jurisdiction of other agencies. For example, the cumulative, area-wide impacts to which the project incrementally contributes, and the secondary impacts of any growth which might be induced by the project, are within the responsibility, jurisdiction, and control of the affected cities and counties, and are outside the control of CCWA.

CCWA further finds that specific economic, social, or other considerations make infeasible certain of the alternatives suggested and analyzed in the project EIRs. These considerations are more fully discussed in the project EIRs and in previous sections of this document, which address the unacceptable alternatives.

///

XI. CONDITIONS OF APPROVAL

CCWA adopts the following conditions of approval for the project. With the adoption of these conditions, CCWA finds that the environmental impacts of the project associated with the potential for growth inducement are insignificant:

1. The Santa Ynez Extension and Mission Hills Extension Mitigation Monitoring Program shall be implemented and enforced throughout the project construction and operation, unless modified after appropriate CEQA review and approval by CCWA.

2. The Santa Maria Valley Water Treatment Plan Mitigation Monitoring Program shall be implemented and enforced throughout the project construction and operation, unless modified after appropriate CEQA review and approval by CCWA.

3. CCWA shall require each Water Supply Agreement contractor to commit, prior to the contractor's use of project water, that the water supplied to the contractor by the project will be used first to offset the contractor's proportionate share of groundwater basin overdraft, if any, and to improve water quality for its consumers, if appropriate, before being made available for other purposes. Such a commitment can be manifested in a number of different ways, including but not limited to adoption of an ordinance or resolution or adoption of a water management plan or program which brings groundwater supply and demand into balance.

XII. STATEMENT OF OVERRIDING CONSIDERATIONS

Having balanced the benefits of the proposed project, the purpose of which is to enhance the water supplies of member purveyors to enable them to provide to their customers a safe, reliable, and adequate water supply, against the project's significant and unavoidable environmental impacts, CCWA hereby determines that the benefits outweigh the significant unavoidable impacts and that these impacts are nonetheless acceptable, based on the following individual and collective overriding considerations:

A. The water deficit in Santa Barbara County was approximately 60,000 AFY in 1985. This deficit is projected to increase steadily in the future.

B. Virtually every member of CCWA meets, or is anticipated to meet, supply deficits by overdrafting groundwater basins. Groundwater basins in the County are being pumped at more than their perennial yields, causing long-term

overdrafts with resultant declines in water levels and water quality, to the extent that, in some cases, the water quality is in danger of not meeting safe drinking water standards.

C. Based upon historic growth rates, demand is anticipated to continue to increase so that the ultimate deficit County-wide will be about 76,000 AFY by the Year 2010, when General Plan Buildout is projected to occur. This figure includes communities which are not participating in the project. The total approximate deficit for participants in the project by the Year 2010 is anticipated to be 68,500 AFY.

D. CCWA members have subscribed to the State Water Project since 1982, and have paid over \$6,400,000 to preserve that subscription to date. If CCWA does not approve the project, CCWA members will continue to pay to the State certain charges for existing SWP conservation and transportation facilities, which charges presently total approximately \$56 per acre foot of entitlement per year for CCWA members, and are expected to escalate in the future.

E. The project provides urban water purveyors with a water supply to use to offset their proportionate shares of groundwater overdraft, mitigating long-term overuse of the groundwater basins and existing and future severe, adverse impacts associated with groundwater basin mining. SBWPA Resolution 90-7 states the SBWPA's commitment to give first priority to offsetting groundwater overdraft attributable to extraction of groundwater.

F. The project, by providing a new water supply to Santa Barbara County water purveyors and users, increases flexible management of supply and increases overall supply reliability. Present water supplies within the County of Santa Barbara depend primarily on local rainfall. The project diversifies available supplies, thereby increasing reliability.

G. The project increases local water purveyors' and users' independence from drought and from the adverse economic consequences associated with chronic water shortages.

H. The quality of the project water is high, allowing water purveyors and users to improve the quality of delivered water and the quality of effluent which recharges the groundwater basins. Because the existing water supplies of certain water purveyors in the County are so poor, those purveyors may not be able to meet applicable water quality standards in the foreseeable future unless they have access to this supply.

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I. None of the residually significant environmental impacts of the project (after mitigation) are long-term or permanent. All are short-term, related to construction. Weighing these residually significant short-term impacts (biological, noise, traffic, air quality, and aesthetics) against the beneficial impacts of the project, the benefits (which are long-term and substantial) far outweigh the environmental detriment.

J. The project provides a source of water which can be used to offset future losses of existing supplies which could be lost as a result of future legal challenges, including litigation pertaining to watershed of origin, downstream releases to enhance habitat, groundwater basin rights, and various other water rights issues which have been raised or are expected to be raised in the future.

K. One-half of the population of Santa Barbara County depends upon water from reservoirs located on the Santa Ynez River, as their principal water supply. The yield of these reservoirs has steadily decreased, largely due to siltation. Further decreases in yield from these reservoirs is anticipated in the future because of continuing siltation, in-basin water demands, and the legal challenges described in a previous finding.

L. Lack of adequate water supplies has caused severe economic and quality of life degradation in Santa Barbara County, including the loss of landscaping and major trees. The loss of landscaping has resulted in substantial economic loss due to the cost of removing dead and damaged trees and other vegetation and the planting of replacement landscaping.

M. There are no supplemental water supply alternatives, individually or collectively, which can furnish water of sufficient quality and quantity to meet the needs of all CCWA contractors and which have fewer significant environmental impacts than the project.

N. At present, no aqueduct system links the major population centers within Santa Barbara County and there is no connection between the County water systems and the water systems in other parts of California. As a result, at times of critical shortage due to emergency, Santa Barbara County water purveyors and users are isolated. The proposed project not only will provide a link with the statewide system, but also provides a means to connect most of the major population centers within the County to one another. During 1990, emergency SWP water supplies were provided to Santa Barbara County purveyors through a complicated series of exchanges with

Ventura County. If this project had been in operation at that time, even more water would have been provided to County purveyors than the 3,000 AF provided on an emergency basis.

O. Because of the high quality of the project water, wastewater quality will be improved. At present, wastewater reuse is limited by the poor quality of existing supplies. The project will result in the potential for greater use of wastewater.

P. CCWA members have implemented water conservation measures and anticipate implementing further measures. These measures will be implemented regardless of whether the project is built. These measures will not be sufficient by themselves to reduce demand to existing water supplies and additional water supplies are still needed to reduce existing overdraft.

Q. The lack of adequate water supply has increased fire danger within the County. Restrictions on landscape watering have made residential areas more susceptible to fires, and the dry vegetation around homes has permitted fires to spread more readily once started. In addition, fires put further stress on an already insufficient water supply. In June 1990, approximately 13,400,000 gallons of water was drawn from Lake Cachuma to fight the Painted Cave fire, further reducing an already seriously low water supply.

R. In 1990, both the County of Santa Barbara and the City of Santa Barbara proclaimed the existence of a local emergency due to drought and requested that the Governor issue a Declaration of Drought Emergency pursuant to the California Emergency Services Act (Government Code §§ 8550 et seq.), declaring a lack of adequate water supplies to meet basic water needs for health, sanitation and safety. The City of Santa Barbara also sought a suspension of CEQA to expedite approval of a desalination plant. The Governor issued Declarations declaring drought emergencies for both entities and directed all state agencies to assist these entities in meeting their emergency water needs. Unless additional water supplies are provided to customers within Santa Barbara County, water shortages affecting basic needs will occur again during droughts.

S. During the drought period described in Paragraph R, several water purveyors have imposed severe restrictions on their customers' water usage. The restrictions during this drought emergency have resulted in shortages which have disrupted interior uses of water, have damaged landscaping, and have threatened the health, safety, and welfare of the water purveyors' customers. Droughts of this severity are expected

to recur. The water provided by the project would provide a supplemental supply to participating purveyors, helping them to offset the shortages in their present supplies when similar severe droughts recur.

T. State law mandates that the County of Santa Barbara and the six (6) cities within the County accommodate their "fair share" of regional needs for housing to serve all segments of the population. That mandate was reaffirmed in a letter from the State of California Department of Housing and Community Development (HCD) to the Santa Barbara County Association of Governments, dated June 27, 1991, which rejected each reason advanced by the County for refusing to accept the State's calculation of its fair share of regional housing needs. Water shortage was one basis stated by the County for avoiding fulfillment of its fair share of housing needs. With the water supply provided by the project, the County and the participating cities will be in a better position to meet the requirements of the law regarding provision of housing.

6910.1 (Rev. 1/14/92)

RESOLUTION NO. 92-11

**RESOLUTION OF THE CENTRAL COAST WATER AUTHORITY
APPROVING SETTLEMENT AGREEMENT AND ADOPTING
CONDITION**

WHEREAS, on January 23, 1992 the Central Coast Water Authority ("the Authority") Board adopted Resolution No. 92-1 and Resolution No. 92-2; and,

WHEREAS, the Notices of Determination for the Authority's approval of the Mission Hills Extension, the Santa Ynez Extension, and the Santa Maria Valley Water Treatment Plant were filed with the Santa Barbara County Clerk on January 23, 1992; and,

WHEREAS, the Authority's staff has entered into negotiations with Citizens for Goleta Valley ("Citizens") and the North County Citizens Coalition ("NCCC"), and their joint counsel, to attempt to arrive at a settlement of potential litigation arising out of the Authority's adoption of Resolution No. 92-1 and Resolution No. 92-2; and,

WHEREAS, said negotiations have resulted in the attached Settlement Agreement, which has been executed by authorized representatives of Citizens and NCCC; and,

WHEREAS, the attached Settlement Agreement provides for the adoption by the Authority of an additional condition of approval of the Mission Hills Extension, the Santa Ynez Extension, and the Santa Maria Valley Water Treatment Plant.

NOW, THEREFORE, BE IT RESOLVED, that the Authority hereby approves the terms and provisions of the attached Settlement Agreement and authorizes the Chairman and counsel to execute same on behalf of the Authority; and,

BE IT FURTHER RESOLVED, that the following condition is hereby adopted as an additional condition to

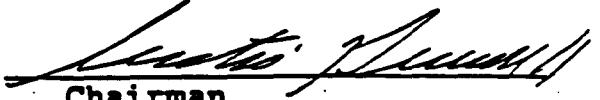
the Authority's approval of the Mission Hills Extension, the Santa Ynez Extension, and the Santa Maria Valley Water Treatment Plant:

4. Each contractor shall commit to prepare and shall publish a report on its annual and long-term water supply, beginning in the year that SWP water first is delivered and annually thereafter for so long as the contractor continues to receive SWP water. This report shall include a calculation which quantifies, over the time period of the contractor's water management plan or of the report, whichever is longer: (1) the obligation to offset groundwater overdraft and improve water quality, if any, set forth in the prior condition; and (2) reasonable estimates of total supplies available to the contractor, including but not limited to local supplies and the contractor's prediction regarding SWP urban delivery capacity, determined from DWR operations studies. The report shall also include a calculation of the available water supply for the ensuing year and the amount of SWP water necessary to fulfill the contractor's obligations as set forth in Condition 3. The report shall contain sufficient information to monitor compliance with Condition No. 3 above. This report shall be presented for adoption to the contractor's Board of Directors at a public hearing. The report shall be distributed at local libraries and at each contractor's office and shall be available for public review at least 30 days prior to the Board hearing.

BE IT FURTHER RESOLVED, that this Resolution shall take effect immediately.

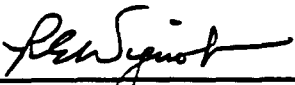
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I certify that the foregoing Resolution 92-11 was adopted by a vote of the Board of Directors of the Central Coast Water Authority at a regular meeting held February 27, 1992, as set forth below.


Chairman

[SEAL]

Attest:


Secretary of the Board
of Directors

| | VOTING PERCENTAGE | AYE | NAY | ABSTAIN | ABSENT |
|--|----------------------|----------|-------|---------|--------|
| Buellton Community Services District | <u>2.21%</u> | <u>X</u> | _____ | _____ | _____ |
| Carpinteria County Water District | <u>7.64</u> | <u>X</u> | _____ | _____ | _____ |
| Goleta Water District | <u>17.20</u> | <u>X</u> | _____ | _____ | _____ |
| City of Guadalupe | <u>1.15</u> | <u>X</u> | _____ | _____ | _____ |
| Montecito Water District | <u>8.35</u> | <u>X</u> | _____ | _____ | _____ |
| City of Santa Barbara | <u>11.47</u> | <u>X</u> | _____ | _____ | _____ |
| City of Santa Maria | <u>43.19</u> | <u>X</u> | _____ | _____ | _____ |
| Santa Ynez River Water Conservation District, Improvement District No. 1 | <u>7.64</u> | <u>X</u> | _____ | _____ | _____ |
| Summerland County Water District | <u>1.15</u> | <u>X</u> | _____ | _____ | _____ |

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SETTLEMENT AGREEMENT

This Agreement is entered into this 27th day of February, 1992, by and between the CENTRAL COAST WATER AUTHORITY, a California joint exercise of powers agency (hereafter "CCWA"), CITIZENS FOR GOLETA VALLEY, a nonprofit public benefit corporation (hereafter "CGV"), and NORTH COUNTY CITIZENS COALITION, an unincorporated citizens' organization (hereafter "NCCC").

RECITALS

WHEREAS, CCWA is a single purpose joint powers authority formed in 1991 to study, plan, develop, finance, acquire, design, construct, maintain, repair, manage, operate, and control a water supply project commonly known as the Mission Hills and Santa Ynez Extensions to the Coastal Branch Phase II Extension of the California Aqueduct of the State Water Project, and has entered into contracts to provide water to its members, associate members, and other water purveyors; and,

WHEREAS, on January 23, 1992, CCWA took the following actions (hereafter, collectively, the "Project"):

1. Adopted Resolution No. 92-1, adopting and approving the certified "State Water Project, Coastal Branch, Phase II, and Mission Hills Extension Final Environmental Impact Report" (hereafter, "Coastal Branch EIR"), setting 1996 as the State Water Project water delivery date for CCWA, setting certain water delivery requirements, and determining the annual entitlement amount for CCWA, among other actions; and,
2. Adopted Resolution No. 92-2, certifying the Coastal Branch EIR, the Santa Ynez Extension EIR, and the Santa Maria Valley Water Treatment Plant EIR, approving the Mission Hills Extension, the Santa Ynez Extension, and the Santa Maria Valley Water Treatment Plant, adopting certain Findings, Conditions, and Statement of Overriding Considerations as revised during the hearing, adopting a certain Mitigation Plan as revised during the hearing, approving the Preliminary Design of the Project and the commencement of Final Design, among other actions; and,

WHEREAS, CGV and NCCC have, in comments on the Project and

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the Project EIRs, objected to the Project and challenged the adequacy of the environmental documents under the California Environmental Quality Act ("CEQA"); and,

WHEREAS, as part of Project approval, CCWA adopted Condition 3 which requires that each contractor commit that the water supplied to the contractor by the Project be used first to offset the contractor's proportionate share of groundwater basin overdraft, if any, and to improve water quality for its consumers, if appropriate, before being made available for other purposes; and,

WHEREAS, CGV and NCCC have expressed concern regarding the lack of an effective monitoring mechanism to enforce the terms of Condition 3; and,

WHEREAS, CGV and NCCC have objected to the approval of the Santa Maria Valley Water Treatment Plant because the County of San Luis Obispo may approve a regional plant designed to treat Project water for delivery to both San Luis Obispo and Santa Barbara Counties, namely, the Polonio Pass Water Treatment Plant; and,

WHEREAS, CGV and NCCC objected to the adopted Mitigation Plan; and,

WHEREAS, CCWA intends to prepare more detailed site-specific biological mitigation measures in order to obtain permits from various state and federal agencies prior to constructing the Project; and,

WHEREAS, the Project is described as providing facilities to deliver water which meets applicable state and federal drinking water standards; and,

WHEREAS, representatives of the parties to this Agreement have participated in negotiations designed to resolve their differences and to avoid litigation; and,

WHEREAS, in consideration of CCWA's consent to the following provisions, CGV and NCCC have agreed to forbear from judicial proceedings challenging the approval of Resolutions No. 92-1 and 92-2 and certification of the Project EIRs as undertaken by CCWA on January 23, 1992;

NOW, THEREFORE, in consideration of the mutual

promises, covenants and agreements contained herein, the parties hereby covenant, promise and agree as follows:

1. Growth Inducement

a. Adoption of Condition 4. CCWA shall adopt the following Condition 4 as a condition upon the Project:

Condition 4: Each contractor shall commit to prepare and shall publish a report on its annual and long-term water supply, beginning in the year that SWP water first is delivered and annually thereafter for so long as the contractor continues to receive SWP water. This report shall include a calculation which quantifies, over the time period of the contractor's water management plan or of the report, whichever is longer: (1) the obligation to offset groundwater overdraft and improve water quality, if any, set forth in the prior condition; and (2) reasonable estimates of total supplies available to the contractor, including but not limited to local supplies and the contractor's prediction regarding SWP urban delivery capacity, determined from DWR operations studies. The report shall also include a calculation of the available water supply for the ensuing year and the amount of SWP water necessary to fulfill the contractor's obligations as set forth in Condition 3. The report shall contain sufficient information to monitor compliance with Condition No. 3 above. This report shall be presented for adoption to the contractor's Board of Directors at a public hearing. The report shall be distributed at local libraries and at each contractor's office and shall be available for public review at least 30 days prior to the Board hearing.

b. Mitigation Monitoring Program. Condition 4 shall be incorporated into the Mitigation Monitoring Program for the Project.

2. Santa Maria Valley Water Treatment Plant

In the event the County of San Luis Obispo approves the construction of the Polonio Pass Water Treatment Plant, CCWA shall hold a public hearing within 30 days thereafter to reconsider its approval of the Santa Maria Valley Water Treatment Plant.

3. Biological Mitigation Plan

a. Adoption of Plan. CCWA shall adopt more detailed

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site-specific biological mitigation measures (hereafter "biological mitigation plan") in order to obtain permits from various state and federal agencies. Prior to execution of a Management Agreement with the California Department of Fish and Game, and prior to accepting permits from the U.S. Army Corps of Engineers, CCWA shall prepare a biological mitigation plan and provide a copy thereof to CGV and NCCC. This plan shall be presented for approval at a public hearing of CCWA.

A preliminary draft biological mitigation plan shall be provided to CGV and NCCC at the same time the draft biological mitigation plan is provided to the County of Santa Barbara. CCWA shall also provide a status report to CGV and NCCC regarding the development of the biological mitigation plan (including a discussion of the items, provisions and areas of agreement and disagreement) on or by May 3, 1992 or 30 days prior to the public hearing, whichever is earlier. CCWA shall meet and discuss said biological mitigation plan with CGV and NCCC prior to executing the above-referenced Management Agreement and accepting the above-referenced permits.

b. Monitoring. Each and every component of the approved biological mitigation plan shall be incorporated into the Mitigation Monitoring Program for the Project.

4. Litigation Waiver

In consideration of CCWA's commitments in this Agreement, CGV and NCCC agree to forbear from judicial proceedings challenging CCWA's approval of Resolutions No. 92-1 and 92-2 and certification of the Project EIRs. This waiver is limited to any potential challenges to the approval of Resolutions No. 92-1 and 92-2 and certification of the Project EIRs as undertaken by CCWA on January 23, 1992. This waiver shall not be construed as an admission by CGV or NCCC that the Project is valid or that the Project EIRs are adequate. This waiver shall not extend to any other action undertaken by CCWA. This waiver shall not extend to certification, adoption or approval of any other environmental review documents, including but not limited to the Negative Declarations and Statements of Exemption for Local Connection and/or Tie-In projects. The execution of this Settlement Agreement shall not be construed to be an admission by CCWA that its approval of Resolutions No. 92-1 and 92-2 and its certification of the Project EIRs is defective, invalid, or improper.

5. Effective Date

This Agreement shall become effective immediately upon execution of this Agreement by all parties hereto.

6. Invalidity of Provision

If any part, term, clause, provision, obligation, sentence,

section or paragraph of this Agreement for any reason is determined, found or ruled to be unconstitutional, illegal, invalid, contrary to law or unenforceable, such unconstitutionality shall affect only such part, term, clause, provision, obligation, sentence, section or paragraph, and shall not affect or invalidate any other part, term, clause, provision, obligation, sentence, section or paragraph, which the parties agree and intend shall remain binding upon the parties in full force, validity and effect.

7. Binding

The parties hereto intend that this Agreement, and each and every provision hereof, shall be binding and enforceable as to each party in accordance with all of the terms and conditions contained herein.

8. Amendment

Neither this Agreement nor any term, provision or condition hereof may be amended or terminated, and no obligation, duty or liability of any party hereto may be released, discharged or waived except in a writing signed by each party hereto.

9. Assignment

No party to this Agreement shall assign any of its respective rights or delegate any of its respective obligations under this Agreement without the prior written consent of all parties hereto.

10. Entire Agreement

This Agreement constitutes the entire agreement between the parties hereto as to the matters referred to in this Agreement. This Agreement specifically supersedes any prior written or oral agreement between the parties with respect to the subject matter hereof.

11. Construction

The language in all parts of this Agreement shall be construed as a whole in accordance with its fair meaning and without regard to California Civil Code Section 1654 or similar statutes.

12. Authority and Capacity

Each party to this Agreement represents and warrants that it is authorized and has the capacity to enter into this Agreement

and each signatory to this Agreement is authorized and has the capacity to sign this Agreement.

13. Time of the Essence

Time shall be of the essence in the performance and/or satisfaction of this Agreement and/or each individual term, promise, provision, obligation, sentence, clause, section or paragraph hereof.

14. Default

The failure of any party to timely satisfy any obligation, promise, agreement, provision, term, sentence, clause, section or paragraph of this Agreement shall constitute a substantial breach of this Agreement and a default thereunder.

15. Waiver of Breach or Violation

The waiver by any party of any breach or violation of any term, covenant, provision or condition of this Agreement shall not be deemed a waiver of such term, covenant, provision or condition, or of any subsequent breach or violation of the same, or of any other term, covenant, provision or condition.

IN WITNESS WHEREOF, the parties hereto have executed this Agreement as of the date written above.

APPROVED AS TO FORM:

Susan J. Petrucci

HATCH AND PARENT

CENTRAL COAST WATER AUTHORITY

By Curtis Tunnell
Curtis Tunnell
Chair

APPROVED AS TO FORM:

Linda Krop
Linda Krop
ENVIRONMENTAL DEFENSE
CENTER

CITIZENS FOR GOLETA VALLEY

By Greg Lockwood
Greg Lockwood
President

APPROVED AS TO FORM:

Linda Krop
Linda Krop
ENVIRONMENTAL DEFENSE
CENTER
4435P

NORTH COUNTY CITIZENS
COALITION

By Bess Christensen
Bess Christensen
CALENDAR PAGE 274.80
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August 24, 1992

**RESOLUTION NO. 93-22 OF THE CENTRAL COAST WATER AUTHORITY
CERTIFYING THE FINAL SUPPLEMENT TO THE SANTA YNEZ
EXTENSION AND MISSION HILLS EXTENSION ENVIRONMENTAL IMPACT
REPORTS; AND APPROVING CERTAIN MODIFICATIONS TO THE
MISSION HILLS EXTENSION AND SANTA YNEZ EXTENSION OF THE
COASTAL BRANCH OF THE CALIFORNIA AQUEDUCT; AND OVERRULING
CERTAIN LOCAL AGENCY DETERMINATIONS OF PROJECT
INCONSISTENCY WITH GENERAL PLANS; AND MAKING REQUIRED
FINDINGS**

WHEREAS, Preliminary Design and Final Environmental Impact Reports, including State Water Project, Coastal Branch, Phase II, and Mission Hills Extension ("MHE EIR"), AND the Santa Ynez Extension, a Local Facility of the Coastal Branch, Phase II ("SYE EIR"), have been completed and all the requirements of the California Environmental Quality Act ("CEQA") have been satisfied relating to the construction of the Mission Hills Extension and the Santa Ynez Extension of the California Aqueduct ("the Local Facilities Project") and all related local turn-outs; and

WHEREAS, the Authority adopted Resolutions No. 92-1 and 92-2 on January 23, 1992, certifying the MHE EIR and the SYE EIR, approving the Local Facilities Project, making certain findings, adopting a certain statement of overriding considerations, and imposing certain conditions of approval; and

WHEREAS, the Authority adopted Resolution No. 92-11, approving a certain settlement agreement and imposing an additional condition upon the Local Facilities Project; and

WHEREAS, a Final Supplement to the MHE EIR and the SYE EIR ("Supplement") has been completed, describing certain proposed project modifications, an alternative site for the Santa Ynez Pump Facility, and the environmental impacts associated with said modifications and alternative, and all requirements of CEQA have been satisfied relating to said Supplement, and the modifications and alternative described therein; and

WHEREAS, the City of Solvang has made a report to the Authority, pursuant to Government Code section 65402, that as described in the Supplement the project location, purpose, or extent of property acquisition is not in conformity with the City's general plan; and

WHEREAS, the County of Santa Barbara has made a report to the Authority, pursuant to Government Code section 65402, that as described in the Supplement the Santa Ynez Pump Facility location, purpose, or extent of property acquisition is not in conformity with the City's general plan; and

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WHEREAS, it is the desire of the Authority to certify the Supplement, overrule the City of Solvang's and County of Santa Barbara's determinations of project inconsistency with their general plans as permitted by Government Code section 65402, approve the proposed modifications to the Local Facilities Project described in the Supplement, and commence the final design of the Mission Hills and Santa Ynez Extensions, revised as described in the Supplement, at this time.

NOW, THEREFORE, BE IT RESOLVED, that the Authority hereby certifies that the Final Supplement to Environmental Impact Reports for Santa Ynez Extension and Mission Hills Extension has been completed in compliance with the California Environmental Quality Act and has been presented to the Board of Directors of the Authority as the lead agency of the Local Facilities Project.

BE IT FURTHER RESOLVED, that the Board of Directors of the Authority has reviewed and considered the information contained in the MHE EIR and SYE EIR as revised by the Supplement.

BE IT FURTHER RESOLVED, that the Board of Directors of the Authority hereby overrules the actions by the planning agencies for the City of Solvang and County of Santa Barbara, disapproving the location, purpose, or extent of property acquisition of the Local Facilities Project, modified as described in the Supplement.

BE IT FURTHER RESOLVED, that the Board of Directors of the Authority hereby approves the proposed modifications to the Local Facilities Project, as described in the Supplement.

BE IT FURTHER RESOLVED, that the Findings set forth in Attachment 1 to this Resolution are incorporated by reference herein and are hereby adopted and determined to be true; and

BE IT FURTHER RESOLVED, that the commencement of Final Design of the project modifications is hereby approved; and

BE IT FURTHER RESOLVED, that both the modified Buellton River Crossing and the Santa Rosa Road Buellton Bypass described in the Supplement are approved, with the Santa Rosa Road Buellton Bypass being the preferred route unless the same is infeasible.

BE IT FURTHER RESOLVED, that this resolution shall take effect immediately.

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FINDINGS IN SUPPORT OF APPROVAL OF
CERTAIN MODIFICATIONS TO THE SANTA YNEZ EXTENSION
AND THE MISSION HILLS EXTENSION OF THE CALIFORNIA AQUEDUCT

PROJECT DESCRIPTION

The Central Coast Water Authority ("CCWA") proposes to construct and operate an extension of the State Water Project aqueduct to deliver water treated water within Santa Barbara County. CCWA also will construct and operate a water treatment plant in San Luis Obispo County, in cooperation with the California Department of Water Resources ("DWR") and the San Luis Obispo County Flood Control and Water Conservation District ("SLOCFCWCD"). CCWA approved its project by Resolution No. 92-2, on January 23, 1993. CCWA imposed an additional condition upon the project by Resolution No. 92-11, on February 27, 1992.

CCWA's project pipeline will commence within Vandenberg Air Force Base, at a tank which is the terminus of the water delivery pipeline constructed by DWR ("Tank 5"), will proceed generally southeasterly through the Lompoc/Mission Hills/Vandenberg Village area, through the Buellton area, through Solvang and the Santa Ynez Valley, then hooking up to an existing water pipeline between Santa Ynez and Lake Cachuma, then extend into Lake Cachuma, where the water will be discharged. Water delivered to the South Coast contractors then will be extracted from the lake through the existing Tecolote Tunnel facility. Project facilities approved by CCWA, in addition to the pipeline, turnouts, and appurtenances, include a water storage tank west of Buellton ("Tank 7"), a pumping facility east of the City of Solvang, and a dechlorination facility.

The project approved by CCWA is described in more detail in the Final Environmental Impact Report, State Water Project, Coastal Branch, Phase II, and Mission Hills Extension, and Addendum thereto ("MHE EIR") and the Final Environmental Impact Report, Santa Ynez Extension, a Local Facility of the Coastal Branch, Phase II, and Addendum thereto ("SYE EIR").

Since approval of the project, CCWA staff and engineers have studied more precise design and siting of the pipeline and its appurtenant facilities and have analyzed the potential environmental impacts which could result from modifying the project slightly to reduce its impacts.

The project modifications are described in detail in the Final Supplement to Final Environmental Impact Reports for Santa Ynez Extension and Mission Hills Extension.

Pursuant to the requirements of the California Environmental Quality Act ("CEQA"), the Central Coast Water Authority, successor agency to the Santa Barbara Water Purveyors Agency ("SBWPA"), hereby adopts the following findings:

I. TIERED/PROGRAM ENVIRONMENTAL IMPACT REPORT

CEQA, and the Guidelines adopted to implement CEQA, describe the concept of a "program" or "tiered" environmental impact report, whereby a series of environmental documents, ultimately comprising a whole, are prepared for a series of actions which can be characterized as one large project and are related geographically or as a part of a chain of contemplated actions. The purpose of the program or tiered environmental impact report is to ensure complete analysis and disclosure of the environmental impacts of the related actions and the cumulative impacts of the whole of those actions. CEQA contemplates that the first environmental impact report discloses the impacts of the general program; that document is followed by narrower or site-specific environmental documents (either environmental impact reports or negative declarations or a combination of both) which incorporate by reference discussion of the impacts of the prior, general document. Subsequent environmental documents need not re-examine environmental impacts which have already been examined in a prior document within the tiered structure. Public Resources Code sections 21068.5, 21094; CEQA Guidelines section 15168.

The California Department of Water Resources (DWR) prepared the first document of the program or tiers, entitled Final Environmental Impact Report, State Water Project, Coastal Branch, Phase II, and Mission Hills Extension ("MHE EIR"), with Addendum. The MHE EIR studied the overall program and the specific potential environmental impacts of construction of the Coastal Branch and Mission Hills Extension. This study included cumulative impacts and various growth inducement scenarios. DWR will construct the Coastal Branch extension to its terminus at Vandenberg Air Force Base (Tank 5) in Santa Barbara County as a State-sponsored project.

DWR and CCWA's predecessor agency, the Santa Barbara Water Purveyors Agency (SBWPA) jointly sponsored preparation of the Final Environmental Impact Report, Santa Ynez Extension, a Local Facility of the Coastal Branch, Phase II, with an

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Addendum thereto ("SYE EIR"), which constitutes another tier within the program environmental impact report. This document addressed the environmental consequences of the Santa Ynez Extension and compared those impacts to the potential impacts of various project alternatives, and provided additional information regarding growth inducement not included in the Coastal Branch EIR.

CCWA now has prepared and certified a Supplement to the SYE and MHE, describing proposed project modifications to reduce the environmental impacts of the project, and an alternative site for the consolidated pump facility-dechloramination facility ("Santa Ynez Pump Facility").

II. CEQA FINDINGS -- GENERAL

1. The Board of Directors of CCWA has read and considered the following environmental documents, including any Appendices and Addenda:

Final Environmental Impact Report, State Water Project, Coastal Branch, Phase II, and Mission Hills Extension, with Addendum ("MHE EIR")

Final Environmental Impact Report, Santa Ynez Extension, a Local Facility of the Coastal Branch, Phase II, with Addendum ("SYE EIR")

Final Supplement to Final Environmental Impact Reports for Santa Ynez Extension and Mission Hills Extension ("Supplement").

2. CEQA requires analysis not only of direct or primary impacts, but also of indirect or secondary impacts which are caused by the project and are later in time or are further removed in distance, but are reasonably foreseeable. In light of these principles, each of the EIRs reviewed by CCWA analyzes the indirect, secondary impacts arising from cumulative development which may occur as a result of the project and from other projects expected to occur in the vicinity at the same time that the program components are under construction.

3. CEQA requires analysis of the potential which the project may have to induce growth. Each of the EIRs reviewed by CCWA analyzes the potential for growth inducement from the project and the impacts which could result from growth related to the project.

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4. CEQA requires the evaluation of reasonable and feasible alternatives to the project, as well as evaluation of the impacts which would result if the project were not implemented (the "No Action" alternative). The EIRs, taken together, analyze the "No Action" alternative, various alternative pipeline routes, and various alternative water sources which might be considered in lieu of the project. In addition, the Supplement analyzes changes and alterations to be made to the project which avoid or substantially lessen the significant environmental impacts identified in the EIRs for the project to be constructed by CCWA. The remaining significant environmental impacts identified in the EIRs for CCWA's project are acceptable due to the overriding concerns described in the Statement of Overriding Considerations adopted by CCWA in Resolution No. 92-2. Although CCWA approved a mitigated alternative in Resolution No. 92-2, the modifications approved by Resolution No. 93-23 to which these findings are appended represent further mitigation measures identified in the course of further project design.

5. The revised project mitigates the potentially significant environmental impacts to an acceptable level. Changes and alterations have been incorporated into the project where feasible; and these changes and alterations to avoid and substantially lessen the significant environmental impacts, as identified in the EIRs and Supplement. These changes include adjustments in the route alignment to avoid or reduce impacts, design features to avoid or reduce impacts, and a mitigation monitoring program which mitigates potentially significant impacts to an acceptable level.

6. As part of its original approval of the project, CCWA adopted a mitigation and monitoring program pursuant to the requirements of Public Resources Code section 21081.6. Further refinement of that mitigation and monitoring program is occurring and a proposed final Mitigation Program and a Biological Resource Mitigation Plan, prepared with input from the United States Fish and Wildlife Service, U.S. Army Corps of Engineers, and California Department of Fish and Game, will be presented to the CCWA Board of Directors for public hearing and adoption prior to commencement of construction.

7. The revised project as proposed by the CCWA is in the interest of providing a safe and reliable water source to the users and customers of the individual purveyors who are members of CCWA, or have Water Supply Agreements with CCWA, for the all of the reasons stated in the findings adopted by Resolution No. 92-2. Those findings and the statement of overriding consideration and conditions adopted by Resolution

substantially lessen some of the cultural resource impacts identified in the EIR.

3. Water quality -- the project modifications include using the existing ID#1 pipeline (reducing the project length by about 5 miles and eliminating a number of creek and river crossings), eliminating all trenching across the Santa Ynez River, and to spanning or tunnelling under San Antonio Creek, thereby reducing substantially the potential water quality impacts of the project. Mitigation measures will be depicted on the project plans so that contractors and monitors will be advised as to the location of potentially sensitive areas and the need for mitigation to reduce and avoid water quality impacts.

4. Aesthetics -- the project modifications described in the Supplement result in substantially less vegetation removal than contemplated in the EIRs. In addition, consolidation of the pumping plant and the dechloramination facility at one site, with the described residential/agricultural design, set back from the nearest road and from neighboring properties and well-landscaped, reduces the aesthetic impacts described in the EIR for the two facilities. The project modifications described in the Supplement overall represent changes which have made to the project to avoid or substantially lessen the aesthetic impacts.

5. Geological -- some of the project modifications described in the Supplement were made to avoid geologic hazards. The project modifications described in the Supplement overall represent changes which have made to the project to avoid or substantially lessen the geologic impacts.

6. Utilities -- the Supplement corrects an inaccurate or unclear statement in the SYE EIR concerning the potential power needs of the pumping facility. These are stated in the SYE EIR variously as 1.1 megawatts (MW) and 1.5 kilowatts (kW). The correct power requirements of this facility are 2 megawatts (MW). These requirements do not exceed the capacity of the local provider to deliver. No change has occurred in the facility which significantly increases the power requirements of the site since completion of the EIR; the Supplement simply has clarified incorrect and conflicting statements in the EIR which were not identified prior to its certification.

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No. 92-2 and by Resolution No. 92-11 are incorporated by reference into these findings.

8. The findings pertaining to alternatives for providing additional water to the members of CCWA, in lieu of the project, adopted by Resolution No. 92-2 are incorporated by reference into these findings. Since adoption of Resolution No. 92-2, no new feasible project alternatives, other than those analyzed in the Supplement, have been discovered.

9. The findings pertaining to growth inducement adopted by Resolution No. 92-2 are incorporated by reference into these findings. Since adoption of Resolution No. 92-2, the growth inducement analysis has not changed

10. CCWA finds and determines that the requirements of CEQA have been satisfied for the project modifications.

III. PROJECT SPECIFIC CEQA FINDINGS

A. The MHE EIR and the SYE EIR identify certain potentially significant environmental impacts associated with construction of CCWA's project and the findings and statement of overriding considerations adopted by Resolution No. 92-2 pertaining to those impacts are incorporated by reference in these findings. Except in the following identified instances, the project impacts and their mitigation as described in EIRs and in the Resolution No. 92-2 findings are unchanged:

1. Biology -- the biological mitigation program adopted by CCWA with Resolution No. 92-2 is being refined with input from the U.S. Fish and Wildlife Service, the U.S. Army Corps of Engineers, and the California Department of Fish & Game. Species specific or habitat specific mitigation measures will be set forth on the project plans so that the contractors and monitors will be fully informed concerning the existence of sensitive resources and the required mitigation of impacts. In addition, the project modifications described in the Supplement and adopted simultaneously with these findings will avoid or substantially lessen many of the biological impacts identified in the EIR.

2. Cultural resources -- the cultural resources mitigation program adopted by CCWA with Resolution No. 92-2 has been refined and CCWA is in the process of negotiating with the applicable State and Federal agencies a programmatic approach to cultural resource mitigation for the project. In addition, the project modifications described in the Supplement and adopted simultaneously with these findings will avoid or

IV. CEOA FINDINGS--CUMULATIVE IMPACTS

The cumulative impacts of the project are unchanged by the project modifications described in the Supplement, except that the reduction in impacts resulting from the project modifications will result in a reduction in the cumulative impacts as well. Although impacts of the project had been avoided or substantially lessened with the incorporation of mitigation measures as set forth in the EIRs, the project modification have further avoided or lessened these impact.

V. CEOA FINDING UNDER PUBLIC RESOURCES CODE SECTION 21081

CCWA finds that changes or alterations have been incorporated into the project to mitigate or avoid significant impacts. These changes or alterations include re-routings and the project modifications outlined herein and set forth in more detail in the Supplement and the EIRs. Some of these changes or alterations have been incorporated into the conditions of approval imposed with the original project approval.

CCWA further finds that some changes or alterations are within the responsibility and jurisdiction of other agencies. For example, the cumulative, area-wide impacts to which the project incrementally contributes, and the secondary impacts of any growth which might be induced by the project, are within the responsibility, jurisdiction, and control of the affected cities and counties, and are outside the control of CCWA.

CCWA further finds that specific economic, social, or other considerations make infeasible certain of the alternatives suggested and analyzed in the project EIRs. These considerations are more fully discussed in the EIRs and the findings adopted by Resolution No. 92-2.

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**RESOLUTION NO. 93-23 OF THE CENTRAL COAST WATER AUTHORITY
AUTHORIZING AMENDMENT NO. 2 TO THE AGREEMENT WITH CH2M HILL IN
CONNECTION WITH CONSTRUCTION MANAGEMENT SERVICES**

WHEREAS, on June 24, 1993, the Board of Directors ("Board") of the Central Coast Water Authority ("Authority") approved Resolution No. 93-15 which authorized the engagement of CH2M Hill Consulting Engineers, Inc. ("Consultant") to provide Construction Management Services and authorized execution of an Agreement for the first two months of such services ("Agreement"); and

WHEREAS, the Authority has previously executed Amendment No. 1 to the contract with Consultant related to the development of water for construction; and

WHEREAS, the Authority and Consultant mutually desire to modify certain terms of the agreement related to the added scope of services and add construction management services for the final design, bidding and construction phases of Authority's project.

NOW, THEREFORE, BE IT RESOLVED,

1. The attached Second Amendment to Agreement for Engineering Services is approved, and the Chairman and Executive Director are authorized to approve it, with such changes as they shall approve.

BE IT FURTHER RESOLVED, that this Resolution shall take effect immediately.

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AMENDMENT NO. 2 TO AGREEMENT FOR PROFESSIONAL SERVICES

**CONSTRUCTION MANAGEMENT SERVICES IN CONNECTION WITH THE
STATE WATER PROJECT DELIVERY AND TREATMENT FACILITIES**

THIS AMENDMENT NO. 2 (Second Amendment) is made and entered into on this 26th day of August, 1993, by and between the Central Coast Water Authority (CCWA) and CH2M HILL CALIFORNIA INC. (Consultant), at Santa Barbara, California, with reference to the following facts and intentions:

A. CCWA and Consultant entered into an Agreement for Services in connection with Construction Management Services dated June 24, 1993, (Agreement).

B. The Agreement describes specific work which the parties contemplated that Consultant would perform, and the compensation therefor.

C. CCWA and Consultant now mutually desire to provide for the modification of certain existing tasks, terms and compensation not previously described in the Agreement.

NOW, THEREFORE, the parties agree as follows:

- 1. Amendment to Section 4 of Agreement. Section 4(d) of the Agreement is hereby amended to delete the existing paragraph and add the following paragraph:**

CCWA reserves the right, in its sole discretion, to withhold amounts from invoices that CCWA deems to have insufficient or inadequate supporting documentation or detail, where CCWA has questions or concerns regarding the services provided, or pending the release/payment of any liens created by the services of Consultant or its subcontractors, as reasonably determined by CCWA. CCWA shall release said retentions upon presentation of releases by subcontractors acceptable to CCWA and/or upon CCWA's determination of the adequacy of supporting documentation or detail, for services provided.

- 2. Amendment to Section 5 of Agreement. Section 5(c) of the Agreement is hereby amended to delete the existing paragraph and add the following paragraph:**

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Consultant shall procure and/or maintain professional liability insurance coverage for protection from claims arising out of performance of professional services under this Agreement in an amount of not less than Ten Million Dollars (\$10,000,000) per occurrence and in the aggregate.

3. **Amendment to Section 7 of Agreement.** Section 7 of the Agreement is hereby amended to add the following paragraph:

During the Project, Consultant may provide services related to remediation of hazardous substances. Such services may involve a portion of the pipeline which will extend to areas known to contain crude oil-contaminated soil, as well as other areas which are believed to be free of contamination based on evaluation of land use maps, but which could contain unforeseen contamination. In providing remediation related services, the Consultant shall not be considered as a generator of the contamination. To the maximum extent permitted by law, Authority will indemnify Consultant and Consultant's officers, employees, subcontractors and affiliated corporations from all claims, damages, losses and costs, including, but not limited to, attorneys' fees and litigation or dispute resolution expenses (Claims) arising out of or relating to the presence, discharge, release, or escape of hazardous substances, contaminants, or asbestos on, under or from the Project, except for any Claims arising from or relating to any alleged negligent acts or omissions of Consultant or its subcontractors, or any alleged failure of Consultant or its subcontractors to perform in accordance with the terms of this Agreement.

4. **Amendment to Exhibit A to Agreement.** Exhibit A to the Agreement is hereby amended to delete Sections 1.b, 2, 4, and 5 of Exhibit A and add the Sections 1.b, 2, 4, and 5 provided in Attachment 1 to this Amendment No. 2.
5. **Amendment to Agreement.** The Agreement is hereby amended to add Task Orders C, D, E, and F provided in Attachment 2 to this Amendment No. 2.
6. **No Other Changes.** Except as expressly amended herein above, the remainder of the Agreement shall remain in full force and effect. All work described in this Second Amendment shall be performed, and all compensation paid, in conformity with the provisions of the Agreement.

IN WITNESS WHEREOF, this Second Amendment has been duly authorized and executed by the parties hereto on the day and year first written above.

**CCWA
CENTRAL COAST WATER AUTHORITY**

By _____
CURTIS J. TUNNELL, Chairman

CH2M HILL CALIFORNIA INC.

By _____
RICHARD KNOX
Contract Representative and
Authorized Signatory

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**Amendment No. 2 to Agreement
for Professional Services**

ATTACHMENT 1

The following sections replace Sections 1.b, 2, 4 and 5 of Exhibit A to the Agreement:

1.b. Consultant's Branch Office Operational Costs and Expenses. Consultant, during the design and bid/award phases of this Agreement, shall operate a local Branch Office in Santa Barbara County. The costs and expenses of the operation of the Consultant's local Branch Office shall not be paid by CCWA, directly or indirectly, but Consultant shall be solely compensated therefor through the hourly rates billed.

2. Basic Compensation. As conditioned in this Exhibit, the hourly rates of Consultant's employees for the purpose of determining Consultant's Basic Compensation for each Task are set forth in Exhibit 1 to this Exhibit A. In determining Consultant's Basic Compensation, there shall be no charges for other employee compensation and overhead expenses. Other employee compensation and overhead expenses include, without limitation, overtime (that in excess of the regular rate of pay), sick leave, holiday pay, vacation, FICA taxes, state employment tax, workers' compensation insurance, retirement benefits, medical and dental benefits, and other benefits, compensation, reimbursements and expenses, except as provided for in this Exhibit A. CCWA will not be billed for more than eight (8) hours of work in any one (1) day for Consultant's Project Manager. Said hourly rates shall not be increased more than four (4) percent per year in 1994 and 1995, and not more than five (5) percent in 1996. Increases in Consultant's hourly rates shall be subject to approval by CCWA's Executive Director. CCWA's decisions regarding rate increases will be based on reasonable review and evaluation of justification provided by Consultant. Hourly rates of project hires working under the direction of Consultant for the purpose of determining Consultant's Basic Compensation for each Task are set forth in Exhibit 1 to this Exhibit A. Hourly rates of project hires set forth in Exhibit 1 to this Exhibit A shall be utilized throughout the term of this Agreement.

4. ODCs. The other direct expenses reimbursable to Consultant are the following.

a. Travel and Subsistence. Consultant's employees shall not be paid for travel time for travel to or from destinations outside of Santa Barbara and San Luis Obispo Counties. Consultant's employees shall be reimbursed for travel which is not a regular commute for Consultant's employee(s). Reimbursable travel expenses shall be at the lowest coach airfare available if travel is by air; \$.285 per mile if an employee's private vehicle is utilized; and the lowest cost available, if other commercial transportation is utilized. Forms of transportation other than regular public transportation or private vehicle transportation are not authorized for reimbursement unless approved in advance

by Executive Director or such arrangements are less than regular commercial costs unless otherwise specified in this section of Exhibit A.

Unless otherwise specified in this section of Exhibit A, Consultant's employees entitled to travel reimbursement shall be reimbursed for actual costs of meals and/or accommodations, but said subsistence reimbursements shall not exceed \$110 per 24-hours if an overnight stay is involved or \$35 per day if an overnight stay is not required unless higher reimbursements are authorized in advance by the Executive Director.

For Consultant employees working during the construction phase (April 1994 through September 1996) and assigned to a field office, CCWA will reimburse Consultant expenses related to moving of employees to the area of construction or for employee subsistence at the following per diem schedule: \$105 per day for Project Manager, \$95 per day for each of the two Construction Managers, and \$80 per for each of four field staff. Aside from the above per diem rates, no separate reimbursement will be made for employee travel between home and job location.

Vehicles for construction site access will be reimbursed at actual rental or lease rates. Reimbursement will be provided for no more than 8 vehicles unless otherwise authorized in advance by the Executive Director. The type of vehicle to be provided under this section shall be approved by Executive Director.

b. Computer Time. Computer hardware and software acquired for, & dedicated to, the project shall be reimbursed at actual cost or provided by CCWA. Computer charges for multiple use computers shall be reimbursed at \$6 per hour, with the limitation that the total aggregate amount of charges shall not exceed \$8,000 during the term of this Agreement.

c. Facsimile Charges. There will be no reimbursement for faxes.

d. Copy Charges. There shall be no reimbursement for regular copying, but Consultant shall be reimbursed for copying of major reports or documents at a rate of \$.07 per page for photographic copies and \$.40 per page for blue-line copies.

e. Telephone Charges. Telephone costs incurred at Consultant's permanent offices shall be reimbursed, with the limitation that the total aggregate amount of charges shall not exceed \$4,000 during the term of this Agreement. At Consultant's temporary office in Santa Barbara, charges for acquiring and using project dedicated telephones will be billed at cost. During construction (April 1994 through September 1996) the cost of telephone service at construction sites will be charged at cost.

f. Postage Charges. No postal or mailing charges at Consultant's permanent offices shall be reimbursable, except the actual cost of necessary or required expedited mailing. At temporary project or field offices, postage and messenger charges will be billed at cost.

g. Lab Charges. Actual lab charges are reimbursable, except that lab costs in excess of \$500 per Task shall not be reimbursable unless authorized in advance by Authority or unless authorization from Authority cannot be obtained in time to avoid a delay of a construction contractor.

h. Temporary Office. Expenses for maintaining a temporary office during September 1993 through March 1994 for the design and bid/award phase activities will not be reimbursed.

5. Key Personnel. In conjunction with Section 1.e. of the Agreement, the key personnel for the Project, none of whom will be removed without Authority's approval, are: Phil Kohne, Dick Day, John Burke, Terry Maughmer, and Loren Shepherd.

Subcontractors. In conjunction with Section 1.e. of the Agreement, the subcontractors and subcontractor agreements approved by Authority are the following:

| <u>Name</u> | <u>Services</u> | <u>Subcontr. Approval</u> |
|------------------|----------------------------|---------------------------|
| Flowers & Assoc. | Contr. Admin./ Insp. | _____ |
| Penfield & Smith | Surveying | _____ |
| K-C Geotechnical | Material Testing | _____ |
| Davies Commun. | Public Commun. | _____ |

EXHIBIT 1 TO EXHIBIT A

CH2M HILL 1993 SCHEDULE OF HOURLY RATES

| <u>GRADE</u> | <u>RATE</u> |
|--------------|-------------|
| E7 | \$142.25 |
| E6 | \$118.75 |
| E5 | \$102.50 |
| E4 | \$ 89.25 |
| E3 | \$ 77.00 |
| T5 | \$ 71.25 |
| T4 | \$ 67.50 |
| T3 | \$ 63.25 |
| OFC | \$ 41.00 |

CH2M HILL PERSONNEL GRADES

| | | |
|----------------|--|----|
| Phil Kohne | Project Manager | E7 |
| Dick Day | Construction Manager - Treatment Plant | E6 |
| John Burke | Construction Manager - Pipeline | E6 |
| Terry Maughmer | Field Engineer | E5 |
| Loren Shepherd | Project Controls Engineer | E4 |

PROJECT HIRE HOURLY RATES

| <u>LEVEL</u> | <u>RATE</u> |
|--------------|-------------|
| Inspector 3 | \$65.00 |
| Inspector 2 | \$60.00 |
| Inspector 1 | \$55.00 |

SCHEDULE OF HOURLY RATES FOR SUBCONSULTANTS

Flowers & Associates

David Baum \$92.00 (Rate shall apply throughout the
term of this Agreement)

Amendment No. 2 to Agreement
for Professional Services

ATTACHMENT 2

TASK ORDER C CONSTRUCTION MANAGEMENT SERVICES
DURING DESIGN

TASK ORDER D CONSTRUCTION MANAGEMENT SERVICES
DURING BID AND AWARD

TASK ORDER E CONSTRUCTION MANAGEMENT SERVICES
DURING CONSTRUCTION PHASE

TASK ORDER F CONSTRUCTION MANAGEMENT SERVICES
FOR REPAIR OF SYID#1 PIPELINE

attach.2

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TASK ORDER C
Construction Management Services
during Design

COORDINATION AND AUTHORIZATION SHEET

I. Initial Authorizations. On the terms and conditions of the Agreement for Construction Management Services between Central Coast Water Authority (CCWA) and CH2M HILL CALIFORNIA INC. (Consultant), as modified hereby, CCWA, with the consent of Consultant, hereby authorizes the attached Task Order C, and Consultant agrees to accomplish said Task Order on said terms and within said time frames.

Task Order Additional Terms are:

Tasks Included and Not-to-Exceed Costs (excluding Extra Services):

| | |
|----------|-------------------|
| Task C1: | <u>\$ 110,113</u> |
| Task C2: | <u>\$ 123,577</u> |
| Task C3: | <u>\$ 165,228</u> |
| Total: | <u>\$ 398,918</u> |

Time Parameters: _____

Extra Services Authorized: \$39,891

AUTHORITY

ENGINEER

By _____
 Authorized Signatory

By _____
 Authorized Signatory

II. Notices to Proceed

| Tasks/SubTasks | Date | Authority Authorization/Acknowledgement | Engineer Authorization/Acknowledgement |
|----------------|---------|--|---|
| C1, C2, and C3 | 8/26/93 | _____ | _____ |
| _____ | _____ | _____ | _____ |
| _____ | _____ | _____ | _____ |

III. Extra Services.

| No. | Task No. | Description | Amount | Date | Authority Authorization / | Engineer Acknowledgement |
|-------|----------|-------------|--------|-------|------------------------------|-----------------------------|
| _____ | _____ | _____ | _____ | _____ | _____ | _____ |
| _____ | _____ | _____ | _____ | _____ | _____ | _____ |
| _____ | _____ | _____ | _____ | _____ | _____ | _____ |
| _____ | _____ | _____ | _____ | _____ | _____ | _____ |

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TASK ORDER C

CONSTRUCTION MANAGEMENT SERVICES DURING DESIGN

Task Order C will be initiated to provide construction management (CM) services during the design phase of the project, currently scheduled to extend through the end of December 1993. Services provided will be related to the water treatment plant, the pipeline facilities (pipeline, tank, pump station), and the coordination of the multiple project elements of CCWA and DWR facilities.

ASSUMPTIONS RELATED TO SCOPE OF SERVICES

The scope of work and budget proposed under this Task Order C are predicated on the following general assumptions:

- A. During the design phase, the Consultant will perform work in its permanent offices and in a temporary office in Santa Barbara. While working in its temporary office, the Consultant will be provided with reasonable clerical support from CCWA staff.
- B. Work outside of the Consultant's offices is expected to occur in locations in Santa Barbara and San Luis Obispo Counties and in Sacramento and Walnut Creek, California. Travel outside of these areas is not planned under this task order.
- C. Preparation of contract documents will be by Montgomery Watson (MW). Consultant will furnish timely input to the contract documents in the form of memoranda, inserts, and markups on the drawings and specifications.
- D. Preparation of a plan for remediation of known hazardous or designated wastes will be by MW or its subconsultant(s). Development of a contingency plan for handling unforeseen hazardous or designated wastes will also be by MW or its subconsultant(s). Consultant will timely review and advise on remediation and contingency plans from a construction perspective.

SCOPE OF SERVICES

Consultant will perform the services identified in Tasks C1, C2, and C3 below.

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Task C1 CM Services for Water Treatment Plant - Design Phase

Task C1 will include construction planning and contract documents review for the Polonio Pass Water Treatment Plant.

Subtask C1.1 Construction Planning

Early placement of construction infrastructure such as water and power at the plant site can reduce the construction duration and help meet the April 1996 delivery goal. To reduce construction duration, the Consultant will continue the construction planning efforts initiated in Task Order B. Task Order B focused on analysis of the construction schedule to identify early critical activities and evaluate the feasibility of performing these activities in advance of construction. Under Subtask C1.1, the Consultant will implement or coordinate identified critical activities. Construction planning will focus on site access provisions, concrete supply, power, waste disposal and environmental requirements. Consultant's planning will facilitate the coordination of the work of the Tank 1 contractor and the treatment plant contractor.

Consultant will meet and work with the Department of Water Resources (DWR) to coordinate project elements common to the treatment plant and Tank 1 contracts. Elements that impact the treatment plant contract documents will be coordinated with MW for inclusion in the drawings and specifications. Site issues to be coordinated with DWR include site access and control, water, power, waste disposal, liquidated damages, limits of construction, and testing.

Subtask C1.2 Contract Documents Review

At about the 75 percent design level, review the bid documents, general and supplementary conditions, and Division 1 specifications. Provide comments and recommendations on the documents, including those related to bid procedures and format, partnering, disputes resolution board, two envelope bids, overhead markups for change orders, electronic submittal of schedule updates, work breakdown structure, escrow of bid documents, and escrow accounts for subcontractor bonding. For environmental mitigation, review contract language contained in the contract specifications.

For the final contract documents, perform a review for the purpose of minimizing claims and change orders during construction. Review the drawings and specifications to reduce omissions, ambiguities, conflicts, and impossible or impractical requirements. Review process equipment specifications to verify that testing and acceptance criteria are clearly defined.

Submit review comments in the form of written comments on the documents or attachments thereto. Attend meetings to discuss review comments with CCWA and MW.

Review of the contract documents is for purposes of reducing deficiencies in the documents and recommending contract language for enhancements in administration of the construction phase (such as escrow of bid documents). Review of contract documents shall not cause Consultant to assume responsibility for the contract documents. Responsibility for the contract documents shall remain with the design consultant.

Task C2 CM Services for Pipeline Facilities - Design Phase

Task C2 will include construction planning and contract documents review for pipeline Schedules A, B, and C, the Santa Ynez Pump Station and Tank 7.

Subtask C2.1 Construction Planning

Construction planning will include refinement of the schedules developed under Task Order B for the pump station and pipeline Schedules A, B, C, and D, based on final siting and routing of the pump station and pipeline. This subtask will include continued assistance with planning for remediation of contamination encountered along the pipeline route, and with contingency planning for unforeseen occurrences of sensitive biological, cultural, and paleontological resources along the pipeline route.

Subtask C2.2 Contract Documents Review

At about 75 percent design, review the bid documents, general and supplementary conditions, and Division 1 specifications. Provide comments and recommendations on the documents, including those related to bid procedures and format, partnering, disputes resolution board, overhead markups for change orders, electronic submittal of schedule updates, work breakdown structure, and escrow of bid documents.

For environmental mitigation, review contract language contained in the contract specifications and drawings. Review mitigation contract language initially developed for first few drawings, and review final contract language for all of the contract drawings and specifications.

For the final contract documents, perform a review for the purpose of minimizing claims and change orders during construction. Review the drawings and specifications to reduce omissions, ambiguities, conflicts, and impossible or impractical requirements. Review equipment specifications to verify that testing and acceptance criteria are clearly defined.

Submit comments in the form of written comments on the documents or attachments thereto. Attend meetings to discuss review comments with the CCWA, MW, and SAIC.

Review of the contract documents is for purposes of reducing deficiencies in the documents and recommending contract language for enhancements in administration of the construction phase (such as escrow of bid documents). Review of contract documents shall not cause Consultant to assume responsibility for the contract documents. Responsibility for the contract documents shall remain with the design consultant.

Task C3 CM Services for Systemwide Elements - Design Phase

Task C3 will include construction management services for coordination of the multiple project elements of CCWA and DWR facilities. This task will include services common to all project elements, such as public information support, assistance with issues relating to minority business involvement, and administration of construction management contracts and subcontracts.

Subtask C3.1 Coordination and Scheduling

The Consultant will prepare a master schedule of construction activities, integrating the components of CCWA's and DWR's facilities. A work breakdown structure, for recording of schedule and cost information will be prepared in a manner compatible with existing MW information. A project budget will be prepared, using existing cost information, for tracking of actual versus planned expenditures. Schedule and cost information on construction and construction management will be monitored and reported to CCWA. Consultant will attend meetings as needed for reporting on progress and key issues.

Develop procedures for communication and document control during bidding and construction. Determine the communications requirements for the bidding and construction phases and identify the equipment and procedures necessary to achieve communication between the construction sites, CCWA, and MW. Develop electronic linkage for transfer of jobsite information to CCWA files in a manner compatible with existing document control system.

Evaluate options for delivery of documents to and from the job sites and recommend a procedure for timely transfer of those documents.

The Consultant will assist CCWA in coordinating with DWR and other agencies involved in the project. Coordination efforts will focus on development of contract documents by CCWA and DWR that address construction issues in a cost effective manner. Coordination efforts will also focus on developing rapport with key regulatory staff to facilitate communications during construction.

Subtask C3.2 Public Information Support

Provide assistance to CCWA in public information efforts. Assist in developing strategies for maintaining public support, responding to public concerns, facilitating public meetings, and preparing information materials.

Subtask C3.3 Construction Issues Advising

Provide advice in response to CCWA's requests for information on construction related issues such as minority business involvement during construction. Facilitate involvement of local contractors and subcontractors in a manner that does not compromise cost.

Subtask C3.4 Consultant Services Administration

Administer Consultant's construction management services contract with CCWA. Manage staffing levels, monitor and control Consultant services level of effort and cost, and coordinate invoicing including response to billing inquiries by CCWA.

Manage subconsultant contracts, level of effort, costs and invoicing.

EXTRA SERVICES

Certain Extra Services may be required in order to complete CCWA's project. The Extra Services will be provided by Consultant upon written authorization of CCWA's Executive Director. Listed below, as individual subtasks, are Extra Services the Executive Director may authorize Consultant to perform.

Preparation of Procurement Documents

Based upon the construction schedule of the facilities, in particular the treatment plant, equipment may have to be procured ahead of the construction contract(s). If requested, the Consultant will prepare, or assist in the preparation of, the necessary equipment procurement documents.

Administrative and Specialty Services Support

During peak workloads CCWA may require assistance with administrative services including document control, accounting and clerical work. During the design phase CCWA may encounter a need to consult with specialists within CH2M HILL in the areas of geotechnical engineering, laboratory analysis, hazardous waste cleanup, environmental mitigation, corrosion control, water rate analysis and other disciplines involved in water supply and treatment projects. If

requested, the Consultant will provide support in administrative and specialty services.

COST OF SERVICES

The "not-to-exceed" cost for Task Order C is \$398,918. The budgeted costs for tasks performed under Task Order C are as shown in Attachment C-1.

| | |
|----------------------|----------------|
| CALENDAR PAGE | 274.105 |
| MINUTE PAGE | 1280 |

Task Order C
ATTACHMENT C-1
Cost Of Services
CONSTRUCTION MANAGEMENT SERVICES DURING DESIGN

| LABOR: | 1993 Hours | | | | | | Total Hrs | \$/hr | Total Cost |
|--|------------|-----|-----|-----|-----|-----------------|-----------|----------------|------------|
| | Aug | Sep | Oct | Nov | Dec | | | | |
| Task C1 CM Services for Water Treatment Plant | | | | | | | | | |
| Subtask C1.1 Construction Planning | | | | | | | | | |
| E7 | 5 | 10 | 10 | 10 | 10 | 45 | 142.25 | 6,401 | |
| E6 | 8 | 60 | 60 | 60 | 30 | 218 | 118.75 | 25,888 | |
| E5 | 10 | 30 | 30 | 30 | 30 | 130 | 102.50 | 13,325 | |
| OFC | 10 | 10 | 10 | 10 | 10 | 50 | 41.00 | 2,050 | |
| | | | | | | | | 47,664 | |
| Subtask C1.2 Contract Documents Review | | | | | | | | | |
| E7 | 5 | 10 | 10 | 10 | 10 | 45 | 142.25 | 6,401 | |
| E6 | 8 | 40 | 80 | 30 | 10 | 168 | 118.75 | 19,950 | |
| E5 | 5 | 40 | 40 | 10 | 10 | 105 | 102.50 | 10,763 | |
| OFC | 5 | 10 | 10 | 10 | 10 | 45 | 41.00 | 1,845 | |
| | | | | | | | | 38,959 | |
| Task C2 CM Services for Pipeline Facilities | | | | | | | | | |
| Subtask C2.1 Construction Planning | | | | | | | | | |
| E7 | 5 | 10 | 10 | 10 | 10 | 45 | 142.25 | 6,401 | |
| E6 | 20 | 80 | 80 | 80 | 80 | 340 | 118.75 | 40,375 | |
| E5 | 10 | 20 | 20 | 10 | | 60 | 102.50 | 6,150 | |
| OFC | 5 | 10 | 10 | 10 | 10 | 45 | 41.00 | 1,845 | |
| | | | | | | | | 54,771 | |
| Subtask C2.2 Contract Documents Review | | | | | | | | | |
| E7 | 5 | 10 | 10 | 10 | 10 | 45 | 142.25 | 6,401 | |
| E6 | 20 | 40 | 40 | 40 | 40 | 180 | 118.75 | 21,375 | |
| E5 | 5 | 40 | 40 | 35 | 10 | 130 | 102.50 | 13,325 | |
| OFC | 5 | 10 | 10 | 10 | 10 | 45 | 41.00 | 1,845 | |
| | | | | | | | | 42,946 | |
| Task C3 CM Services for Systemwide Elements | | | | | | | | | |
| Subtask C3.1 Coordination and Scheduling | | | | | | | | | |
| E7 | 10 | 60 | 60 | 60 | 60 | 250 | 142.25 | 35,563 | |
| E4 | 40 | 178 | 178 | 178 | 178 | 752 | 89.25 | 67,116 | |
| OFC | 10 | 10 | 10 | 10 | 10 | 50 | 41.00 | 2,050 | |
| | | | | | | | | 104,729 | |
| Subtask C3.2 Public Information Support | | | | | | | | | |
| E7 | | 10 | 10 | 10 | 10 | 40 | 142.25 | 5,690 | |
| Subtask C3.3 Construction Issues Advising | | | | | | | | | |
| E7 | 10 | 30 | 30 | 30 | 30 | 130 | 142.25 | 18,493 | |
| Subtask C3.4 CM Services Administration | | | | | | | | | |
| E7 | 8 | 22 | 22 | 22 | 22 | 96 | 142.25 | 13,656 | |
| OFC | 5 | 10 | 10 | 10 | 10 | 45 | 41.00 | 1,845 | |
| | | | | | | | | 15,501 | |
| Total Labor: | | | | | | 3,059.00 | | 328,752 | |

EXPENSES:

| | |
|---|--------|
| Travel | 57,640 |
| Telephone | 4,000 |
| Fed Ex | 430 |
| Computer | 3,096 |
| Sub - Public Info (Davies Communications) | 5,000 |

Total Expenses: 70,166

TOTAL BUDGET

| | |
|---------------|---------|
| | 398,918 |
| CALENDAR PAGE | 274.106 |
| MINUTE PAGE | 1281 |

TASK ORDER D
Construction Management Services
during Bidding and Award

COORDINATION AND AUTHORIZATION SHEET

I. Initial Authorizations. On the terms and conditions of the Agreement for Construction Management Services between Central Coast Water Authority (CCWA) and CH2M HILL CALIFORNIA INC. (Consultant), as modified hereby, CCWA, with the consent of Consultant, hereby authorizes the attached Task Order D, and Consultant agrees to accomplish said Task Order on said terms and within said time frames.

Task Order Additional Terms are:

Tasks Included and Not-to-Exceed Costs (excluding Extra Services):

| | |
|----------|------------|
| Task D1: | \$ 130,466 |
| Task D2: | \$ 121,919 |
| Task D3: | \$ 126,797 |
| Total: | \$ 379,182 |

Time Parameters: _____
 Extra Services Authorized: \$37,918

AUTHORITY

ENGINEER

By _____
 Authorized Signatory

By _____
 Authorized Signatory

II. Notices to Proceed

| Tasks/SubTasks | Date | Authority Authorization/Acknowledgement | Engineer Authorization/Acknowledgement |
|----------------|-------|---|--|
| _____ | _____ | _____ | _____ |
| _____ | _____ | _____ | _____ |
| _____ | _____ | _____ | _____ |

III. Extra Services.

| No. | Task No. | Description | Amount | Date | Authority Authorization/ | Engineer Acknowledgement |
|-------|----------|-------------|--------|-------|--------------------------|--------------------------|
| _____ | _____ | _____ | _____ | _____ | _____ | _____ |
| _____ | _____ | _____ | _____ | _____ | _____ | _____ |
| _____ | _____ | _____ | _____ | _____ | _____ | _____ |
| _____ | _____ | _____ | _____ | _____ | _____ | _____ |

| | |
|----------------------|----------------|
| CALENDAR PAGE | 274.107 |
| MINUTE PAGE | 1282 |

TASK ORDER D

CONSTRUCTION MANAGEMENT SERVICES DURING BID AND AWARD

Task Order D will be initiated to provide construction management (CM) services during the bid and award phase of the project, currently scheduled to extend from January to April 1994. The Consultant will be the primary interface with contractors during the bidding and award of the contracts. Services provided will be related to the water treatment plant, the pipeline facilities (pump station, tank and pipeline), and the coordination of the various components of CCWA and DWR facilities.

ASSUMPTIONS RELATED TO SCOPE OF SERVICES

The scope of work and budget proposed under this Task Order D are predicated on the following general assumptions:

- A. Reproduction and distribution of the contract documents and preparation, reproduction and distribution of addenda will be by MW. Advertisement of the contract documents to prospective bidders will be by CCWA.
- B. Certain of the Consultant's personnel will be located full time in Santa Barbara during the bid and award period. The Consultant will obtain office space as near as possible to CCWA's offices to house its personnel, and will equip the office with furnishings and office equipment as required to perform the work.
- C. During the bid and award period, a clerical person will be provided by Consultant to support its personnel located in Santa Barbara. Additional clerical support will be available from CCWA based on workload demands and availability of CCWA clerical staff.
- D. It is assumed that there will be three bid openings: one for the water treatment plant, one for the pipeline (three pipeline schedules), and one for the pump station and Tank 7. For the bid openings, it is assumed that space at a public facility will be available and that there will be no cost to Consultant for the use of such space.

- E. For the prebid conference and site tours, it is estimated that there will be one for the water treatment plant and two for the pipeline facilities. It is assumed that space for the prebid conferences will be provided at no cost to the Consultant.

SCOPE OF SERVICES

Consultant will perform the services identified in Tasks D1, D2, and D3 below.

Task D1 CM Services for Water Treatment Plant - Bid/Award Phase

Task D1 will include management of bid and award phase activities for the Polonio Pass Water Treatment Plant.

Subtask D1.1 Bid Phase Services

Consultant shall perform the following bid phase activities:

1. **Bid Period Inquiries.** Receive bidder questions and direct inquiries to the proper party for response to be routed through Consultant. Number and log each question. Provide response to administrative questions. Transmit design related questions to MW for response. For any oral response provided, maintain a written record of the question and response. Oral response shall be provided only when written clarification or modification of the documents is not required.
2. **Addenda Coordination.** Coordinate the preparation of written addenda required for clarification or modification of the contract documents. Prepare a schedule of addenda identifying the number and timing of addenda for each contract. Addenda will be prepared by MW, reviewed by the Consultant, and reproduced and distributed by MW. Administrative addenda items prepared by the Consultant will be forwarded to MW for incorporation in the written addenda sent to bidders on the planholders list. MW will maintain and update the planholders list, and transmit a copy to Consultant each week.
3. **Pre-Bid Conference and Site Tours.** Plan, schedule, and conduct a pre-bid conference for prospective bidders. Prepare an agenda, with CCWA and MW review and input, for distribution to attendees at the meeting. Record the meeting and prepare summary minutes of the meeting. Distribute the minutes, including list of attendees, to all parties on the planholders list. Arrange and conduct site tours for prospective bidders. Facilitate involvement of local contractors and subcontractors in the bidding process without creating requirements that increase project costs.

4. **Bid Opening Planning.** Assist in selecting the optimum schedule for the bid opening. Identify other scheduled bid openings that may divert the resources of potential bidders and assist CCWA to select the bid opening schedule. Assist in identifying an appropriate location for the bid opening. Identify and visit potential bid opening locations to evaluate their suitability for the bid opening. Assist MW with development of the advertisement for bid.

5. **Bid Review.** Conduct the bid opening and observe the receipt, acknowledgement, opening and reading of bids. Review the low bid(s) for compliance with the contract documents, including bond requirements, experience requirements, acknowledgement of addenda, evidence of proper licensing, subcontractor listing, power of attorney, and proper signatures. Provide the CCWA with a written analysis of the bid review within five working days after of the bid opening.

Subtask D1.2 Award Phase Services

Consultant shall assist CCWA in the award phase activities for the water treatment plant. Assist with preparation of the report to CCWA's Board recommending award and the notice of award. Prepare notice-to-proceed following receipt of approved bonds and insurance.

Coordinate with contractor in advance of notice-to-proceed on administrative matters necessary for expediting the project. Prepare clarifications and change orders, in conjunction with MW, necessary to respond to bidder inquiries received after issuance of the last addendum.

Task D2 CM Services for Pipeline Facilities - Bid/Award Phase

Task D2 will include management of bid and award activities for pipeline Schedules A, B, and C, the Santa Ynez Pump Station and Tank 7.

Subtask D2.1 Bid Phase Services

Consultant shall perform the following bid phase activities:

1. **Bid Period Inquiries.** Receive bidder questions and direct inquiries to the proper party for response. Number and log each question. Provide response to administrative questions. Transmit design related questions to MW for response. For any oral response provided, maintain a written record of the question and response. Oral response shall be provided only when written clarification or modification of the documents is not required.

2. **Addenda Coordination.** Coordinate the preparation of written addenda required for clarification or modification of the contract documents. Prepare a schedule of addenda identifying the number and timing of addenda for each contract. Addenda will be prepared by MW, reviewed by the Consultant, and reproduced and distributed by MW. Administrative addenda items prepared by the Consultant will be forwarded to MW for incorporation in the written addenda sent to bidders on the planholders list. MW will maintain and update the planholders list, and transmit a copy to Consultant each week.
3. **Pre-Bid Conference and Site Tours.** Plan, schedule, and conduct a pre-bid conference for prospective bidders. Prepare an agenda, with CCWA and MW review and input, for distribution to attendees at the meeting. Record the meeting and prepare summary minutes of the meeting. Distribute the minutes, including list of attendees, to all parties on the planholders list. Arrange and conduct site tours for prospective bidders. Facilitate involvement of local contractors and subcontractors in the bidding process without creating requirements that increase project costs.
4. **Bid Opening Planning.** Assist in selecting the optimum schedule for the bid opening. Identify other scheduled bid openings that may divert the resources of potential bidders and assist CCWA to select the bid opening schedule. Assist in identifying an appropriate location for the bid opening. Identify and visit potential bid opening locations to evaluate their suitability for the bid opening. Assist MW with development of the advertisement for bid.
5. **Bid Review.** Conduct the bid opening and observe the receipt, acknowledgement, opening and reading of bids. Review the low bid(s) for compliance with the contract documents, including bond requirements, experience requirements, acknowledgement of addenda, evidence of proper licensing, subcontractor listing, power of attorney, and proper signatures. Provide the CCWA with a written analysis of the bid review within five working days after of the bid opening.

Subtask D2.2 Award Phase Services

Consultant shall assist CCWA in the award phase activities for the pipeline facilities. Assist with preparation of the report to CCWA's Board recommending award and the notice of award. Prepare notice-to-proceed following receipt of approved bonds and insurance.

Coordinate with contractor in advance of notice-to-proceed on administrative matters necessary for expediting the project. Prepare clarifications and change orders, in conjunction with MW, necessary to respond to bidder inquiries received after issuance of the last addendum.

Task D3 CM Services for Systemwide Elements - Bid/Award Phase

Task D3 will include construction management services for coordination of the multiple project elements of CCWA and DWR facilities. This task will include services common to all project elements, such as public information support and administration of construction management contracts.

Subtask D3.1 Coordination and Scheduling

The Consultant will monitor and report on cost and schedule of construction and construction management activities. Consultant will attend meetings as needed for reporting on progress and key issues.

Provide continued coordination and communication with DWR and other agencies involved in the project. Meet with DWR job site staff as needed for coordination of DWR and CCWA activities.

Subtask D3.2 Public Information Support

Provide assistance to CCWA in public information efforts. Assist in developing strategies for maintaining public support, responding to public concerns, facilitating public meetings, and preparing information materials.

Subtask D3.3 Construction Issues Advising

Provide advice in response to CCWA's requests for information on construction related issues such as minority business involvement during construction, participation by local contractors, and resolution of potential bid protests.

Subtask D3.4 Consultant Services Administration

Administer Consultant's construction management services contract with CCWA. Manage staffing levels, monitor and control Consultant services level of effort and cost, and coordinate invoicing including response to billing inquiries by CCWA.

Manage subconsultant contracts, level of effort, costs and invoicing.

EXTRA SERVICES

Certain Extra Services may be required in order to complete CCWA's project. The Extra Services will be provided by Consultant upon written authorization of CCWA's Executive Director. Listed below, as individual subtasks, are Extra Services the Executive Director may authorize Consultant to perform.

Management of Procurement Contracts

Schedule analyses performed under Task Order C during the design phase may identify a need to expedite portions of the work. Expediting of the work can be accomplished by prepurchasing long lead equipment and/or by issuing a purchase order for time critical items immediately following bid opening. For equipment requiring advanced purchase, the Consultant will manage the procurement contract(s), including scheduling, expediting, and coordinating shop drawings and clarifications. For early purchase orders, the Consultant will coordinate with the low bidder as needed for completion of the time critical work items.

Administrative and Specialty Services Support

As required to assist with administrative peak workloads and to provide specialized expertise, the Consultant will provide appropriate staff and specialists. As a service to aid in the resolution of any bid protests, the Consultant will make available the services of legal experts through subcontract.

COST OF SERVICES

The "not-to-exceed" cost for Task Order D is \$379,182. The budgeted costs for tasks performed under Task Order D are as shown in Attachment D-1.

Task Order D
 ATTACHMENT D-1
 Cost Of Services
 CONSTRUCTION MANAGEMENT SERVICES DURING BID AND AWARD

| LABOR: | 1994 | | | Hrs | \$/hr | Total Cost |
|--|------|-----|-----|-----------------|--------|----------------|
| | Jan | Feb | Mar | | | |
| Task D1 CM Services for Water Treatment Plant | | | | | | |
| Subtask D1.1 Bid Phase Services | | | | | | |
| E7 | 20 | 20 | | 40 | 148.00 | 5,920 |
| E6 | 80 | 80 | | 160 | 123.50 | 19,760 |
| E5 | 162 | 162 | | 324 | 106.50 | 34,506 |
| Clerk | 81 | 81 | | 162 | 20.00 | 3,240 |
| | | | | | | <u>63,426</u> |
| Subtask D1.2 Award Phase Services | | | | | | |
| E7 | | | 20 | 20 | 148.00 | 2,960 |
| E6 | | | 162 | 162 | 123.50 | 20,007 |
| E5 | | | 162 | 162 | 106.50 | 17,253 |
| Clerk | | | 81 | 81 | 20.00 | 1,620 |
| | | | | | | <u>41,840</u> |
| Task D2 CM Services for Pipeline Facilities | | | | | | |
| Subtask D2.1 Bid Phase Services | | | | | | |
| E7 | 20 | 20 | | 40 | 148.00 | 5,920 |
| E6 | 80 | 80 | | 160 | 123.50 | 19,760 |
| Flowers | 162 | 162 | | 324 | 92.00 | 29,808 |
| Clerk | 81 | 81 | | 162 | 20.00 | 3,240 |
| | | | | | | <u>58,728</u> |
| Subtask D2.2 Award Phase Services | | | | | | |
| E7 | | | 20 | 20 | 148.00 | 2,960 |
| E6 | | | 162 | 162 | 123.50 | 20,007 |
| Flowers | | | 162 | 162 | 92.00 | 14,904 |
| Clerk | | | 81 | 81 | 20.00 | 1,620 |
| | | | | | | <u>39,491</u> |
| Task D3 CM Services for Systemwide Elements | | | | | | |
| Subtask D3.1 Coordination and Scheduling | | | | | | |
| E7 | 60 | 60 | 60 | 180 | 148.00 | 26,640 |
| E4 | 178 | 178 | 178 | 534 | 92.75 | 49,529 |
| | | | | | | <u>76,169</u> |
| Subtask D3.2 Public Information Support | | | | | | |
| E7 | 10 | 10 | 10 | 30 | 148.00 | 4,440 |
| Subtask D3.3 Construction Issues Advising | | | | | | |
| E7 | 30 | 30 | 30 | 90 | 148.00 | 13,320 |
| Subtask D3.4 CM Services Administration | | | | | | |
| E7 | 22 | 22 | 22 | 66 | 148.00 | 9,768 |
| Total Labor: | | | | 3,122.00 | | 307,182 |

EXPENSES:

| | |
|---|--------|
| Travel | 36,500 |
| Fed Ex | 300 |
| Computer | 10,700 |
| Telephone | 4,500 |
| Sub - Public Info (Davies Communications) | 20,000 |

Total Expenses:

TOTAL BUDGET

TASK ORDER E
Construction Management Services
during Construction Phase

COORDINATION AND AUTHORIZATION SHEET

I. Initial Authorizations. On the terms and conditions of the Agreement for Construction Management Services between Central Coast Water Authority (CCWA) and CH2M HILL CALIFORNIA INC. (Consultant), as modified hereby, CCWA, with the consent of Consultant, hereby authorizes the attached Task Order E, and Consultant agrees to accomplish said Task Order on said terms and within said time frames.

Task Order Additional Terms are:

Tasks Included and Not-to-Exceed Costs (excluding Extra Services):

| | |
|----------|---------------------|
| Task E1: | <u>\$ 2,378,651</u> |
| Task E2: | <u>\$ 2,476,115</u> |
| Task E3: | <u>\$ 1,197,187</u> |
| Total: | <u>\$ 6,051,953</u> |

Time Parameters: _____

Extra Services Authorized: \$605,195

AUTHORITY

ENGINEER

By _____
 Authorized Signatory

By _____
 Authorized Signatory

II. Notices to Proceed

| Tasks/SubTasks | Date | Authority Authorization/Acknowledgement | Engineer Authorization/Acknowledgement |
|----------------|-------|--|---|
| _____ | _____ | _____ | _____ |
| _____ | _____ | _____ | _____ |
| _____ | _____ | _____ | _____ |

III. Extra Services.

| No. | Task No. | Description | Amount | Date | Authority Authorization/ | Engineer Acknowledgement |
|-------|----------|-------------|--------|-------|-----------------------------|-----------------------------|
| _____ | _____ | _____ | _____ | _____ | _____ | _____ |
| _____ | _____ | _____ | _____ | _____ | _____ | _____ |
| _____ | _____ | _____ | _____ | _____ | _____ | _____ |
| _____ | _____ | _____ | _____ | _____ | _____ | _____ |

CALENDAR PAGE 274.115

MINUTE PAGE 1290

TASK ORDER E

CONSTRUCTION MANAGEMENT SERVICES DURING CONSTRUCTION PHASE

Task Order E will be initiated to provide construction management (CM) services during the construction phase of the project. The construction phase is currently scheduled to extend from April 1994 through August 30, 1996. The construction phase, for purposes of this task order, is intended to include startup of the facilities. Services provided will be related to the water treatment plant, the pipeline facilities (pump station, tank and pipeline), and the coordination of the multiple project elements of CCWA and DWR facilities.

ASSUMPTIONS RELATED TO SCOPE OF SERVICES

The scope of work and budget proposed under this Task Order E are predicated on the following general assumptions:

- A. For the water treatment plant, the construction duration is expected to be 24 months through substantial completion (April 1996) plus an additional 5 months through final completion and acceptance (August 1996). The treatment plant is anticipated to be constructed under a single contract, without owner-furnished materials or equipment.
- B. For the pipeline facilities, the present plan is to bid the pipeline, pump station, and Tank 7 under separate contracts. The pipeline will be bid in three schedules, resulting in the possible outcomes of having one, two or three contracts for the pipeline construction. Use of owner-furnished materials or equipment is not contemplated for the pipeline facilities. The construction is planned to begin in April 1994. Substantial completion is expected to occur in August 1996; final completion and acceptance is planned for September 1996.
- C. The construction duration for the pump station is estimated to be 18 months. The construction duration for Tank 7 is estimated to be 13 months.
- D. For the pipeline the estimated construction duration for each schedule is 9 months. The Consultant plans to provide one inspector for each schedule. If a contractor uses more than one crew, additional effort and cost may result.
- E. During the construction period from April 1994 through September 1996, field offices for the Consultant's staff, as well as the staff of CCWA, MW and other parties retained by CCWA, will be provided by the construction contractors. Under the construction contracts, the field offices will be furnished and equipped as required for performance of the work of the Consultant, CCWA, MW and other parties retained by CCWA.

| | |
|---------------|----------|
| CALENDAR PAGE | 274. 116 |
| MINUTE PAGE | 1291 |

- F. For the pipeline facilities, Consultant will provide clerical staff during the construction period for use by both CCWA and the Consultant.
- G. The levels of effort and cost proposed under this Task Order are considered reasonable for a project of this scope and magnitude. Factors beyond the control of the Consultant such as severe weather, strikes, or contractor workmanship deficiencies may require additional effort and cost on the part of the Consultant.
- H. During the construction period CCWA will assign to the project its Deputy Director, an Operations Superintendent, and a Project Engineer. Deputy Director responsibilities will include approval of contractor payments, review and approval of changes to the construction contracts, authorization of extra work by contractors as needed to avoid or minimize delays due to unforeseen conditions, oversight of public communication efforts, and other oversight functions as CCWA's primary point of interface regarding construction activities. The Operations Superintendent will develop first-hand knowledge of the completed facilities through active participation during the construction phase, and prepare operational plans in advance of operation of the constructed facilities. The Operations Superintendent will review the project documents, including shop drawings of equipment, equipment operation and maintenance manuals, change orders impacting system operations, and other operations related documents. The Operations Superintendent will witness critical construction and startup activities affecting operations, and assist MW in developing an operations plan that will address operations staffing, budgets, and procedures. The Project Engineer will provide detailed cost and schedule control related to the work of consultants and contractors; assist with engineering solutions to field problems caused by unforeseen conditions; assist with the monitoring of supplies and services furnished by manufacturers (such as equipment spare parts, manuals, certifications and training), and coordinate CCWA project activities such as the Santa Ynez ID #1 pipeline repair, right of way acquisition, and environmental monitoring.
- I. During final design and construction CCWA will have appropriate environmental experts available to address environmental issues and concerns related to the project. Environmental experts will include an Environmental Program Manager, a field coordinator of environmental monitors and appropriate environmental monitors. The environmental experts will report to CCWA's Deputy Director and will work cooperatively with Consultant to resolve environmental issues in a timely and cost effective manner while meeting applicable environmental standards and requirements. Environmental training will be provided by CCWA's environmental experts.

- J. CCWA will have right of way acquisition agents available during construction to help Consultant address right of way issues and concerns that may arise during construction.

SCOPE OF SERVICES

Consultant will perform the services identified in Tasks E1, E2, and E3 below. Consultant personnel will receive training related to environmental mitigation for biological, cultural and paleontological resources. Consultant personnel will coordinate with environmental monitors, coordinators and managers in an effort to meet specified mitigation requirements and to minimize the impact of mitigation measures on the construction cost and schedule.

Task E1 CM Services for Treatment Plant - Construction Phase

Task E1 will include subtasks for construction management, field engineering and administration, and inspection, testing and surveying for the Polonio Pass Water Treatment Plant.

Subtask E1.1 Construction Management

Services provided under this subtask will be performed or led primarily by the construction manager and the project controls engineer. Specific activities will include:

1. **Pre-Construction Activities.** Arrange and attend a partnering workshop over a two day period. Provide a facilitator for the workshop, with a budget amount of \$6000 for the facilitator's labor and expenses. Arrange and conduct a pre-construction conference to introduce project personnel, review administrative procedures, discuss environmental mitigation requirements, and review procedures for coordination with the activities of the Tank 1 contractor. Prepare and distribute a CCWA-approved project manual that contains the team organization and roles, telephone numbers of project personnel, administrative procedures, and environmental mitigation training and field procedures.
2. **Coordination and Correspondence.** Serve as the focal point for coordination among the contractor, CCWA, MW, DWR and other parties. Receive contractor correspondence and prepare and transmit responses. Coordinate with applicable parties as required to develop responses. Coordinate warranty services with contractor and CCWA through final completion and acceptance of the project.
3. **Change Order Management.** Apply Consultant's skill and experience in minimizing change orders during construction through timely processing of construction documents; preventing changes arising from constructive acceleration; working with the contractors to minimize field conditions that could result in added

work; and developing a screening process for change requests initiated by MW, CCWA or Consultant. For any changes that are required, develop a process for initiation, negotiation, approval, payment and documentation of change orders. Perform change order administration, including issuing proposed change orders to contractor, maintaining logs of proposed and approved change orders, receiving change order quotations from contractor, negotiating change order costs and time extensions, processing final negotiated change orders, and incorporating approved change orders into progress payment schedule of values. Perform quantity and cost analysis as required for negotiation of change orders. Coordinate with CCWA and MW as required for processing of change orders. Review change orders with CCWA staff and a Board appointed review group.

4. **Claims Management.** Apply Consultant's skill and experience in minimizing claims during construction through maintaining positive working relationships with contractors; assisting in identifying and resolving claims for additional compensation early and equitably; and applying procedures for enabling work to proceed in the event differences arise over the responsibility for, or cost of, extra work. Analyze claims for additional compensation submitted during construction and prepare responses. Perform claims administration, including coordination and monitoring, claims resolution negotiations, logging and tracking of claims status, and informing CCWA on the status of claims.

5. **Schedule Management.** Review contractor's as-planned schedule for conformance with the specifications and for reasonableness of activity durations and sequence. Furnish a copy of the initial schedule for review and comment by MW. Review schedule issues with CCWA. Participate in a schedule work session with the contractor to develop an acceptable as-planned schedule. Review work progress as compared to the contractor's monthly schedule updates, and appraise CCWA of any schedule deviations and recovery plans. Analyze the schedule to determine impact of weather and change orders on the construction schedule. Negotiate time extensions due to change orders, weather and other delays. Review time extensions with CCWA.

6. **Status Meetings.** Conduct meetings with the contractor to discuss the status of the work and the short term work activities planned by the contractor. Schedule and conduct start-up meetings for planning, sequencing and organizing the start-up activities for the treatment plant. Prepare meeting agendas and minutes and distribute to meeting attendees. Coordinate with MW staff related to their involvement in jobsite meetings.

7. **Progress Reports.** Prepare and submit a status report each month describing key issues, cost status, and schedule status for compilation into the program report prepared by MW.

8. **Payment Recommendations.** Review the contractor's initial cost breakdown for reasonableness and ease of monitoring. Review contractor's monthly payment requests, negotiate differences over payment, and prepare and process payment recommendations to CCWA.

9. **Personnel Safety.** Consultant shall perform the work in compliance with state and federal safety requirements, and shall assume sole and complete responsibility for the safety of its personnel during the project. To provide for the safety of its personnel Consultant will perform the following activities: review the contract documents to verify the requirement for the contractor to ensure safe working conditions and practices at the construction site, review contractor's safety plan, monitor the jobsite for safe working conditions for Consultant personnel, provide safety guidelines and training for Consultant personnel, and report safety violations observed at the construction site. Reporting of safety violations to the contractor or the CCWA shall not make Consultant responsible for duties that belong to the construction contractor or other parties, and shall not relieve the contractor of its responsibility for complying with safety regulations. Notification of contractor of safety deficiencies shall not cause Consultant to assume, by its actions, a duty to detect safety deficiencies of the contractor.

Subtask E1.2 Field Engineering and Administration

Services provided under this subtask will be performed primarily by the Consultant's field engineer and the project clerk. Specific activities will include:

1. **Submittals Management.** Develop, in conjunction with MW, a submittal distribution list to identify engineer responsible for review and acceptance. Receive, stamp, and log submittals, and distribute for review. Monitor review of submittals to foster timely review and return of submittals to contractor. Review and respond to administrative submittals such as the construction schedule. Review of engineering submittals will be by MW.

2. **RFI (Request for Information) Management.** Receive, process and monitor requests for information from the contractor. Prepare responses to RFIs that are related to construction issues. Transmit design-related RFIs to MW and track progress. Conduct discussions and/or meetings with contractor, MW, CCWA and other parties as needed to resolve RFIs.

3. **Change Order Scoping.** Prepare scope of change orders based on drawings, specifications, and other design information from MW. Prepare scope of change orders that are related to construction issues. Review change orders with CCWA.

4. **Document Management.** Set up and maintain project files. Set up and operate computerized document tracking system in the field as part of overall document tracking system.
5. **Coordination of Equipment and Services.** For equipment furnished under the specifications, develop lists and monitor status of manufacturers' certificates, services, spare parts and manuals. Receive, log and file manufacturers' certificates. Receive, log and turn over spare parts to CCWA. Receive, log and distribute manufacturers' O&M manuals for review and acceptance. Coordinate manufacturers' training services with CCWA operations and maintenance staff.
6. **Coordination of Testing and Startup.** Coordinate testing and startup, including efforts by the contractor, manufacturers, MW, and operations and maintenance personnel. Receive test reports from contractor and transmit for review and acceptance.
7. **Contract Closeout.** Complete documentation and coordination required for final acceptance and closeout of the construction contract.

Subtask E1.3 Inspection, Testing and Surveying

Provide inspection, testing and surveying services as follows:

1. **Inspection.** Provide two resident inspectors for day-to-day on-the-job observation of the work for an aggregate of 50 person-months at the project site. Provide an electrical and instrumentation inspector assigned primarily to the water treatment plant and part time to the pipeline facilities, for an aggregate of 25 person-months. The inspectors shall make reasonable efforts to guard CCWA against defects and deficiencies in the work of the contractor and to help determine if the provisions of the contract documents are being fulfilled; prepare daily inspection reports documenting observed construction activities and jobsite conditions; measure pay quantities; coordinate the activities of materials testing firms; coordinate, witness and record leakage tests for piping and water bearing structures; take progress photographs and bind and label them; mark up a field blueline set of drawings to incorporate contractor record drawing markups; prepare punch lists; coordinate and conduct final inspection; and assist with equipment testing and startup and other matters relating to construction of the project. All documentation shall be made available to CCWA. Inspection services by Consultant shall not cause Consultant to assume contractor's responsibility for completing the work in conformance with the contract documents. Compliance with the contract documents shall remain the sole responsibility of the contractor.

2. **Materials Testing.** Provide materials testing for concrete strength and soils compaction. Materials tests may also include aggregate gradation analysis, non-destructive weld testing, and torque resistance.

3. **Surveying.** Provide survey control monuments for layout of the water treatment plant. Construction staking will be by the contractor. Field check critical construction elevations such as concrete tank base slab elevations.

Task E2 CM Services for Pipeline Facilities - Construction Phase

Task E2 will include subtasks for construction management, field engineering and administration, and inspection, testing, and surveying for pipeline Schedules A, B, and C, the Santa Ynez Pump Station, and Tank 7.

Subtask E2.1 Construction Management

Services provided under this subtask will be performed or led primarily by the construction manager and the project controls engineer. Specific activities will include:

1. **Pre-Construction Activities.** Arrange and attend partnering workshops for the pipeline, pump station, and Tank 7 contracts. Workshop format and duration will be tailored to the size of the contracts. Arrange and conduct a pre-construction conference to introduce project personnel, review administrative procedures, and discuss environmental mitigation requirements. Prepare and distribute a CCWA-approved project manual that contains the team organization and roles, telephone numbers of project personnel, administrative procedures, and environmental mitigation training and field procedures.

2. **Coordination and Correspondence.** Serve as the focal point for coordination among the contractor, CCWA, MW, DWR and other parties. Receive contractor correspondence and prepare and transmit responses. Coordinate with applicable parties as required to develop responses. Coordinate with property owners near the pipeline facilities to keep them informed and aware of construction activities. Respond to property owner concerns in an effort to maintain public support for the project. Coordinate the videotaping of property conditions along the pipeline. Consultant will coordinate warranty service with contractor(s) and CCWA through final completion and acceptance. Coordinate between contractors and parties providing services related to identification of crude oil contaminated soil anticipated in the Unocal property.

3. **Change Order Management.** Apply Consultant's skill and experience in minimizing change orders during construction through timely processing of construction documents; preventing changes arising from constructive acceleration; working with the contractors to minimize field conditions that could result in added work; and developing a screening process for change requests initiated by MW,

CCWA or Consultant. For any changes that are required, develop a process for initiation, negotiation, approval, payment and documentation of change orders. Perform change order administration, including issuing proposed change orders to contractor, maintaining logs of proposed and approved change orders, receiving change order quotations from contractor, negotiating change order costs and time extensions, processing final negotiated change orders, and incorporating approved change orders into progress payment schedule of values. Perform quantity and cost analysis as required for negotiation of change orders. Coordinate with CCWA and MW as required for processing of change orders. Review change orders with CCWA staff and a Board appointed review group.

4. **Claims Management.** Apply Consultant's skill and experience in minimizing claims during construction through maintaining positive working relationships with contractors; assisting in identifying and resolving claims for additional compensation early and equitably; and applying procedures for enabling work to proceed in the event differences arise over the responsibility for, or cost of, extra work. Analyze claims for additional compensation submitted during construction and prepare responses. Perform claims administration, including coordination and monitoring, claims resolution negotiations, logging and tracking of claims status, and informing CCWA on the status of claims. Provide videotaping of property conditions along the pipeline, using a budget of \$10,000 for this effort.

5. **Schedule Management.** Review contractor's as-planned schedule for conformance with the specifications and for reasonableness of activity durations and sequence. Furnish a copy of the initial schedule for review and comment by MW. Review schedule issues with CCWA. Participate in a schedule work session with the contractor to develop an acceptable as-planned schedule. Review work progress as compared to the contractor's monthly schedule updates, and appraise CCWA of any schedule deviations and recovery plans. Analyze the schedule to determine impact of weather and change orders on the construction schedule. Negotiate time extensions due to change orders, weather and other delays. Review time extensions with CCWA.

6. **Status Meetings.** Conduct meetings with the contractor to discuss the status of the work and the short term work activities planned by the contractor. Schedule and conduct start-up meetings for planning, sequencing and organizing the start-up activities. Prepare meeting agendas and minutes and distribute to meeting attendees. Coordinate with MW staff related to their involvement in jobsite meetings.

7. **Progress Reports.** Prepare and submit a status report each month describing key issues, cost status, and schedule status for compilation into the program report prepared by MW.

8. **Payment Recommendations.** Review the contractor's initial cost breakdown for reasonableness and ease of monitoring. Review contractor's monthly payment requests, negotiate differences over payment, and prepare and process payment recommendations to CCWA.

9. **Personnel Safety.** Consultant shall perform the work in compliance with state and federal safety requirements, and shall assume sole and complete responsibility for the safety of its personnel during the project. To provide for the safety of its personnel Consultant will perform the following activities: review the contract documents to verify the requirement for the contractor to ensure safe working conditions and practices at the construction site, review contractor's safety plan, monitor the jobsite for safe working conditions for Consultant personnel, provide safety guidelines and training for Consultant personnel, and report safety violations observed at the construction site. Reporting of safety violations to the contractor or the CCWA shall not make Consultant responsible for duties that belong to the construction contractor or other parties, and shall not relieve the contractor of its responsibility for complying with safety regulations. Notification of contractor of safety deficiencies shall not cause Consultant to assume, by its actions, a duty to detect safety deficiencies of the contractor.

Subtask E2.2 Field Engineering and Administration

Services provided under this subtask will be performed primarily by the Consultant's field engineer and the project clerk. Specific activities will include:

1. **Submittals Management.** Develop, in conjunction with MW, a submittal distribution list to identify engineer responsible for review and acceptance. Receive, stamp, and log submittals, and distribute for review. Monitor review of submittals to foster timely review and return of submittals to contractor. Review and respond to administrative submittals such as the construction schedule. Review of engineering submittals will be by MW.

2. **RFI (Request for Information) Management.** Receive, process and monitor requests for information from the contractor. Prepare responses to RFIs that are related to construction issues. Transmit design-related RFIs to MW and track progress. Conduct discussions and/or meetings with contractor, MW, CCWA and other parties as needed to resolve RFIs.

3. **Change Order Scoping.** Prepare scope of change orders based on drawings, specifications, and other design information from MW. Prepare scope of change orders that are related to construction issues. Review change orders with CCWA.

4. **Document Management.** Set up and maintain project files. Set up and operate computerized document tracking system in the field as part of overall document tracking system.
5. **Coordination of Equipment and Services.** For equipment furnished under the specifications, develop lists and monitor status of manufacturers' certificates, services, spare parts and manuals. Receive, log and file manufacturers' certificates. Receive, log and turn over spare parts to CCWA. Receive, log and distribute manufacturers' O&M manuals for review and acceptance. Coordinate manufacturers' training services with CCWA operations and maintenance staff.
6. **Coordination of Testing and Startup.** Coordinate testing and startup, including efforts by the contractor, manufacturers, MW, and operations and maintenance personnel. Receive test reports from contractor and transmit for review and acceptance.
7. **Contract Closeout.** Complete documentation and coordination required for final acceptance and closeout of the construction contract.

Subtask E2.3 Inspection, Testing and Surveying

Provide inspection, testing and surveying as follows:

1. **Inspection.** Provide three resident inspectors for pipeline Schedules A, B, and C, one for the pump station, and one for Tank 7. The resident inspectors will provide day-to-day on-the-job observation of the work for an aggregate of 27 person-months for the pipeline, 18 person-months for the pump station, and 13 person-months for Tank 7. Provide a portion of the time of the electrical and instrumentation inspector assigned to the treatment plant for inspection of the pipeline, pump station and Tank 7 facilities. Provide 3 person-months of an additional electrical and instrumentation inspector during the final construction and startup of the pump station and pipeline. The inspectors shall make reasonable efforts to guard CCWA against defects and deficiencies in the work of the contractor and to help determine if the provisions of the contract documents are being fulfilled; prepare daily inspection reports documenting observed construction activities and jobsite conditions; measure pay quantities; coordinate the activities of materials testing firms; coordinate, witness and record leakage tests for piping and water bearing structures; take progress photographs and bind and label them; mark up a field blueline set of drawings to incorporate contractor record drawing markups; prepare punch lists; coordinate and conduct final inspection; and assist with equipment testing and startup and other matters relating to construction of the project. Provide factory inspection of the pipe for an aggregate of 590 person-hours. This level of effort is based on a rate of pipe production of 1500 feet per day and half time inspection at the factory during a 7 month production run. All documentation shall be available to CCWA. Inspection services by Consultant

shall not cause Consultant to assume contractor's responsibility for completing the work in conformance with the contract documents. Compliance with the contract documents shall remain the sole responsibility of the contractor.

2. **Materials Testing.** Provide materials testing for concrete strength and soils compaction. Materials tests may also include aggregate gradation analysis, non-destructive weld testing, and torque resistance.

3. **Surveying.** Provide survey control monuments for the pump station and Tank 7. For these two facilities the contractor will provide the construction staking. For the pipeline, the Consultant will provide construction staking. Staking shall consist of one (1) set of stakes set at maximum fifty (50) foot intervals, and horizontal pipeline angle points. Staking shall be set at an offset and shall reference cut to top of pipe or bottom of trench. Staking will also include location of air relief valves, turnouts, pipe bridges, and other pipeline appurtenances, along with staking of boring and receiving pits for road crossings.

Task E3. CM Services for Systemwide Elements - Construction Phase

Task E3 will include construction management services for coordination of the multiple project elements of CCWA and DWR facilities. This task will include services common to all project elements, such as public information support and administration of construction management contracts.

Subtask E3.1 Coordination and Scheduling

The Consultant will monitor and report on cost and schedule of construction and construction management activities. Consultant will attend meetings as needed for reporting on progress and key issues.

Provide continued coordination and communication with DWR and other agencies involved in the project. Meet with DWR job site staff as needed for coordination of DWR and CCWA activities.

Subtask E3.2 Public Information Support

Provide assistance to CCWA in public information efforts. Assist in developing strategies for maintaining public support, responding to public concerns, facilitating public meetings, and preparing information materials.

Subtask E3.3 Construction Issues Advising

Provide advice in response to CCWA's requests for information on construction related issues such as labor relations, dual gate systems, and compliance with prevailing wage regulations. Services of firms specialized in labor relations would be provided as an extra service.

Subtask E3.4 Consultant Services Administration

Administer Consultant's construction management services contract with CCWA. Manage staffing levels, monitor and control Consultant services level of effort and cost, and coordinate invoicing including response to billing inquiries by CCWA.

Manage subconsultant contracts, level of effort, costs and invoicing.

Subtask E3.5 Identification of Contaminated Soils

Crude oil contamination is anticipated in the soils along the pipeline corridor through the Unocal property. It is expected that contaminated soils will be stored on viscene for remediation by the property owner. During construction it will be necessary to identify which portion of excavated soils have been contaminated versus that which can be placed over the installed pipe as backfill. Identification of contaminated soils will be by sampling and lab analysis as well as by visual observation. Identification and documentation of contaminated soils will be performed by a firm approved by CCWA and qualified to perform services related to remediation of contaminated soils. A budget of \$50,000 is included in the Consultant's costs for efforts related to identification and documentation of contaminated soils. Half of this budget is estimated to be labor and half expenses. Remediation and coordination efforts for unforeseen soils contamination will be performed as an extra service.

EXTRA SERVICES

Certain Extra Services may be required in order to complete CCWA's project. The Extra Services will be provided by Consultant upon written authorization of CCWA's Executive Director. Listed below, as individual subtasks, are Extra Services the Executive Director may authorize Consultant to perform.

Management of Procurement Contracts

Schedule analyses performed under Task Order C during the design phase may identify a need to expedite portions of the work. Expediting of the work can be accomplished by prepurchasing long lead equipment and/or by issuing a purchase order for time critical items immediately following bid opening. For equipment requiring advanced purchase, the Consultant will manage the procurement contract(s),

including scheduling, expediting, coordinating shop drawings and clarifications, documenting the transfer of equipment to installing contractor's custody, and resolving responsibility for deficiencies detected during testing and startup. For early purchase orders, the Consultant will coordinate with the contractor(s) as needed for completion of the time critical work items.

Administrative and Specialty Services Support

As required to assist with administrative peak workloads and to provide specialized expertise, the Consultant will furnish appropriate staff and specialists. As a service to aid in the resolution of any unresolved claims, the Consultant will make available the services of legal experts through subcontract. For any unresolved claims remaining, or for claims filed at the conclusion of construction, Consultant will provide assistance in claims analysis, negotiation and resolution.

Partnering Facilities

Consultant's scope of services does not include the cost of facilities for hosting partnering workshops. If requested, the Consultant will arrange and pay for appropriate partnering facilities.

Videotape of Property and Environmental Conditions

Under the Scope of Services of this Agreement, Consultant will contract with professional videographers to produce videotapes of the condition of improvements and selected sensitive environmental locations on properties along the pipeline route, up to a budgeted cost of \$10,000. As an extra service, Consultant can provide additional videotape footage of property conditions beyond the \$10,000 budgeted amount. Consultant can also contract with professional videographers to produce videotapes of additional sensitive environmental locations along the pipeline route.

Factory Test Observation

Consultant will provide engineering specialists to witness factory tests of equipment to be furnished on the project. It is assumed that MW will be the lead in providing staff to witness any factory tests.

Startup and Operational Assistance

Consultant will provide services related to startup and operation of the facilities, including furnishing a startup engineer specialized in water facilities startup, providing a computerized operations and maintenance manual(s), and providing operator training and technical and administrative support in addition to services provided for in this Agreement.

Warranty Services

For coordination of warranty repairs Consultant will assist CCWA during the period following final completion and acceptance. Prior to final completion Consultant will coordinate warranty repairs with construction contractor(s) and CCWA as part of the Consultant's scope of services.

Remediation of Contaminated Soils

For unforeseen contamination encountered on the project, Consultant will provide services related to identification, documentation, and remediation of the contaminated area(s).

COST OF SERVICES

The "not-to-exceed" cost for Task Order E is \$6,051,953. The budgeted costs for tasks performed under Task Order E are as shown in Attachment E-1.

Task Order E
ATTACHMENT E-1
Cost Of Services

CONSTRUCTION MANAGEMENT SERVICES DURING CONSTRUCTION

| LABOR: | 1994 | | | | | | | | | | 1995 | | | | | | | | | | | | 1996 | | | | | | | | | Hrs | Avg \$/hr | Cost |
|--|------|-----|-----|-----|-----|-----|-----|-----|-----|-----|------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|------|-----|-----|-----|-----|-----|-----|-----|-------|--------|-----------|------|
| | Apr | May | Jun | Jul | Aug | Sep | Oct | Nov | Dec | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep | Oct | Nov | Dec | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep | | | | |
| TASK E1 CM SERVICES FOR WATER TREATMENT PLANT | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Subtask E1.1 Construction Management | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Construction Manager (E6) | 178 | 178 | 178 | 178 | 178 | 178 | 178 | 178 | 178 | 178 | 178 | 178 | 178 | 178 | 178 | 178 | 178 | 178 | 178 | 178 | 178 | 178 | 178 | 178 | 178 | 178 | 178 | 178 | 178 | 178 | 4,800 | 128.50 | 617,571 | |
| Subtask E1.2 Field Engineering and Administration | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Field Engineer (E5) | 178 | 178 | 178 | 178 | 178 | 178 | 178 | 178 | 178 | 178 | 178 | 178 | 178 | 178 | 178 | 178 | 178 | 178 | 178 | 178 | 178 | 178 | 178 | 178 | 178 | 178 | 178 | 178 | 178 | 178 | 3,916 | 110.75 | 433,697 | |
| Clerk | 162 | 162 | 162 | 162 | 162 | 162 | 162 | 162 | 162 | 162 | 162 | 162 | 162 | 162 | 162 | 162 | 162 | 162 | 162 | 162 | 162 | 162 | 162 | 162 | 162 | 162 | 162 | 162 | 162 | 162 | 4,374 | 20.00 | 87,480 | |
| | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | 521,177 | |
| Subtask E1.3 Inspection, Testing and Surveying | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Inspector #1 (T4) | 178 | 178 | 178 | 178 | 178 | 178 | 178 | 178 | 178 | 178 | 178 | 178 | 178 | 178 | 178 | 178 | 178 | 178 | 178 | 178 | 178 | 178 | 178 | 178 | 178 | 178 | 178 | 178 | 178 | 178 | 3,736 | 73.00 | 272,874 | |
| Inspector #2 | 178 | 178 | 178 | 178 | 178 | 178 | 178 | 178 | 178 | 178 | 178 | 178 | 178 | 178 | 178 | 178 | 178 | 178 | 178 | 178 | 178 | 178 | 178 | 178 | 178 | 178 | 178 | 178 | 178 | 178 | 5,162 | 65.00 | 335,530 | |
| Insp - Elec, I&C (T4) | | | | | 160 | 160 | 160 | 160 | 160 | 160 | 160 | 160 | 160 | 160 | 160 | 160 | 160 | 160 | 160 | 160 | 178 | 178 | 178 | 178 | 178 | 178 | 178 | 178 | 178 | 178 | 4,160 | 73.00 | 305,140 | |
| Survey | 30 | 32 | 32 | 32 | 16 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 334 | 60.00 | 20,040 | |
| Materials Testing | | | 178 | 178 | 178 | 178 | 178 | 178 | 178 | 178 | 178 | 100 | 80 | 60 | 32 | 32 | 32 | 32 | 32 | 32 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 2,130 | 51.00 | 108,630 | |
| | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | 1,042,214 | |
| | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | 2,160,962 | |

| | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|--|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-------|-------|-----------|---------|
| TASK E2 CM SERVICES FOR PIPELINE FACILITIES | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Subtask E2.1 Construction Management | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Construction Manager (E6) | 178 | 178 | 178 | 178 | 178 | 178 | 178 | 178 | 178 | 178 | 178 | 178 | 178 | 178 | 178 | 178 | 178 | 178 | 178 | 178 | 178 | 178 | 80 | 80 | 80 | 80 | 80 | 80 | 80 | 80 | 4,654 | 128.50 | 598,039 |
| Subtask E2.2 Field Engineering and Administration | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Field Engineer (Flowers) | 178 | 178 | 178 | 178 | 178 | 178 | 178 | 178 | 178 | 178 | 178 | 178 | 178 | 178 | 178 | 178 | 178 | 178 | 178 | 178 | 178 | 178 | | | | | | | | | 4,094 | 92.00 | 378,648 |
| Clerk | 162 | 162 | 162 | 162 | 162 | 162 | 162 | 162 | 162 | 162 | 162 | 162 | 162 | 162 | 162 | 162 | 162 | 162 | 162 | 162 | 162 | 162 | 162 | 162 | 162 | 162 | 162 | 162 | 162 | 162 | 4,374 | 20.00 | 87,480 |
| | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | 484,128 |
| Subtask E2.3 Inspection, Testing and Surveying | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Insp - Pump Station (T4) | 178 | 178 | 178 | 178 | 178 | 178 | 178 | 178 | 178 | 178 | 178 | 178 | 178 | 178 | 178 | 178 | 178 | 178 | 178 | 178 | 178 | | | | | | | | | 3,204 | 73.00 | 233,892 | |
| Insp - Tank | 178 | 178 | 178 | 178 | 178 | 178 | 178 | 178 | 178 | 178 | 178 | 178 | 178 | 178 | 178 | 178 | 178 | 178 | 178 | 178 | 178 | | | | | | | | | 2,314 | 65.00 | 150,410 | |
| Insp - Pipeline (T4) | 178 | 178 | 178 | 178 | 178 | 178 | 178 | 178 | 178 | 178 | 178 | 178 | 178 | 178 | 178 | 178 | 178 | 178 | 178 | 178 | 178 | | | | | | | | | 1,802 | 71.00 | 113,742 | |
| Insp - Pipeline (Flowers) | 178 | 178 | 178 | 178 | 178 | 178 | 178 | 178 | 178 | 178 | 178 | 178 | 178 | 178 | 178 | 178 | 178 | 178 | 178 | 178 | 178 | | | | | | | | | 1,802 | 55.00 | 88,110 | |
| Insp - Pipeline (Flowers) | 178 | 178 | 178 | 178 | 178 | 178 | 178 | 178 | 178 | 178 | 178 | 178 | 178 | 178 | 178 | 178 | 178 | 178 | 178 | 178 | 178 | | | | | | | | | 1,802 | 55.00 | 88,110 | |
| Insp - Elec, I&C (T4) | | | | | 161 | 161 | 161 | 161 | 161 | 161 | 161 | 161 | 161 | 161 | 161 | 161 | 161 | 161 | 161 | 178 | 178 | | | | | | | | | 804 | 73.00 | 58,692 | |
| Survey | 320 | 320 | 320 | 320 | 320 | 320 | 320 | 320 | 320 | 320 | 300 | | | | | | | | | 178 | 178 | | | | | | | | | 3,500 | 60.00 | 210,000 | |
| Testing Tech | 165 | 165 | 165 | 165 | 165 | 165 | 165 | 165 | 165 | 165 | 165 | 100 | 80 | 60 | 40 | 20 | 10 | | | 178 | 178 | | | | | | | | | 1,900 | 51.00 | 96,960 | |
| Corrosion Engr (E3) | 20 | 20 | | | | | | | | | | | | | | | | | | | | | | | | | | | | 40 | 80.00 | 3,200 | |
| Factory Insp (T4) | 80 | 80 | 80 | 80 | 80 | 80 | 40 | 40 | 30 | | | | | | | | | | | | | | | | | | | | | 580 | 70.25 | 41,448 | |
| | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | 1,087,564 | |

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 ETASK LS

| LABOR: | 1994 | | | | | | | | | | | | 1995 | | | | | | | | | | | | 1996 | | | | | | | | | Hrs | Avg Hr | Cost | | | | | | |
|--|------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|------|-----|-----|-----------|-----|-----------|-----|-----|-----|-----|-----------|------|-----|-----|-----|-------|--------|---------|
| | Apr | May | Jun | Jul | Aug | Sep | Oct | Nov | Dec | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep | Oct | Nov | Dec | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep | | | | | | | | | | | | |
| TASK E3 CM SERVICES FOR SYSTEMWIDE ELEMENTS | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Subtask E3.1 Coordination and Scheduling | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Project Manager (E7) | 92 | 92 | 92 | 92 | 92 | 92 | 92 | 92 | 92 | 92 | 92 | 92 | 92 | 92 | 92 | 92 | 92 | 92 | 92 | 92 | 92 | 92 | 92 | 92 | 92 | 92 | 92 | 92 | 92 | 92 | 34 | 34 | 34 | 34 | 34 | 34 | 34 | 34 | 34 | 2,236 | 154.00 | 344,852 |
| Project Controls (E4) | 178 | 178 | 178 | 178 | 178 | 178 | 178 | 178 | 178 | 178 | 178 | 178 | 178 | 178 | 178 | 178 | 178 | 178 | 178 | 178 | 178 | 178 | 178 | 178 | 178 | 178 | 178 | 178 | 178 | 178 | 178 | 178 | 178 | 178 | 178 | 178 | 178 | 178 | 178 | 3,738 | 98.50 | 360,717 |
| Clerk | 182 | 182 | 182 | 182 | 182 | 182 | 182 | 182 | 182 | 182 | 182 | 182 | 182 | 182 | 182 | 182 | 182 | 182 | 182 | 182 | 182 | 182 | 182 | 182 | 182 | 182 | 182 | 182 | 182 | 182 | 182 | 182 | 182 | 182 | 182 | 182 | 182 | 182 | 182 | 3,402 | 20.00 | 68,040 |
| | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Subtask E3.2 Public Information Support | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Project Manager (E7) | 20 | 20 | 20 | 20 | 20 | 20 | 20 | 20 | 20 | 20 | 20 | 20 | 20 | 20 | 20 | 20 | 20 | 20 | 20 | 20 | 20 | 20 | 20 | 20 | 20 | 20 | 20 | 20 | 20 | 20 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 485 | 154.00 | 71,810 |
| Subtask E3.3 Construction Issues Advising | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Project Manager (E7) | 30 | 30 | 30 | 30 | 30 | 30 | 30 | 30 | 30 | 30 | 30 | 30 | 30 | 30 | 30 | 30 | 30 | 30 | 30 | 30 | 30 | 30 | 30 | 30 | 30 | 30 | 30 | 30 | 30 | 30 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 875 | 154.00 | 103,950 |
| Subtask E3.4 CM Services Administration | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Project Manager (E7) | 20 | 20 | 20 | 20 | 20 | 20 | 20 | 20 | 20 | 20 | 20 | 20 | 20 | 20 | 20 | 20 | 20 | 20 | 20 | 20 | 20 | 20 | 20 | 20 | 20 | 20 | 20 | 20 | 20 | 20 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 510 | 154.00 | 78,540 |
| | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Total Labor: | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | | | | | | | | | 70,006.00 | | 1,027,609 | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | 5,358,202 | | | | | | | | | | | | |

EXPENSES:

| | | |
|--|-----------|------------------|
| Field Offices | | 52,970 |
| Vehicles | | 85,000 |
| Cellular Phones | | 85,800 |
| Sub - Public Info (Davis Communications) | | 85,000 |
| Subs - Misc. | | 18,000 |
| Sub - Remediation | | 80,000 |
| Special Travel | | 20,000 |
| Misc Expenses | | 18,000 |
| Per Diem Expenses | | |
| Project Managers | 105 / day | 83,880 |
| Construction Members | 85 / day | 117,380 |
| Field Staff | 80 / day | 138,012 |
| Total Expenses | | 693,751 |
| TOTAL PROJECT | | 6,051,953 |

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 ETAS

TASK ORDER F
Construction Management Services
for Repair of SYRWCD ID#1 Pipeline

COORDINATION AND AUTHORIZATION SHEET

I. Initial Authorizations. On the terms and conditions of the Agreement for Construction Management Services between Central Coast Water Authority (CCWA) and CH2M HILL CALIFORNIA INC. (Consultant), as modified hereby, CCWA, with the consent of Consultant, hereby authorizes the attached Task Order F, and Consultant agrees to accomplish said Task Order on said terms and within said time frames.

Task Order Additional Terms are:

Tasks Included and Not-to-Exceed Costs (excluding Extra Services):

| | |
|----------|------------------|
| Task F1: | <u>\$ 33,628</u> |
| Task F2: | <u>\$ 14,770</u> |
| Task F3: | <u>\$ 32,400</u> |
| Total: | <u>\$ 80,798</u> |

Time Parameters: _____

Extra Services Authorized: \$ 8,079

AUTHORITY

ENGINEER

By _____
 Authorized Signatory

By _____
 Authorized Signatory

II. Notices to Proceed

| Tasks/SubTasks | Date | Authority | Engineer |
|----------------|---------|-------------------------------|----------|
| | | Authorization/Acknowledgement | |
| F1, F2, and F3 | 8/26/93 | | |
| | | | |
| | | | |

III. Extra Services.

| No. | Task No. | Description | Amount | Date | Authority | Engineer |
|-----|----------|-------------|--------|------|----------------|-----------------|
| | | | | | Authorization/ | Acknowledgement |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |

TASK ORDER F

CONSTRUCTION MANAGEMENT SERVICES FOR REPAIR OF SYID#1 PIPELINE

Task Order F will be initiated to provide construction management (CM) services for the repair of the Santa Ynez River Water Conservation and Improvement District Number One (SYID#1) pipeline. Task Order F will include tasks for construction management, field engineering and administration, and inspection, testing and surveying for the repair of the SYID#1 pipeline.

ASSUMPTIONS RELATED TO SCOPE OF SERVICES

The scope of work and budget proposed under this Task Order F are predicated on the following general assumptions:

- A. Construction duration will be 3 months and include the repair of four crossings of the SYID#1 pipeline across the Santa Ynez River. The SYID#1 pipeline extends from Bradbury Dam to Meadowlark Lane.
- B. Construction period will be October through December, 1993.
- C. Contract closeout can be completed within 1 month following the end of construction.
- D. The construction contract is to be awarded and administered by Santa Ynez River Water Conservation and Improvement District Number One (SYID#1) under an agreement between CCWA and SYID#1. The agreement provides for reimbursement by CCWA of SYID#1's expenses associated with the repairs to the SYID#1 pipeline. The agreement also provides that CCWA will retain and pay for a consultant to provide construction management services needed for the contract to repair the SYID#1 pipeline.
- E. CCWA/SYID#1 will provide an environmental program manager to work with consultant to address environmental concerns and issues in a cost effective and timely manner while complying with applicable environmental standards and requirements.

| | |
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SCOPE OF SERVICES

Consultant will perform the services identified in Tasks F1, F2, and F3 below.

Task F1 Construction Management

Services provided under this task will be performed or led primarily by the construction manager. Specific activities will include:

1. **Pre-Construction Activities.** Arrange and conduct a pre-construction conference to introduce project personnel, review administrative procedures, discuss environmental mitigation requirements. Prepare and distribute a project memorandum approved by CCWA and SYID#1 that contains the team organization and roles, telephone numbers of project personnel, administrative procedures, and environmental mitigation training and field procedures.
2. **Coordination and Correspondence.** Serve as the focal point for coordination among the contractor, CCWA, SYID#1, and other parties. Receive contractor correspondence and prepare and transmit responses. Coordinate with applicable parties as required to develop responses. Coordinate with property owners near the pipeline facilities to keep them informed and aware of construction activities. Respond to property owner concerns in an effort to maintain public support for the project. Consultant will coordinate warranty service with contractor, SYID#1 and CCWA through final completion and acceptance.
3. **Change Order Management.** Develop a process for initiation, negotiation, approval, payment and documentation of change orders. Perform change order administration, including issuing proposed change orders to contractor, maintaining logs of proposed and approved change orders, receiving change order quotations from contractor, negotiating change order costs and time extensions, processing final negotiated change orders, and incorporating approved change orders into progress payment schedule of values. Perform quantity and cost analysis as required for negotiation of change orders. Coordinate with CCWA and SYID#1 as required for processing of change orders.
4. **Claims Management.** Analyze claims for additional compensation submitted during construction and prepare responses. Perform claims administration, including coordination and monitoring, claims resolution negotiations, logging and tracking of claims status, and informing SYID#1 and CCWA on the status of claims.

5. **Schedule Management.** Review contractor's as-planned schedule for conformance with the specifications and for reasonableness of activity durations and sequence. Analyze the schedule to determine impact of weather and change orders on the construction schedule. Negotiate time extensions due to change orders, weather and other delays. Review time extensions with CCWA and SYID#1.

6. **Status Meetings.** Conduct meetings with the contractor to discuss the status of the work and the short term work activities planned by the contractor. Schedule and conduct start-up meetings for planning, sequencing and organizing the start-up activities. Prepare meeting agendas and minutes and distribute to meeting attendees. Coordinate with the design engineer, SYID#1 and CCWA related to their involvement in jobsite meetings.

7. **Progress Reports.** Prepare and submit a status report to CCWA, SYID#1, the environmental program manager and the design engineer each month describing key issues, cost status, and schedule status.

8. **Payment Recommendations.** Review the contractor's initial cost breakdown for reasonableness and ease of monitoring. Review contractor's monthly payment requests, negotiate differences over payment, and prepare and process payment recommendations to CCWA and SYID#1.

9. **Personnel Safety.** Consultant shall perform the work in compliance with state and federal safety requirements, and shall assume sole and complete responsibility for the safety of its personnel during the project. To provide for the safety of its personnel Consultant will perform the following activities: review the contract documents to verify the requirement for the contractor to ensure safe working conditions and practices at the construction site, review contractor's safety plan, monitor the jobsite for safe working conditions for Consultant personnel, provide safety guidelines and training for Consultant personnel, and report safety violations observed at the construction site. Reporting of safety violations to the contractor CCWA/SYID#1 shall not make Consultant responsible for duties that belong to the construction contractor or other parties, and shall not relieve the contractor of its responsibility for complying with safety regulations. Notification of contractor of safety deficiencies shall not cause Consultant to assume, by its actions, a duty to detect safety deficiencies of the contractor.

Subtask F.2 Field Engineering and Administration

Services provided under this subtask will be performed primarily by the Consultant's field engineer. Specific activities will include:

1. **Submittals Management.** Develop, in conjunction with the design consultant, a submittal distribution list to identify engineer responsible for review and acceptance. Receive, stamp, and log submittals, and distribute for review. Monitor review of submittals to foster timely review and return of submittals to contractor. Review and respond to administrative submittals such as the construction schedule. Review of engineering submittals will be by the design consultant.
2. **RFI (Request for Information) Management.** Receive, process and monitor requests for information from the contractor. Prepare responses to RFIs that are related to construction issues. Transmit design-related RFIs to the design consultant and track progress. Conduct discussions and/or meetings with contractor, the design consultant, and other parties as needed to resolve RFIs.
3. **Change Order Scoping.** Prepare scope of change orders based on drawings, specifications, and other design information. Prepare scope of change orders that are related to construction issues.
4. **Document Management.** Set up and maintain project files.
5. **Coordination of Testing and Startup.** Coordinate testing and startup, including efforts by the contractor, and operation and maintenance personnel. Receive test reports from contractor and transmit for review and acceptance.
6. **Contract Closeout.** Complete documentation and coordination required for final acceptance and closeout of the construction contract.

Subtask F.3 Inspection, Testing and Surveying

Provide inspection, testing and surveying services as follows:

F3.1. Inspection. Provide a resident inspector for day-to-day on-the-job observation of the work for an aggregate of 3 person-months. The inspector shall make reasonable efforts to guard CCWA and SYID#1 against defects and deficiencies in the work of the contractor and to help determine if the provisions of the contract documents are being fulfilled; prepare daily inspection reports documenting observed construction activities and jobsite conditions; measure pay quantities; coordinate, witness and record leakage tests for piping; take progress photographs and bind and label them; mark up a field blueline set of drawings to incorporate contractor record drawing markups; prepare punch lists; coordinate and conduct final inspection; and assist with startup and other matters relating to construction of the project. Inspection services by Consultant shall not cause Consultant to assume contractor's responsibility for completing the work in conformance with the contract documents. Compliance with the contract documents shall remain the sole responsibility of the contractor.

F3.2 Materials Testing. Provide materials testing for concrete strength and soils compaction. Materials tests may also include aggregate gradation analysis, non-destructive testing of weld and torque resistance.

F3.3. Surveying. Provide 160 hours of surveying services to perform surveys that may be owners obligation in the contract documents or required for inspection support.

EXTRA SERVICES

Certain Extra Services may be required in order to complete the project. The Extra Services will be provided by Consultant upon written authorization of CCWA's Executive Director. Listed below, as individual subtasks, are Extra Services the Executive Director may authorize Consultant to perform.

Videotape of Property and Environmental Conditions

Consultant will contract with professional videographers to produce videotapes of environmental conditions

Warranty Services

For coordination of warranty repairs Consultant will assist CCWA during period following final completion and acceptance. Prior to final completion Consultant will coordinate warranty repairs with construction contractor(s) and CCWA as part of the Consultant's scope of services.

COST OF SERVICES

The "not-to-exceed" cost for Task Order F is \$80,798. The budgeted costs for tasks performed under Task Order F are as shown in Attachment F-1.

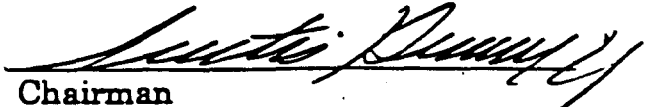
Task Order F
ATTACHMENT F-1
Cost Of Services
CONSTRUCTION MANAGEMENT SERVICES FOR RECONSTRUCTION OF SYID PIPELINE

| LABOR: | 1993 Hours | | | | | | Jan | Total Hrs | \$/hr | Total Cost |
|---|------------|-----|-----|-----|-----|----|---------------|-----------|---------------|------------|
| | Aug | Sep | Oct | Nov | Dec | | | | | |
| Task F1 Construction Management | | | | | | | | | | |
| Construction Manager (E6) | 40 | 40 | 40 | 40 | 16 | 16 | 192 | 118.75 | 22,800 | |
| Project Manager (E7) | 16 | 16 | 8 | 8 | | | 48 | 142.25 | 6,828 | |
| | | | | | | | | | 29,628 | |
| Task F2 Field Engineering and Administration | | | | | | | | | | |
| Field Engineer (Flowers) | | | 58 | 58 | 58 | 40 | 214 | 55.00 | 11,770 | |
| Task F3 Inspection, Testing and Surveying | | | | | | | | | | |
| Inspector (Flowers) | | | 120 | 120 | 120 | | 360 | 55.00 | 19,800 | |
| Survey | 64 | 32 | 32 | 32 | | | 160 | 60.00 | 9,600 | |
| | | | | | | | | | 29,400 | |
| Total Labor: | | | | | | | 974.00 | | 70,798 | |

EXPENSES:

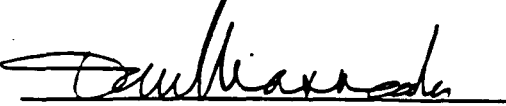
| | |
|------------------------|---------------|
| Misc. | 10,000 |
| Total Expenses: | 10,000 |
| TOTAL BUDGET | 80,798 |

I certify that the foregoing Resolution No. 93-26 was adopted by the Board of Directors of the Central Coast Water Authority at a regular meeting held September 23, 1993.


Chairman

[SEAL]

Attest:


Secretary of the Board
of Directors

| | VOTING PERCENTAGE | AYE | NAY | ABSTAIN | ABSENT |
|--|----------------------|----------|-----|---------|--------|
| City of Buellton | <u>2.21</u> % | <u>x</u> | — | — | — |
| Carpinteria County Water District | <u>7.64</u> % | <u>x</u> | — | — | — |
| Goleta Water District | <u>17.20</u> % | <u>x</u> | — | — | — |
| City of Guadalupe | <u>1.15</u> % | <u>x</u> | — | — | — |
| Montecito Water District | <u>8.35</u> % | <u>x</u> | — | — | — |
| City of Santa Barbara | <u>11.47</u> % | <u>x</u> | — | — | — |
| City of Santa Maria | <u>43.19</u> % | <u>x</u> | — | — | — |
| Santa Ynez River Water Conservation District, Improvement District No. 1 | <u>7.64</u> % | <u>x</u> | — | — | — |
| Summerland County Water District | <u>1.15</u> % | <u>x</u> | — | — | — |

Agenda Item V.B.
Board Meeting
September 23, 1993

**RESOLUTION NO. 93-26 OF THE CENTRAL COAST WATER AUTHORITY
APPROVING THE BIOLOGICAL RESOURCES MITIGATION PLAN AND
MITIGATION PROGRAM FOR THE POLONIO PASS, MISSION HILLS EXTENSION,
AND SANTA YNEZ EXTENSION PROJECT**

WHEREAS, the Central Coast Water Authority has approved construction and operation of the Polonio Pass Water Treatment Plant, the Mission Hills Extension, and the Santa Ynez Extension (the "Project"); and

WHEREAS, the Authority also has approved a preliminary draft mitigation program for the Project; and

WHEREAS, a final Mitigation Program and a final Biological Resources Mitigation Plan have been prepared by the Authority's environmental consultants, a copy of which Mitigation Program and Biological Resources Mitigation Plan are attached to this Resolution.

NOW, THEREFORE, BE IT RESOLVED, that the attached Mitigation Program and Biological Resources Mitigation Plan, dated September 1993, are hereby approved and incorporated into the Project;

BE IT FURTHER RESOLVED, that this resolution shall take effect immediately.

Final
Biological Resources
Mitigation Plan
 for the Mission Hills Extension
 and Santa Ynez Extension

September 1993

Prepared for

Central Coast Water Authority
 1933 Cliff Drive, Suite 12
 Santa Barbara,
 California 93109

Prepared by



An Employee-Owned Company
 Science Applications International Corporation

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 Environmental Programs Unit 141

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Final

**Biological Resources
Mitigation Plan**

**for the Mission Hills Extension
and Santa Ynez Extension**

September 1993

Prepared for

Central Coast Water Authority
1933 Cliff Drive, Suite 12
Santa Barbara, California 93109

Prepared by

Science Applications International Corporation
Environmental Programs Division
816 State Street, Suite 500
Santa Barbara, California 93101

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1.0 INTRODUCTION

This mitigation plan for the Mission Hills Extension and the Santa Ynez Extension, both local projects associated with Phase II of the Coastal Branch extension of the State Water Project, has been prepared to specify the measures necessary to mitigate significant impacts to biological resources that were identified in the environmental impact reports (EIRs) for these projects (DWR 1991; SAIC 1991). Since these EIRs were prepared, the pipeline alignment has been altered at several locations to shorten the route and to avoid biological, cultural, and geological resources. As a result, impacts to native vegetation have been substantially reduced. Elimination of Tank 6 and use of existing roads plus a fuelbreak have decreased the amount of Burton Mesa chaparral to be affected by approximately 33 acres (about 50 percent). The amount of oak woodland affected has been reduced by about 40 acres (60 percent) while riparian forest and scrub habitats were reduced by 30 acres (about 85 percent). Additional modifications in the pipeline alignment and construction easement are still being made to minimize impacts to biological resources. The format for this mitigation plan is patterned after the plan prepared by the Department of Water Resources (DWR) for the Coastal Branch, Phase II. Planning and design processes for the Mission Hills and Santa Ynez extensions are now in the final design stage, but several project changes are still being considered, including how much to narrow the corridor width through sensitive habitats. As a result, exact amounts of each vegetation type impacted will continue to change. Vegetation and other sensitive resources are being mapped on the engineering plans, and the mitigation measures for the construction period will be included as environmental constraint specifications on these plans. Mitigations applicable to restoration after construction will be included as specifications on the revegetation plan maps.

1.1 PURPOSE AND SCOPE

The goal of this mitigation plan is to reduce the project-caused impacts to biological resources to a level not considered significant. The pipeline route is being designed to avoid sensitive biological resources to the maximum extent feasible. When avoidance is not feasible, mitigation of impacts would be as set forth in this document. This includes monetary incentives for the contractors to avoid or further reduce impacts to sensitive vegetation. For animal or plant species that are listed or candidates for listing as threatened or endangered under state or federal laws, the mitigation goal will be no-net-loss of habitat or species viability. No take is anticipated for listed animal species, and populations of the state-listed seaside bird's beak (if found to be present) will be avoided to the extent feasible. Where such avoidance is not feasible, take will be as authorized in a Management Agreement/Management Permit issued by the California Department of Fish and Game pursuant to ~~Fish and Game Code Section 2081~~

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The mitigation goal for sensitive species that are not candidate or listed species and for native plant communities will be replacement in kind, to the extent practicable. For wetland and riparian habitats the goal will be no net loss of habitat value.

1.2 DOCUMENT ORGANIZATION

This document has been divided into eight sections. Section 1 contains the project description. The organization, personnel qualifications, and reporting procedures for carrying out the mitigation plan are presented in section 2, Mitigation Plan Management. Section 3, Project-Wide Mitigation Measures, describes specifications that will be incorporated into construction contracts throughout the ROW and facilities to minimize construction impacts to the extent feasible. Mitigation measures for sensitive animal and plant species are presented in section 4, Sensitive Species-Specific Mitigation Plans. Measures to restore affected vegetation types are presented in section 5, Vegetation Type Restoration Measures. Affected Sensitive Biological Resources by Facility, section 6, summarizes the biological resources along the pipeline, at associated facilities and staging areas, and at roads and powerlines. Section 7, Acquisition of Replacement Lands, presents the strategy and process for acquiring and managing lands to replace biological resource values that could not be restored on-site. References are listed in section 8. The Appendices contain reference and background materials.

1.3 PROJECT DESCRIPTION

The project consists of a pipeline extending from the north part of Vandenberg AFB to Lake Cachuma and associated facilities such as a storage tank, a pumping plant, and turnouts. Each of these is described below. In addition, two short pipeline segments and Tank 5 of the Coastal Branch, Phase II are located in Burton Mesa chaparral. Since most of the impacts to this plant community occur within the Mission Hills/Santa Ynez Extension, these small areas of the Coastal Branch have been included in this document.

1.3.1 Route Description

The routes for the two projects are contiguous and follow a 42.5-mile-long corridor that originates at the end of the proposed Coastal Branch facilities at Tank 5 on Vandenberg AFB, Santa Barbara County, and extending south and east to terminate on the south side of Lake Cachuma near Bradbury Dam (see Figure 1-1). An alternate route segment just west of Buellton is being evaluated for feasibility and is the preferred alignment. Use of an existing water pipeline from just south of Santa Ynez to Bradbury Dam will eliminate construction of 4.5 miles of pipeline (see Appendix C, maps 18 and 19).

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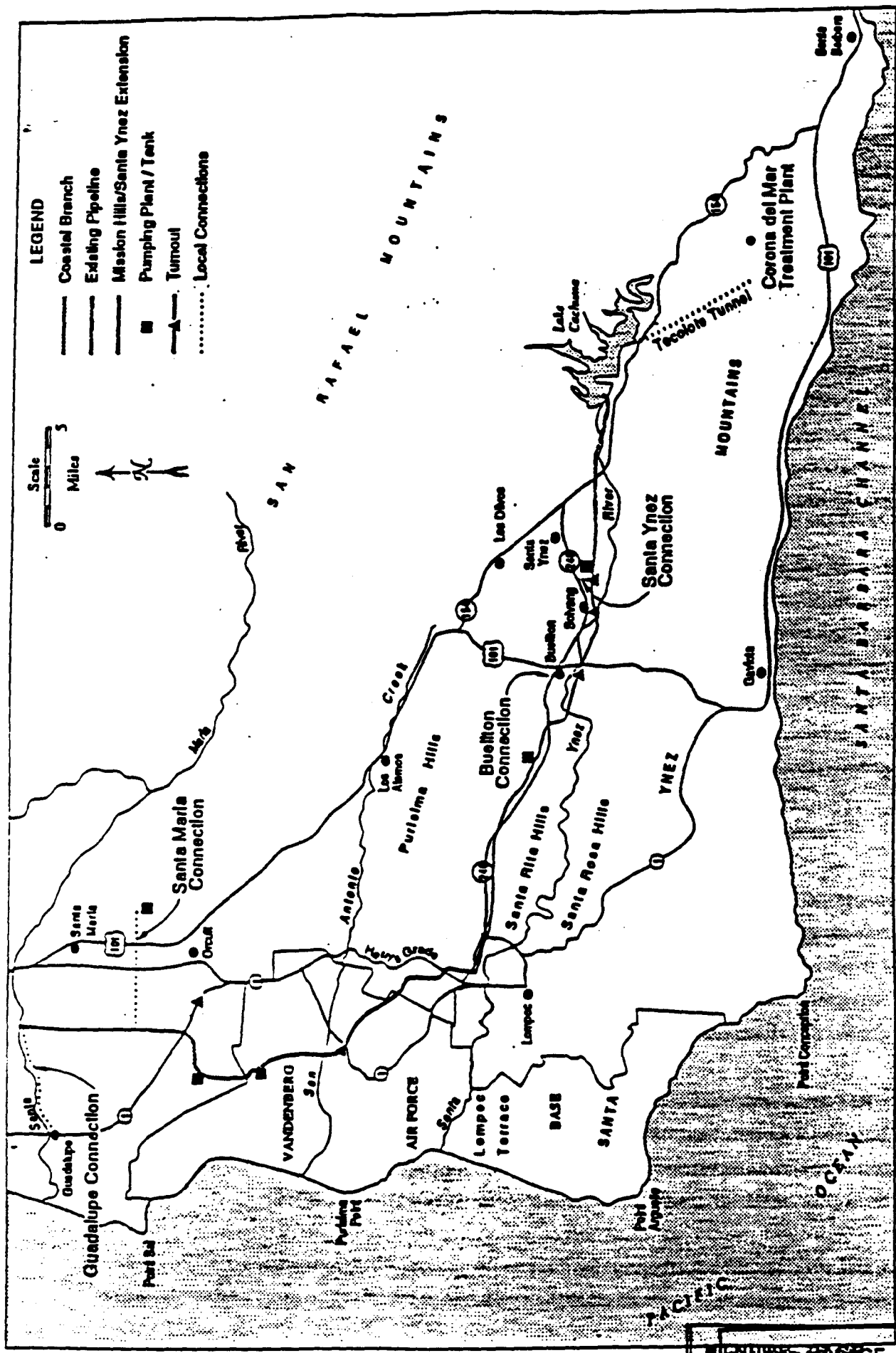


Figure 2-2
 LOCATION MAP FOR STATE WATER PIPELINES IN SANTA BARBARA COUNTY

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1.3.2 Permanent Facilities

The two projects consist of a buried pipeline with pumping and service turnout facilities. Permanent facilities include the buried pipeline, one pumping plant, one tank site, four water supply turnouts, and the terminus facilities. Tank 5, the terminus of the Coastal Branch to be built by the DWR, is also included in this mitigation plan. A water treatment plant will also be constructed at Polonio Pass in San Luis Obispo County. Specific permanent facilities are listed in section 6.

A permanent 50- to 60-foot right of way (ROW) easement will be required for the pipeline alignment. A portion of the permanent ROW (width to be determined, but approximately 20 feet) will be kept cleared of large vegetation such as trees and deep-rooted shrubs to permit aerial surveillance and access for maintenance. One short permanent road will be needed to serve Tank 7. Most facilities also will require electrical power service.

Drawings and specifications (at scale of 1 inch = 100 feet) will be prepared to show all project facilities in detail, and locations of sensitive biological resources will be placed on these maps. These drawings and specifications, because of their number and bulk, are incorporated into this plan by reference. The maps will be made available to users of this plan as needed. (Aerial photography for use in making these maps was taken in early August 1992 and March 1993. Biological and cultural resource surveys have been conducted over most of the route and will be completed when final maps are available for realignment areas.)

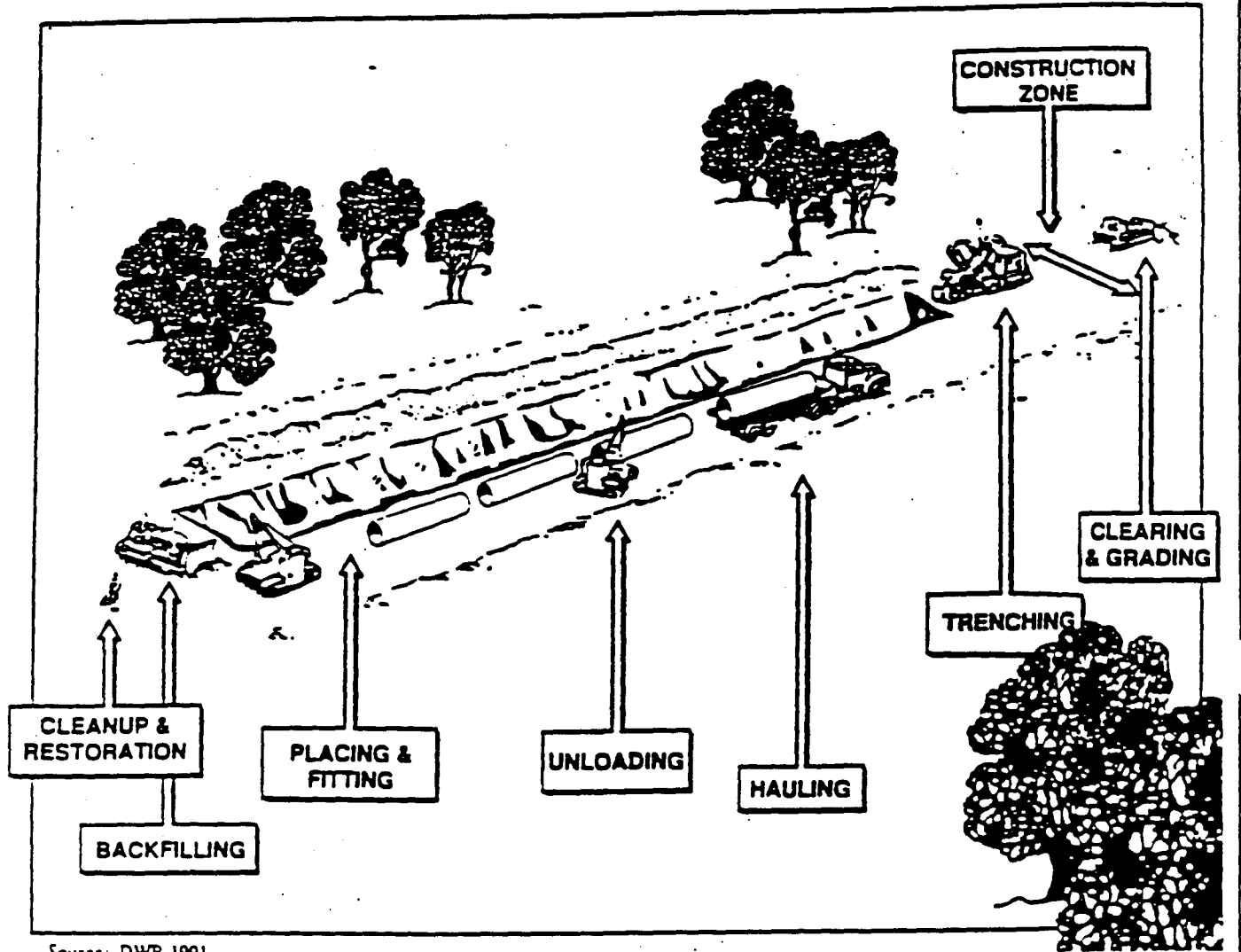
1.3.3 Temporary Construction Requirements

The construction ROW generally will be 100 to 120 feet wide. Some areas such as steep hillsides or sandy streambeds will require a greater ROW width, while in certain areas it may be reduced to about 50 feet for short distances. Within the ROW, the pipe trench will generally be a 15- to 30-foot-wide excavation. The top of the pipe will be buried about 4 to 5 feet. Figure 1-2 illustrates the general construction steps.

Temporary staging areas will be required to store equipment and materials. Generally, staging areas will be about 4 acres but two will be 5.5 acres. The staging areas have been located based on environmental and construction considerations. Staging areas are listed in section 6 and shown on the project drawings and specifications (also see Appendix C maps).

Excavation materials will be stored along the pipeline trench in the construction ROW. Other spoil stockpile areas may be required where the width of the ROW is reduced to avoid sensitive resources.

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Source: DWR 1991

Figure 1-2

SCHEMATIC OF GENERAL STEPS IN CONSTRUCTING A BURIED PIPELINE

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Access onto the ROW will be from existing roads or the new permanent road providing access to Tank 7. Temporary access roads will be constructed only where steep slopes dictate the need for such roads.

No borrow areas will be required within the ROW. Any fill material needed will be obtained from existing commercial mining operations.

The aqueduct will cross four major streams, many small drainages, and enter Lake Cachuma. Stream crossings are listed in section 6. An alignment minimizing the disturbance of riparian vegetation was selected for each crossing. San Antonio Creek will be spanned or bored under, Hilton Creek will be spanned (or avoided if the existing tunnel through Bradbury Dam can be used to discharge water into the lake), and both of the Santa Ynez River crossings will be placed on bridges. The alternative route west of Buellton would cross the Santa Ynez River by directional bore about 3 miles west of Highway 101, eliminating the use of Avenue of the Flags bridge.

2.0 MITIGATION PLAN MANAGEMENT

2.1 ORGANIZATION OF MITIGATION PLAN MANAGEMENT

CCWA will assign qualified environmental personnel or contract with a qualified environmental consultant to monitor and carry out the mitigation plan. The environmental personnel shall conduct preconstruction surveys and mitigation activities (section 3.1), monitor construction activities to assure compliance with construction contract specifications (section 3.2), monitor vegetation restoration after construction activities (sections 3.3.1, 4 and 5), and prepare and implement habitat replacement requirements (Section 7). Primary responsibility for managing construction contracts resides with the Construction Manager retained by CCWA. During construction activities, Environmental Quality Compliance Reports, including reports of violations or recommendations for changes in contract specifications, will be delivered to the Construction Manager for appropriate action. Appeal and oversight provisions are provided for conflict resolution and to provide for changes in contract specifications if necessary (section 2.5). A schematic representation of the Mitigation Program management is presented in Figure 2-1 of the Mitigation Program.

The environmental monitors will work with construction management staff to halt and reroute construction to prevent significant environmental damage and assure compliance with the mitigation program. The environmental monitoring personnel also will be responsible for preparing all required monitoring reports, providing environmental awareness training to construction workers, and maintaining contact with resource agencies.

2.2 PERSONNEL QUALIFICATIONS

All environmental monitors and restoration personnel shall be knowledgeable in natural resources. The monitors must be able to identify sensitive species and habitats in the field and be familiar with monitoring. Restoration personnel also must be able to identify sensitive species in the field as well as all other species for which restoration is being conducted.

2.3 COORDINATION OF MITIGATION PROGRAM WITH AGENCIES

The reporting procedures established in the Mitigation Program, section 2.3.1, shall be followed. All work involving state or federally listed species shall be conducted within the permit conditions issued by the responsible agencies, and any problems or deviations from these conditions will be reported immediately to these agencies.

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2.4 TRAINING PROGRAM

All monitoring and restoration personnel shall undergo a training program developed under the supervision of the PEPM as described in the Mitigation Program.

2.5 CONFLICT RESOLUTION

Resolution of any conflicts arising during project construction shall be settled according to the procedures described in section 2.5 of the Mitigation Program.

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3.0 PROJECT-WIDE MITIGATION MEASURES

This section describes the general measures that apply to biological resources throughout the project. Measures that are primarily for other resources, but would also reduce impacts to biological resources, are discussed in the Mitigation Program in section 3.

3.1 PRECONSTRUCTION PHASE

Preconstruction biological surveys shall be conducted by qualified biologists for the entire ROW prior to construction. These surveys will be conducted during the appropriate seasons for all sensitive species. Additional site specific surveys will be conducted immediately prior to construction as described in section 4. The vegetation map and locational information for sensitive species (plants and animals) will be refined from the data collected. Amount and quality of each vegetation type will be recorded on the maps. The numbers and types of native trees in the ROW will be added by the monitor after the corridor has been staked. In addition, existing conditions at all sensitive habitats, including stream crossings, will be documented to guide restoration of habitat to pre-project conditions. The resulting maps will then be used to quantify the amount of each vegetation type to be mitigated on site and off site by computer planimetry. Locations for off-site mitigation will be selected and plans drawn up for restoration/creation of the required habitats (see section 7.0).

All sensitive biological resources within and immediately adjacent to the ROW will be flagged, or fenced if covering a small area, by environmental monitors immediately prior to construction. Areas where the width of the ROW is to be reduced will also be marked. Photographs of sensitive habitats and species, including assessment plots outside the ROW, will be taken at specific locations to be recorded on the drawings and specifications for use in site restoration. CCWA has taken aerial videotape pictures of the ROW in March 1993. Seeds and other plant materials will be collected from within and adjacent to the ROW for use in site restoration beginning one year prior to construction. This includes salvage of sensitive plant species that can be removed, held, and transplanted back into the ROW after construction is complete. Sensitive animals, such as American badger, will be enticed to move from the corridor as described in section 4.

3.2 CONSTRUCTION PHASE

Monitoring of construction activities will be conducted by trained environmental monitors under the direction of the PEPM and the on-site environmental coordinator, with reports submitted to CDFG. These monitors shall follow the procedures set forth in sections 2.1.4, 2.3.1, and 2.5 of

the Mitigation Program for communication, reporting, and conflict resolution. Measures to minimize impacts of noise on sensitive human receptors will also act to reduce impacts on wildlife. Erosion control measures specified in the Mitigation Program will minimize on site and off site impacts on vegetation and habitat quality that could result from soil disturbance and runoff of storm waters.

Measures for topsoil handling, backfilling, equipment and materials storage, use of hazardous materials, trash control, fire control, construction personnel activity limitations, and site restoration discussed in the Mitigation Program (section 3) will also minimize project impacts on biological resources. In addition, monetary incentives for the contractors to avoid or minimize impacts to sensitive vegetation (e.g., oak trees and Burton Mesa chaparral) will be included in the construction documents.

3.3 POST-CONSTRUCTION PHASE

A post-construction survey of the entire project will be conducted by the environmental monitors after construction cleanup and surface restoration. This survey will include comparison of the construction areas to the preproject maps and photographs to determine the actual extent of impacts to sensitive resources within the ROW and if any impacts occurred outside the specified limits for construction. All substantial impacts beyond those predicted prior to construction will be thoroughly documented on maps and by photographs, and the measures necessary to restore these areas will be added to the mitigation plan. Areas where the contractors were able to reduce impacts will also be documented, and the scope of the final revegetation plan will be revised accordingly.

Site-specific revegetation and habitat enhancement for the entire project area will be performed as described in sections 4, 5, and 7 of this plan. The success of these measures will be monitored until specific compliance criteria have been met to the extent feasible.

3.4 OPERATION PHASE

Procedures for mitigating impacts resulting from routine and emergency maintenance work have been established in the Mitigation Program. This includes vegetation control over the pipeline to allow for aerial visual inspection for leaks as well as restoration of areas disturbed during repair work.

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4.0 SENSITIVE SPECIES-SPECIFIC MITIGATION MEASURES

4.1 INTRODUCTION

This section briefly describes the sensitive wildlife and plant species (see Table 4-1) that could be significantly affected by construction of the project and lists specific mitigation measures to avoid or minimize the effects. Mitigation for temporal and permanent loss of habitat is included in the vegetation mitigations (sections 5 and 7). All project-wide mitigation measures presented in section 3 of the Mitigation Program are applicable along with measures presented below. If a project-wide mitigation measure conflicts with the measures presented in this section, the mitigation measures of this section will generally be enacted. If a conflict with section 3 of this document arises during construction activities, a change order may be required following the procedures of section 2.5 in the Mitigation Program, and a change order will be executed if necessary. All individuals who handle listed or sensitive animals or plants or excavate burrows will be qualified to do so and will obtain the appropriate permits for that activity.

4.1.1 Relationship to State and Federal Threatened and Endangered Species Acts

The mitigation for sensitive species presented in this section includes several species that have been listed or are candidates for listing as threatened or endangered pursuant to the California Endangered Species Act (CESA) and the federal Endangered Species Act (ESA). It is recognized that the requirements of these acts must be met to construct the project. The mitigation measures for threatened and endangered species presented in this plan are CCWA's proposals to meet the requirements of CESA and ESA by avoiding take of listed species and significant impact to their habitat. Any changes to the mitigation measures made through the CESA process will be incorporated into this mitigation plan by a separate Management Agreement/Management Permit between CDFG and CCWA. Additional conditions may be specified by federal agencies pursuant to ESA.

4.2 SENSITIVE WILDLIFE SPECIES

4.2.1 Introduction

Sensitive wildlife species have been identified as potentially affected by construction of the Mission Hills Extension and the Santa Ynez Extension. The sensitive wildlife species that could be significantly impacted or are of particular concern are presented with a brief description of the animal and species-specific mitigation measures. Several of these species may not be

Table 4-1

SENSITIVE PLANTS AND ANIMALS POTENTIALLY AFFECTED BY THE PROJECT

| | STATUS ¹ | | |
|----------------------------------|---------------------|-------|-----------------|
| | Federal | State | CNPS |
| Animals | | | |
| Arroyo southwestern toad | C2 | SSC | |
| California tiger salamander | C2 | SSC | |
| Red-legged frog | C1 | SSC | |
| California horned lizard | | SSC | |
| Southwestern pond turtle | C1 | SSC | |
| Bald eagle | E | E | |
| Cooper's hawk | | SSC | |
| Long-eared owl | | SSC | |
| Yellow warbler | | SSC | |
| Yellow-breasted chat | | SSC | |
| Southwestern willow flycatcher | C1 | E | |
| Tricolored blackbird | C2 | | |
| Unarmored threespine stickleback | E | E | |
| American badger | | SSC | |
| Plants | | | |
| Sand mesa (shagbark) manzanita | RC1 ² | | 1B |
| Hoover's bentgrass | | | 4 |
| Seaside bird's beak | C1 | E | 1B |
| Parry's delphinium | C2 | | 1B |
| Black-flowered figwort | C2 | | 3 |
| Purisima manzanita | RC2 ² | | 1B ² |

- Notes:**
- Federal status determined by USFWS:**
 - E Endangered; in danger of extinction throughout all or a significant portion of its range.
 - C1 Substantial on-file information on biological vulnerability and threat indicates that proposing to list these species as endangered or threatened is appropriate.
 - C2 Information indicates that proposing to list these species is possibly appropriate, though more data on vulnerability and threat is necessary.
 - C3 Information indicates that these species have proven to be more abundant than previously believed and are not subject to any identifiable threat.
 - R Recommended status.
 - CDFG status:**
 - E Listed as endangered.
 - SSC "Species of Special Concern."
 - CNPS status:**
 - 1B Plants rare, threatened, or endangered in California and elsewhere.
 - 3 Review list - need more information.
 - 4 Watch list - plants of limited distribution.
2. Proposed status change.

affected due to realignments, and this will be verified during field surveys begun in the spring of 1993 and continuing through the summer of 1993. For a discussion of sensitive species that occur in the project area but would not be significantly impacted and additional wildlife information see the reports "Sensitive Fish and Wildlife Resources along the Proposed Coastal Aqueduct and Santa Barbara Extension" (BioSystems Analysis 1991a), "Biological Mitigation and Compensation Plan for Wildlife" (BioSystems Analysis 1991b), and "Sensitive Fish and Wildlife Resources along the Proposed Lompoc Pipeline" (BioSystems Analysis 1990).

4.2.2 General Mitigation Measures

The strategy for minimizing impacts to sensitive wildlife species is to avoid impacts to the greatest extent feasible, to prevent and minimize project caused mortality, and to restore and compensate for affected habitat.

The following approach to minimizing impacts to sensitive wildlife species will be followed:

- Conduct biological surveys (in the appropriate seasons) along the entire ROW and at all facility sites before construction to identify and locate sensitive species (see section 3.1). These surveys will not be limited to those species that have been determined to be significantly impacted (discussed in the following pages) but will include any other sensitive species potentially occupying areas to be affected by the project. If the surveys identify sensitive species that will be significantly impacted that are not addressed below, the PEPM will develop mitigation measures to protect the species and submit them to CDFG for review and approval prior to construction.
- Adjust ROW location or pipeline alignment within the ROW to avoid known sensitive wildlife habitat and dens or burrows to maximum degree feasible. The alignment will be adjusted through the final design and after biological surveys of the final ROW alignment. Any minor adjustments of the ROW necessary to protect wildlife or plants will be checked by appropriate environmental specialists to ensure that other sensitive resources (e.g., cultural sites) would not be affected.
- Reduce construction ROW width to avoid sensitive wildlife habitat and dens or burrows to the maximum degree feasible. The width of construction activity may be narrowed to a minimum of 50 feet for short distances to avoid or minimize impacts. These ROW width reductions will be flagged, marked on the project drawings and specifications, and included in construction contracts.

- In all habitats except agricultural fields, open trenches will be inspected by an environmental monitor each morning prior to any construction activity and each evening after construction activity is through, and any sensitive animals found will either be allowed to escape or will be removed according to prescribed protocol.
- Adjust construction schedule through or adjacent to sensitive species habitat to avoid impacts during critical times of the year such as the breeding season.
- Restore temporarily disturbed habitat (see section 5) and compensate for permanent habitat losses (see section 7).
- Develop plans, prior to construction, to handle emergency situations involving sensitive species.

4.2.3 Species-Specific Mitigation Measures

Wildlife species considered sensitive that could be significantly affected by the project are presented below along with the location of their habitat. Locations are given by mile or geographic site (see Appendix C for maps), and are approximations. Exact demarcation of the sites will be made on the drawings and specifications. State or federal status of each animal species and its occurrence on the ROW is then stated followed by species-specific mitigation measures.

Amphibians

ARROYO SOUTHWESTERN TOAD (*Bufo microscaphus californicus*)

Potential habitat for this species is present in the Santa Ynez River, although it has not been recorded west of Lake Cachuma in the Santa Ynez River drainage. The pipeline crosses the river on bridges at Buellton and Solvang, or would be bored under the river west of Buellton and placed on a bridge at Solvang. No impacts to this species are expected. The toad is a California Species of Special Concern and is a category 2 candidate for federal listing. Mitigation measures are presented below under Amphibians: Mitigation Measures.

CALIFORNIA TIGER SALAMANDER (*Ambystoma tigrinum californiense*)

The California tiger salamander is known to breed in the Campbell vernal pools (1991 records) at mile 20.5. No other locations for this species have been recorded for the project corridor.

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The California tiger salamander is a California Species of Special Concern and is a Category 2 candidate for federal listing.

Specific mitigation measures for the Campbell vernal pool population (and any other populations observed during preconstruction surveys) are:

- Avoid the Campbell vernal pools by moving the pipeline to the south side of Highway 246 and using the Caltrans ROW, if feasible.
- Keep construction ROW as narrow as possible (60 feet or less) adjacent to the pools to the extent feasible. This will be shown on the drawings and specifications.
- Design and place backfill in the trench so that subsurface water flow to the pools is not interrupted by the trench (if subsurface flow is found to occur). This includes replacement of the impervious clay layer if it is cut by the trench.
- Restore land contours to preconstruction conditions so that surface runoff is not altered.
- Control sediment runoff from the ROW using standard construction techniques until soils are stabilized with vegetation.
- Biological monitors to collect any salamanders found during trench excavation and hold in cool, moist conditions until construction is complete in this area. Replace the animals in hand-excavated burrows.
- Biological monitors to place fencing between pools and ROW (small mesh) to keep salamanders from entering the ROW.

Additional mitigation measures are presented below under Amphibians: Mitigation Measures.

RED-LEGGED FROG (*Rana aurora draytonii*)

Individuals of this species have been found in the Santa Ynez River about 3 miles west of Buellton, and placement of the pipeline on Avenue of the Flags bridge, or boring under the river in this area, would not affect this population. They have also been reported in the Campbell vernal pools at mile 20.5. Potential habitat for this species exists in San Antonio Creek, in a pond at mile 17.2, and at the Zanja de Cota Creek crossing at mile 35.5. The red-legged frog is a

California Species of Special Concern and is a Category 1 candidate for federal listing. Mitigation measures are presented below under Amphibians: Mitigation Measures.

Mitigation measures for sensitive amphibian species are:

- The two Santa Ynez River crossings will make use of existing bridges, or one will be by boring under the river and the other on a bridge. San Antonio Creek will be spanned or bored under and Hilton Creek will be spanned.
- The construction corridor width will be as small as feasible, but exact dimensions cannot be specified until detailed site engineering is completed. Gravel and unconsolidated material in some streambeds forces a wider trench to bury the pipeline adequately. Dimensions of each stream crossing will be specified on the drawings and specifications and in the construction contracts.
- Construction will be limited to the dry season (about 1 April to 1 November) through or adjacent to habitat known to support the above-mentioned species, except as noted below. Any aquatic habitats that could be affected by construction activities will be surveyed using appropriate sampling gear and techniques to determine if any of these species are present. Any individuals found will be temporarily relocated by a qualified biologist to unaffected similar habitat nearby and monitored during construction to determine if any project-related mortality occurs. No construction through these habitat will begin while larval or other life stages are present until they either migrate or are removed from the habitat. Timing for construction adjacent to the Campbell vernal pools will be indicated on the drawings and specifications.
- In streams that are flowing during the dry season, the section of the stream to be excavated will be seined and any animals will be relocated by a qualified biologist before construction but after stream diversion devices have been installed. Installation and operation of the stream diversion devices will be monitored by the environmental monitors and CDFG.
- After habitat restoration is complete, approximately the same number (accounting for any known mortality) of each species removed will be returned from the relocation site to the habitat by a qualified biologist.
- Move the pipeline ROW to the south side of Highway 246, using the Caltrans ROW (if feasible) to avoid the Campbell vernal pools.

Reptiles

CALIFORNIA HORNED LIZARD (*Phrynosoma coronatum frontale*)

Potential habitat exists for this species at numerous locations in chaparral, primarily from mile 0 to mile 11. The horned lizard is a California Species of Special Concern and is on the California Natural Diversity Data Base Watchlist.

Specific mitigation measures include:

- The construction corridor width will be as small as feasible, but exact dimensions cannot be specified until detailed site engineering is completed.
- Restoration of designated horned lizard habitat that includes replacement of previously removed sand/fine gravel across topsoil surface.

SOUTHWESTERN POND TURTLE (*Clemmys marmorata pallida*)

This turtle has been observed in the Campbell vernal pools (mile 20.5), in San Antonio Creek, in the stilling basin adjacent to Bradbury Dam, and in Lake Cachuma. Potential habitat for this species exists at mile 17.2 (a pond), and in Zanja de Cota Creek. The turtle is a California Species of Special Concern and a category 1 candidate for federal listing.

Specific mitigation measures include:

- Avoid the Campbell vernal pools by moving the pipeline to the south side of Highway 246 and using the Caltrans ROW, if feasible.
- Narrow construction corridor to 60 feet wide adjacent to the Campbell vernal pools.
- Construction through known pond turtle habitat will be limited to the dry season (about 1 April to 1 November).
- Seining bodies of water within the ROW prior to construction and relocating turtles to aquatic refugia outside of the construction zone by a qualified biologist. These refugia will be monitored during construction to assess any project-related mortality. In habitats where pond turtles could enter the ROW from adjacent habitat, removal of pond turtles ~~would occur after diversion~~.

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devices have been installed. Installation and maintenance of these devices will be monitored by environmental monitors.

- After habitat restoration is complete, approximately the same number (accounting for any mortality) of pond turtles removed will be returned from the refugia to the habitat by a qualified biologist.
- Fencing between the vernal pools and the ROW for tiger salamander will also keep pond turtles from entering the ROW.

Birds

BALD EAGLE (*Haliaeetus leucocephalus*)

A pair of bald eagles have nested just north of Lake Cachuma in 1989 and 1990; they may continue to use this nest site. Two other bald eagles have regularly used habitat adjacent to (west side) the Tecolote Tunnel intake tower for foraging and perching during winter. Wintering eagles occur in variable numbers (2-15) at Lake Cachuma from November through March. This species is listed as endangered by both state and federal agencies. Construction of the pipeline terminus near Bradbury Dam is not expected to affect bald eagle use of the lake.

A specific mitigation measures is:

- Construct terminus for discharging to lake during summer (April through October) when eagle numbers at the lake are at a minimum.

BURROWING OWL (*Athene cucularia*)

Burrowing owls are not known to nest in the project area although occasional winter visitors may be present, particularly in the western portion of the study area. Preconstruction surveys will include looking for this species and suitable burrows (if any owls are observed). No mitigation measures are proposed at this time since no impacts are expected.

COOPER'S HAWK (*Accipiter cooperi*)

Cooper's hawk nesting and foraging habitat occurs in the riparian woodlands along the Santa Ynez River west of Buellton and along the oak woodlands south of San Antonio Creek, and a nest was found just north of the proposed crossing at Zanja de Cota Creek. Potential habitat for

this species also exists in chaparral and woodlands between miles 0 and 11. This bird is a California Species of Special Concern.

Specific mitigation measures are:

- Conduct preconstruction surveys within riparian woodland habitat during the April through July nesting season and before any construction activities. Any nests found within or immediately adjacent to the corridor (i.e., within approximately 0.5 mile) will be mapped during the survey and checked for use. If in use when construction is scheduled to occur (see Figure 4-1 for approximate dates), construction activities will be redirected so as to avoid disturbance of the nest site and the surrounding foraging area. The area to be temporarily avoided (until the young have fledged in July or August) will be determined by a bird specialist considering site-specific topography and existing land uses.

Riparian and Wetland Birds

LONG-EARED OWL (*Asio otus*)

This species has been seen at the Santa Ynez River 3 miles west of Buellton (near alternative route crossing by directional drilling) but is unlikely to be present near the relocated crossing at Avenue of the Flags bridge. Potential habitat for this species also exists along Zanja de Cota Creek. Construction activities may disturb birds at winter roosts or while nesting. The nearest known suitable nesting habitat is at Barka Slough, approximately 2.5 miles (4 km) east of the pipeline crossing of San Antonio Creek. This species is a California Species of Special Concern. Mitigation measures are presented below in Riparian and Wetland Birds: Mitigation Measures.

YELLOW WARBLER (*Dendroica petechia brewsteri*)

This species occurs as a migrant and occasional breeder in willow riparian habitat in San Antonio Creek in the willow riparian habitat between mile 2 and mile 3, adjacent to Zaca Creek and the Santa Ynez River west of Buellton (including the alternative bore site at the Avenue of the Flags bridge crossing), along Zanja de Cota Creek, and at the Santa Ynez River just below Bradbury Dam. The yellow warbler is a California Species of Special Concern. Mitigation measures are presented below in Riparian and Wetland Birds: Mitigation Measures.

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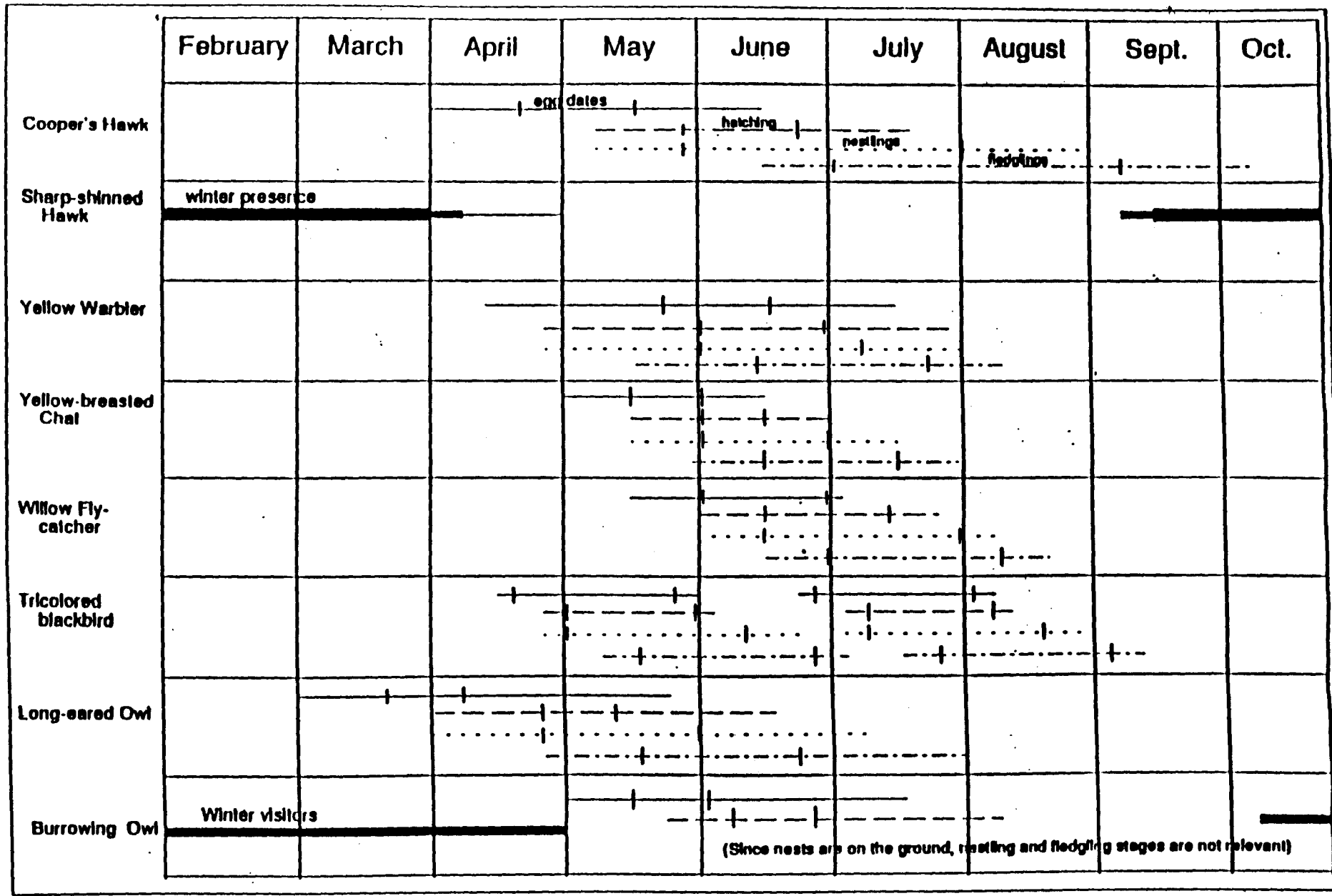


Figure 4-1
 SENSITIVE BIRD NESTING PERIODS

YELLOW-BREASTED CHAT (*Icteria virens*)

This species occurs as a migrant and breeder in dense riparian habitat adjacent to the Santa Ynez River at the confluence of Zaca Creek, at the alternative bore site, and at the Avenue of the Flags bridge crossing; along Zanja de Cota Creek; and in San Antonio Creek. Pipeline construction during the nesting season (April-June) could disrupt nesting attempts. The yellow-breasted chat is considered a California Species of Special Concern. Mitigation measures are presented below in riparian and wetland birds: mitigation measures.

SOUTHWESTERN WILLOW FLYCATCHER (*Empidonax traillii eximius*)

This species is now a rare spring and fall migrant occurring in dense willow riparian habitat along the Santa Ynez River. Nesting pairs have been found along the Santa Ynez River near Buellton. Potential habitat for this species also exists along San Antonio Creek. None were found in the vicinity of the ROW during 1992 and 1993 spring bird surveys. The southwestern willow flycatcher is listed as endangered by California and is a category 1 candidate for federal listing. Mitigation measures are presented below in Riparian and Wetland Birds: Mitigation Measures.

TRICOLORED BLACKBIRD (*Agelaius tricolor*)

Several breeding colonies have been recorded along the Santa Ynez River, close to but outside the project area (BioSystems 1990). A large colony breeds in the marsh associated with an irrigation reservoir on the Mendez Ranch at mile 17.2 located immediately adjacent to the proposed pipeline corridor. This species is a category 2 candidate for federal listing.

Riparian and Wetland Birds: Mitigation Measures

Impacts to yellow warblers, long-eared owls, yellow-breasted chats, southwestern willow flycatchers, and tricolored blackbirds will be mitigated by minimizing the area affected, timing construction activities to avoid disturbance during the breeding season, restoration of habitat (section 5), and habitat replacement (section 7). Additional measures are:

- At all stream crossings (including associated riparian woodlands) where these species are known to be present (to be designated on the drawings and specifications) and where nesting is found within the ROW, construction shall not begin in these habitats (and at least 100 to 200 feet, depending on topography, on either side of this habitat) until the young have fledged (see Figure 4-1 for approximate dates).

- Construction adjacent to the pond used by tricolored blackbirds at mile 17.2 will be performed after nest building is complete (March), and if feasible after the nesting season. The latter is assumed to be approximately 1 August, but the exact date will be determined by the environmental monitors. If avoiding the entire nesting season is not feasible, a buffer of at least 20 feet shall be maintained between the pond and the construction zone.
- Mitigation measures include a pre-construction survey conducted through any suitable riparian habitat within 30 days before the start of construction. Impacts to nesting long-eared owls can be avoided by restricting construction to the portion of the dry season which is within their non-breeding season (1 July to 1 November).
- A 50-foot buffer shall be maintained between construction activities and riparian woodlands where sensitive species are found to be nesting when no nesting is found within the construction corridor and construction cannot be scheduled for after the breeding season.

Fish

UNARMORED THREESPINE STICKLEBACK (*Gasterosteus aculeatus williamsoni*)

This species inhabits San Antonio Creek on Vandenberg AFB and is present at the ROW crossing of the creek. The unarmored threespine stickleback is state and federally listed as endangered.

Specific mitigation measures are:

- Avoid disturbance of stream banks and to riparian habitat within banks during installation of bridge for pipe across creek, or bore under the creek.
- Prevent runoff of sediments or other construction materials to the creek from the ROW within the watershed, especially adjacent to the creek, through use of berms, straw bales, etc. that are monitored daily and maintained as necessary.
- Complete construction over (or under) and near the creek, including the tributary to San Antonio Creek crossed three times, during the dry season (1 April to 1 November).

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- Stabilize disturbed soils prior to rainy season; monitor and maintain sediment control devices until soils are permanently stabilized.

Mammals

AMERICAN BADGER (*Taxidea taxus*)

Sign of this species has been observed along or near the pipeline ROW in Burton Mesa chaparral, near Tank 7, and between mileposts 2 and 3. Potential habitat for this species occurs in grassland and open chaparral at various intervals throughout the project area. The American badger is a California Species of Special Concern.

Specific mitigation measures are:

- Survey grasslands along the entire ROW and at all facility sites during the preconstruction survey. Resurvey areas where sign of badgers is found 60 days before construction to determine if any potential dens within the construction zone are occupied. Construction contract specifications will require that contractors provide the Construction Manager notice of intent to conduct construction activities 90 days before initiation of work within areas designated as American badger habitat on project design plans.
- Mark exclusion zones of 50-foot radius around active dens where they can feasibly be avoided by the ROW.
- Destroy unoccupied dens that cannot be avoided to prevent badgers from reoccupying the dens prior to reproductive season (February - May).
- Hand excavate occupied dens within the ROW that cannot be avoided to make badgers leave and close den to assure animals will not return. This is to occur either before or after the reproductive season (February - May).

4.3 SENSITIVE PLANT SPECIES

4.3.1 Introduction

A number of sensitive plant species are present in the ROW and would be affected by construction of the Mission Hills and Santa Ynez extensions (see Table 4-1). This section presents the mitigation measures that will be used to avoid and minimize significant impact to

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these resources. The mitigation measures presented in section 4.3.2 are common to all sensitive plant species. A list of the sensitive plants is then presented with a brief indication of their location and some specific mitigations. Manuals specifying details for implementing the mitigation measures for each species will be prepared after preconstruction surveys and prior to construction. The content of these manuals is presented below. A draft example is provided in Appendix A. Additional information concerning sensitive plants can be found in the "Summary of Vegetation Studies, 1987-1991. State Water Project: Coastal Branch Phase II and Mission Hills Extension" (Hendrickson 1992), and in "Lompoc to Cachuma Pipeline, Alignment Impacts to General Vegetation and Sensitive Plant Species" (DWR 1989b). Several sensitive species not discussed below are associated with Burton Mesa chaparral but are not currently known to be present in the ROW. Mitigation measures presented in section 5.2.2 and section 7 would provide habitat for these species.

4.3.2 Mitigation Measures

The strategy for minimizing impacts to sensitive plant species is to avoid the plants to the greatest extent feasible and to restore populations of plants in their natural habitat to approximately the numbers and condition present before the project if they cannot be avoided.

The following approach to minimizing impacts to sensitive plants will be followed:

- Adjust pipeline alignment within the ROW to avoid plants to maximum degree feasible. The alignment will be adjusted, where feasible, to avoid sensitive plants through the final design and after preconstruction biological surveys of the final ROW alignment.
- Reduce construction ROW width to avoid sensitive plants. The width of construction activity will be narrowed to a minimum of 50 feet for a short lineal distance to avoid or minimize impacts. These ROW width reductions will be marked on the project drawings and specifications and will be included in construction contracts.
- Provide incentives to contractors to avoid impacts to sensitive species within the ROW. These incentives will be included in construction documents.
- Transplant or collect seed, bulbs, young plants, or cuttings to reestablish individual plants that cannot be avoided.

- Identify and flag sensitive plants in exclusion zones. Fence or clearly mark the exclusion zone when small and clearly mark it when large, no sooner than 6 months prior to construction.
- General topsoil preservation by construction contractors will be required as shown on the drawings and specifications.
- Monitor reestablishment and irrigate, cultivate, or take other steps to assure restoration success.

Technical manuals will provide procedures on propagation and maintenance of specific sensitive plant species. The manuals will be based on existing literature and expertise of professionals. Where adequate information concerning a species is not available, the manual will suggest techniques to experimentally obtain the information with backup provisions to follow in case the experiments do not prove successful.

The technical manual will follow the following format:

- Species
- Location
- Ecological requirements
- Collection method and schedule
- Storage method
- Propagation and cultivation methods: seed preparation, fertilization, weed control, etc.
- Watering schedule: frequency, duration, quantity
- Special needs
- Recommendation for companion species
- Monitoring schedule.

Criteria for restoration success.

4.3.3 Sensitive Plants

The following sensitive plants have been identified within the ROW or at facility sites (Hendrickson 1992; DWR 1989b; SAIC 1993 field surveys). They would be significantly impacted by the project and, therefore, require mitigation measures to restore the species populations. Other sensitive plant species that are located within or near the Mission Hills Extension ROW but would not be significantly affected by the project are discussed in Hendrickson (1992). Seeds from plants of species to be affected will be collected for revegetation purposes as time and conditions permit. Associations of sensitive species are present in Burton Mesa chaparral and wetlands. These habitats are discussed in section 5.0.

SAND MESA (SHAGBARK) MANZANITA (*Arctostaphylos nudis*)

This resprouting shrub species is a category 2 candidate for federal listing (but recommended for Category 1 status) and on the California Native Plant Society (CNPS) 1B list (rare, threatened or endangered in California). It is endemic to Burton Mesa chaparral and numerous individuals would be removed during clearing of the ROW. Specific locations where this species is found are near Nipomo and Tank 5 (within the Coastal Branch to be constructed by DWR), mile 0-0.3, mile 5.6-5.7, mile 7 to 8.2, mile 8.8 to 10, and mile 10.1 to 11.1. This is being mapped at a scale of 1 inch = 100 feet during preconstruction surveys begun in spring 1993 and continuing through summer.

The construction corridor shall be as narrow as feasible through Burton Mesa chaparral. In the area that is within the construction easement but outside the area to be trenched, sand mesa manzanita shrubs will be cut off to the stump using equipment such as a brush hog or flail-type mower. The work area will be covered with a material (such as straw) to mark the ground level and then materials excavated from the trench will be spread over it to protect the stumps from damage by heavy equipment traffic. Movement of machinery in this habitat should be minimized and avoid stumps where feasible. The area to be restored may be planted with individuals grown from locally collected seed and cuttings. Planted individuals and resprouting individuals will be tagged and monitored for several years to measure the success of the different methods of revegetation for this species.

PURISIMA MANZANITA (*Arctostaphylos purissima*)

Purissima Manzanita is on CNPS list 3, but is now proposed to be added to list 1B and recommended for Category 2 federal listing status. It is found in Burton Mesa chaparral from

Tank 5 on Vandenberg Air Force Base to Harris Grade Road at mile 11.1. Locations of its occurrence along the corridor are being mapped during preconstruction surveys begun in the spring of 1993.

Efforts to reestablish this species following pipeline construction will include spreading heat or ash treated seed over the corridor. Brush cleared during construction may be chipped and burned under a permit from the County Fire Prevention Agency and the ashes spread over the construction corridor. Whole plants could be salvaged and replanted. Supplemental watering during winter may be necessary in dry years.

HOOVER'S BENTGRASS (*Agrasis hooveri*)

Hoover's bentgrass is on CNPS list 4 (watch list). Localized patches are found in open areas and under shrubs within Burton Mesa chaparral. Hoover's bentgrass was found on a slope above unnamed drainage A under some shrubs and it may be present elsewhere in the Burton Mesa area. The occurrence located within the ROW were mapped during the preconstruction surveys. Any additional dense clumps of individuals located during flagging of the corridor will be recorded and revegetated. Individuals will be collected and saved prior to construction for replanting following construction, and seed will be collected prior to construction and then be grown at a nursery and replanted.

SEASIDE BIRD'S BEAK (*Cordylanthus rigidus* ssp. *litoralis*)

This species is a category 1 candidate for federal listing, listed as endangered by the state, and on CNPS list 1B. Suitable habitat is present in the ROW, and a number of individuals of this annual species could potentially be affected. It may occur along the banks and hillsides adjacent to unnamed drainage A near Vandenberg Village. Specific locations and numbers of individuals within the ROW will be determined and mapped during the preconstruction surveys in the 1993 blooming season. Since the subspecies *rigidus* is more common in this area, identification to subspecies will be verified through comparison with herbarium specimens using plant material collected during the preconstruction surveys.

This possible hemiparasite grows in slightly disturbed clearings adjacent to oaks and oak chaparral. It is an annual, but whole plants should be collected late in the season to seed the area following construction. Seeds of other herbs that are found in the same area will be collected and scattered with the seed of the bird's beak.

PARRY'S DELPHINIUM (*Delphinium parryi* VAR. *blochmaniae*)

Parry's delphinium is a category 2 candidate for federal listing, on the CNPS list 1B, and a species of local concern in Santa Barbara County. This species, which emerges from perennial root stalks during favorable seasons, is a local endemic in Burton Mesa chaparral. One individual occurs at mile 0.2 and at mile 4.6, and it may be present between mile 9.5 and mile 11. Since not all plants in a population may emerge every year, this species may be more abundant and widespread on the ROW than the surveys conducted during previous years have indicated. Locations found during the 1993 blooming season will be mapped.

BLACK-FLOWERED FIGWORT (*Scrophularia atrata*)

This herbaceous perennial figwort is a category 2 candidate for federal listing and is on CNPS list 3 (review list). It is known to occur at mile 0.7 and may be present between miles 9.5 and 11. Locations will be mapped during preconstruction surveys.

Individuals of this species will be removed prior to disturbance and maintained in a nursery for replanting following construction, and/or locally collected seed will be grown at a nursery for replacement planting at the site.

5.0 VEGETATION TYPE RESTORATION MEASURES

5.1 INTRODUCTION

This section discusses the vegetation types affected by construction of the Mission Hills and Santa Ynez extensions. The strategy for avoiding and minimizing effects to vegetation resources is described. The content of technical manuals that will be prepared to guide the replacement and maintenance of impacted vegetation resources is presented. General mitigation measures are listed. The list of vegetation types (excluding agriculture and disturbed) that will be affected by the extensions is then presented, including a brief description of the species composition and acreages impacted. The areas given are approximations from measurements on maps at a scale of 1:24,000 of the route dated 1 June 1993. The acreages will be revised as necessary upon completion of preconstruction field surveys and mapping at a scale of 1 inch = 100 feet in the summer of 1993. Specific mitigation measures to be used to minimize impacts to each vegetation type are listed. The need to create and manage similar habitats at a minimum of an acre-per-acre ratio to replace lost ecological communities or acquire disturbed lands near the project site for ecological enhancement is then presented. These recommendations are taken from Table 4-2, "Ecological Communities within Easement," from the *Coastal Branch, Phase II and Mission Hills Extension Final Environmental Impact Report*. Section 7, Acquisition of Replacement Lands, presents the proposed method to acquire lands to compensate for permanently lost threatened or endangered species habitat and to replace sensitive ecological communities that cannot be reestablished within the pipeline corridor.

Additional information concerning vegetation types can be found in Hendrickson (1992).

5.2 MITIGATION MEASURES

The strategy for minimizing impacts to vegetation is to avoid the sensitive vegetation types or individual plants, such as mature trees, to the greatest extent feasible. Where a sensitive plant species or habitat is not avoided, the pipeline corridor will be narrowed to limit impacts to the greatest extent feasible when considering added construction cost versus replacement cost. Monetary incentives will be given to the contractors to avoid or minimize these impacts. Impacts which cannot be avoided will be mitigated by restoring the vegetation on site and by off-site replacement of ecological communities that cannot be mitigated on site. The alignment will be adjusted through the final design phase and after biological surveys of the final ROW alignment should sensitive vegetation be located and an alignment shift is cost effective. Additionally, the construction ROW width may be narrowed to about 50 feet for short distances to avoid or minimize impacts to sensitive vegetation resources.

During pipeline construction qualified monitors will be present to ensure that all flagged areas are avoided, and to keep a log of all activities including the number, size, and species of trees that are removed. These monitors (through the PEPM) will have the authority to temporarily (less than 1/2 hour) stop or slow corridor clearing within Burton Mesa chaparral or other ecologically sensitive areas where vegetation is too dense to completely survey (locations marked on the plans and specifications) if necessary to enumerate or salvage sensitive plants that could not be accomplished prior to clearing due to density of vegetation. The monitors will work with construction management staff on this to minimize interruption of work. These specifications will be included in the construction contract.

Construction will follow fixed schedules to avoid disturbing habitats at crucial times. In cases where portions of the pipeline cannot be completed within the scheduled period, the supervising biologist will work with construction management staff to determine if construction in that location can be completed at that time without significant impact to vegetation or must be rescheduled.

Immediately following construction, fences and other barriers will be erected where appropriate to restrict access of mountain bikes, ORV's, and other recreational vehicles that may hamper revegetation efforts. These areas will be periodically monitored and damaged sections will be repaired promptly.

Within one month following construction, a survey will be conducted to determine actual acreages of each vegetation type disturbed.

Revegetation efforts will follow a strict schedule to maximize success. Specific plans will be formulated for each vegetation type and drainage or stream crossing. The specific plans will include relative densities of and numbers of individuals of each species. Actual methods and timing will be recorded in detail so that success of the methods can be analyzed and evaluated.

Revegetated areas will be monitored at least annually until project-specific performance criteria are met. Species present, diversity, density, and percent cover will be recorded, and photographs will be taken.

Other general mitigation measures that are aimed at preserving the natural recovery potential of the vegetation are:

- Erosion control (section 3 of Mitigation Program).

- Topsoil preservation (section 3 of Mitigation Program) including special provisions for some rare plant species (section 4 of the Biological Mitigation Plan).
- Salvage of some plants.
- Preservation of burls, root crowns, and root systems of sprouting species.
- Stockpiling removed vegetation, mulching, and spreading over restored ROW.

Restoration of native vegetation at disturbed sites will be guided by the following principles:

- Restore site, to the degree feasible, to original contours and topographical conditions with modifications as necessary to prevent erosion and where a gently graded bench is necessary for access along the pipeline in sloped areas.
- Use locally collected materials for restoring native vegetation types. Geographical limits for seed, bulb, young plant, and cutting collection will be specified in the site specific restoration plans. The objective of this is to revegetate disturbed areas with specimens taken from local populations to preserve genetic compatibility and to avoid introduction of pests and diseases.
- Maintenance activities will be specified in the site specific restoration plans and will be carried out until restoration criteria have been met.

Technical manuals will be prepared prior to commencement of construction to provide procedures on propagation and maintenance of each vegetation type. The manuals will be based on existing literature and expertise of professionals. Where adequate information concerning a vegetation type is not available, the manual will suggest techniques to experimentally gain the information, with backup provisions in case the experiment(s) does not prove successful.

The technical manual will follow the following format:

- Plant community
- Location(s) and area disturbed
- Seeds to be planted (i.e., species composition)

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- Methods of seed planting (e.g., soil preparation, depth, mulch)
- Other types of propagation to be undertaken (cuttings, bulbs).
- Special requirements of plantings (e.g., shade, fertilizer, fire).
- Maintenance schedule.
- Weed control methods, and timing.
- Monitoring methods and timing.
- Remedial action proposal.
- Criteria for determining restoration.
- Other considerations.

The following sections describe the plant communities affected and give specific mitigation measures.

5.2.1 Nonnative Grasslands

Nonnative grasslands are characterized by annuals such as wild oats (*Avena fatua*), ripgut brome (*Bromus diandrus*), soft cheat (*B. hordeaceus*), wall barley (*Hordeum murinum*), and rattail fescue (*Vulpia myuros*), as well as native perennial and annual forbs such as lupine (*Lupinus* spp.), rancher's fireweed (*Amsinckia menzeisii* var. *intermedia*), and purple owl's clover (*Castilleja exserta*). About 164 acres of lands classified as grasslands would be affected by the project. Nonnative grasslands removed during ROW clearing will be restored within the construction ROW as will grassland disturbed at the staging areas. In addition, other vegetation types in the area permanently cleared of brush and trees above the pipeline may be restored to grassland. The loss of nonnative grasslands at permanent facilities will be the only permanent loss of this vegetation type and is not considered significant in relationship to the amount of nonnative grasslands present in the region. Therefore, replacement is not proposed. Vegetation type specific mitigation measures that will be used to restore affected nonnative grasslands will include:

- Topsoil salvage and replacement (see section 3.2.4 of Mitigation Program). The topsoil shall be removed and stored separate from subsoils. In most areas, the

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entire topsoil layer will be stored separately from subsoils, replaced in the reverse order, and revegetated by seeding as described below. At a few specific locations where native species (e.g., wildflowers; see section 5.2.8) are abundant (based on preconstruction field surveys), revegetation by seeding may not be cost effective, and the topsoil averages more than 18 inches thick, the top 2 to 4 inches of soil, which contains most of the seed, will be removed first. These specific areas will be identified on the drawings and specifications. Then the remainder of the topsoil (A horizon) will be removed and stored. The bottom layer of soil will be removed as necessary for pipeline placement. Soils will be replaced such that the original layering is restored.

- Revegetation. Seed of the nonnative species will generally be from commercially available sources and do not need to be collected at the site, but seed of the native species must be collected as close to the site as feasible to maintain the genetic integrity of the populations in the area. Species and quantities of these seed mixes will be determined for discrete sections along the corridor so that they mimic as closely as feasible the natural conditions.
- Weed Control. Seeded areas will be monitored during the first growing season after planting, and active weed control (if found to be necessary) will be conducted in areas where the surrounding grassland is not dominated by weeds until the grassland becomes reestablished. Hand spraying with an environmentally safe herbicide, cutting, or pulling noxious weeds such as bull thistle, veldt grass, and black mustard will be undertaken to control their growth. Although pulling or cutting is preferred, it may not be practical in all instances. If herbicides are used, a biologist must be present at all times during herbicide spraying to supervise their application and identify individual plants to be sprayed. Weeds must be removed at least once a year. Weeding will be conducted when the plants are large and visible but not flowering (to avoid seed set), the timing of which will vary from year to year depending on weather conditions and must be determined for each species. Surveys of specific areas with potential weed problems, such as in sandy soils where veldt grass could invade, will be done as necessary (estimated at two to three times) during the growing season to determine timing for weed eradication. It is particularly important that these schedules are followed. Deviation from them could result in seed set of the weeds and greatly lengthen the time required for weed removal efforts.

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- Monitoring. The grasslands will be monitored at least annually, preferably in the spring prior to weed removal. This effort will focus in areas containing native grasses, dense wildflower assemblages, and high weed invasion potential. This will include comparison of nearby sites outside the construction ROW. When the revegetation criteria are met, the area will be considered revegetated.

5.2.2 Chaparral

Chaparral affected by the proposed state water pipelines in Santa Barbara County is primarily a subgroup of central maritime chaparral known as Burton Mesa chaparral. It is characterized by the endemic sand mesa (shagbark) manzanita (*Arctostaphylos rudis*) and Purisima manzanita (*A. purissima*), varieties of coast and Santa Barbara ceanothus (*Ceanothus ramulosus* var. *fascicularis* and *C. impressus* var. *impressus*), chamise (*Adenostoma fasciculatum*), black sage (*Salvia mellifera*), poison oak (*Toxicodendron diversilobum*), and a multi-stemmed shrubby form of coast live oak (*Quercus agrifolia*). A number of other endemic or rare taxa are present as well. A maximum of 45.5 acres of Burton Mesa chaparral (with a 120-foot-wide construction corridor except along Burton Mesa Boulevard) would be affected by the project. Included are 12.8 acres within the pipeline corridor and at Tank 5 for the Coastal Branch. This will be reduced through corridor narrowing where feasible. A small amount of northern mixed chaparral occurs at mile 17 and approximately 2.5 acres would be affected. A very small area (less than 1 acre) of mixed chaparral and oak woodland would be crossed near the terminus at Lake Cachuma. Approximately 15 acres would be permanently lost. Specific mitigation measures that will be used to restore affected central maritime and northern mixed chaparral will include:

- Narrow construction corridor to 50 feet wide where feasible (to be designated on the drawings and specifications) and maintain clear zone within permanent easement of 20 feet or less.
- Monetary incentives will be given to the contractors to minimize impacts to chaparral.
- Construction contract specifications will require that the ROW be cleared by cutting the chaparral at ground level prior to trench excavation to provide for vegetative reproduction.
- Straw (wheat or barley) mulch, or other appropriate materials (e.g., soil padding or construction fencing), will be spread over the section of the ROW to be used as spoils storage and equipment access to mark the existing ground surface.

Excavated spoils will be spread over areas where equipment will be driven to protect root systems.

- The top 2 to 4 inches of soil (where present) shall be removed and stored separately from the rest of the excavated materials, and replaced over the fill where shown on the drawings and specifications.
- Seeds and cuttings will be collected within and adjacent to the ROW, and young plants will be collected from within the ROW where ground level cutting is not feasible or unlikely to be successful. Actual weight of seed required will be calculated based on predisturbance densities and probable germination and establishment ratios. Prior to pipeline construction, germination ratios will be determined experimentally. It is likely that seeds of the chaparral will require some heat treatment such as boiling to enhance germination. If these methods prove unsuccessful, alternative measures such as growing individuals from cuttings will be necessary.
- Vegetation removed from the ROW will be saved and, after site restoration, spread over the ROW. The material may be burned (under a permit from the County Fire Prevention Agency and PEPM supervision) to enhance seedbank germination.
- The ROW will be monitored for a minimum of 5 years to document revegetation success relative to restoration criteria set prior to construction and to identify problems and implement remedial actions as necessary.
- Active weed control to prevent dominance by perennial, invasive weedy species (e.g., pampas grass, *Cortaderia atacamensis*; hottentot fig, *Carpobrotus edulis*; narrow-leaved iceplant, *Conicosia pugioniformis*; and veldt grass, *Ehrharta calycina*) will be practiced until chaparral becomes established. This will be done at least annually for each species. It will be scheduled after the beginning of the growing season but prior to flowering to control establishment of more weeds.

Purchase of disturbed lands near the project site for preservation and ecological enhancement of Burton Mesa chaparral may not be feasible for replacement of permanent loss (15 acres), such as at Tank 5 and in the clear zone over the pipeline to be free of large trees. An option is to restore or enhance degraded areas within the Unocal Preserve, either directly or through contribution of funds to Santa Barbara County for restoration work in this preserve. Any funds

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given to the County will include stipulations that the monies are to be used only for habitat restoration work and that the County will provide CCWA with documentation of how the funds are used along with the results of the restoration work. Eradication of pampas grass upwind of the ROW is also being considered as partial mitigation for long-term impacts.

5.2.3 Coastal Sage Scrub

Two types of coastal sage scrub are found in the project area. They differ primarily in density of shrub cover and species composition. The Venturan coastal sage scrub community is generally dominated by coastal sagebrush (*Artemisia californica*) and coyote bush (*Baccharis pilularis*). A variety of other species are frequently present, and some of these may be dominant at specific locations (e.g., black sage). In disturbed areas, a subtype of this community dominated by coyote bush occurs. On Vandenberg Air Force Base and around Vandenberg Village central coast scrub is present. Besides the species listed for Venturan coastal sage scrub, mock heather (*Ericameria ericoides*), poison oak, and buckthorn (*Rhamnus* spp.) are characteristically present. About 61 acres (including 3 acres of mixed scrub and grassland) would be affected. Specific mitigation measures are:

- The top soil (A horizon) salvage and replacement shall be as described in section 3.2.4 of the Mitigation Program. Specific requirements will be included in the drawings and specifications. In addition, the soil seed bank (top 2 to 4 inches) will be salvaged and replaced in specific areas shown on the drawings and specifications.
- Seeds will be collected prior to pipeline construction close to the site to be revegetated. Different species bloom and set seed at different times of the year, and this also varies from year to year. Seed collection efforts may have to be conducted over several months and will require field checks to determine the precise timing best for seed collection. Seed collection may not be feasible in some years due to low seed production. If this occurs, seed collection will be done the following year. Seed collection will begin one year prior to initiation of construction.
- For seed mixes, species and quantities will be determined based on densities of each species in each community and germination ratios. Germination ratios will be determined experimentally for each species. The seed mixes will then be applied at a specified time to limit predation of the seeds by rodents and birds.

- The revegetated areas will be monitored and weeds will be actively removed either by hand pulling or by hand spraying of herbicides known to be environmentally safe. Cutting or mowing may be appropriate in some areas. Schedules for weed removal must be determined for each species on a year by year basis. Each weed species will be removed a least once a year. The weeds must be removed before they flower to avoid seed set. Any herbicide spraying that is done will only be permitted under the supervision of a qualified biologist, who will direct which plants are to be sprayed and keep a log of the progress.
- Revegetated areas will be monitored on a yearly basis prior to weed removal but after weed appearance. Specific criteria for evaluating weed colonization will be developed and included in the revegetation plan. When those criteria are met, the weed control efforts shall be considered complete.
- Where patches of particularly invasive weeds occur adjacent to the corridor, it may necessary to kill or cut nearby weeds as well as the ones actually growing in the construction corridor. Otherwise, the nearby weeds may provide a seed source for the disturbance corridor.

5.2.4 Riparian Communities

5.2.4.1 Southern Cottonwood-Willow Riparian Forest

This community is dominated by cottonwood (*Populus* spp.) and willows (*Salix* spp.) with sycamore (*Platanus racemosa*) common in some areas. The understory may contain mulefat (*Baccharis salicifolia*), shrubby willows, and other species. About 2 acres would be affected at stream crossings, primarily at Zanja de Cota Creek. Specific mitigation measures to be used will be:

- Mature trees within exclusion zones will be flagged. Biological monitors shall be aware of the locations of such individuals and insure that they are not removed or damaged.
- Clear the ROW outside the trench excavation by cutting the willows and other shrubs at ground level while preserving live stumps or root crowns in place to provide for vegetative reproduction. (To be designated in the drawings and specifications and to be specified in construction contracts.) Efforts should be made where feasible to avoid driving machinery over these stumps. Monetary incentives will be given to the contractors to minimize impacts.

- Collect cuttings, young plants, and seed to replace trees and understory vegetation where cutting is not feasible or successful. Seed should be locally collected and stored in a cool place.
- Prior to construction, riparian areas to be impacted will be mapped at a scale of 1 inch = 100 feet and characterized as to species composition, tree sizes, and density. Physical characteristics of the stream bed and banks will also be recorded. Following backfilling these areas will be restored to previous physical conditions. This must be done within one month of backfilling. (To be specified in construction contracts.)
- Topsoil will be salvaged and replaced as described in the Mitigation Program.
- There will be a strict schedule for construction and revegetation of riparian areas. Deviation from these schedules will only be permitted with approval of PEPM. (To be specified in construction contracts.)
- Species removed in areas cleared beyond the permanent easement will be replanted.
- Monitor restored areas, perform active weed control, and implement remedial measures (as necessary) until vegetation becomes established and meets restoration criteria established from preconstruction data.
- Maintain vegetation clear zone within permanent easement of 20 feet or less.

Creation and management of similar habitats off site at an acre-per-acre (1:1) ratio to replace lost southern cottonwood-willow riparian forest ecological communities in the permanent easement may be necessary (see section 7).

5.2.4.2 Southern Willow Scrub

This scrub is composed of willow thickets (*Salix* spp.) or sometimes mulefat thickets. About 2 acres would be affected at stream crossings with most along the tributary to San Antonio Creek. Specific mitigation measures are the same as for southern cottonwood-willow riparian forest.

Creation and management of similar habitats off site at an acre-per-acre (1:1) ratio to replace lost southern willow scrub ecological communities will be necessary if the scrub is kept cleared in the permanent easement (see section 7).

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5.2.4.3 Central Coast Live Oak Riparian Forest

Coast live oak dominates this forest type with a grassy understory that includes coyote bush, mugwort (*Artemisia douglasiana*), creeping snowberry (*Symphoricarpos mollis*), and poison oak. About 1 acre would be affected at unnamed AZ and Zanja de Cota Creek. Specific mitigation measures will be the same as for southern cottonwood-willow riparian forest. Individual oak trees lost, however, will be replaced at a ratio to result in establishment of 5 saplings (after 5 years) for each one lost. Number of acorns to be collected and planted will be determined.

Creation and management of similar habitats off site at an acre-per-acre (1:1) ratio to replace lost central coast live oak riparian forest ecological communities in the permanent easement will be necessary (see section 7).

5.2.5 Marsh

This plant community is a permanently flooded, freshwater site, dominated by perennial monocots. In addition, seasonal marshes having soils that are saturated for at least part of the year and supporting perennial and annual wetland plants are present at several of the drainages. Several small marshes occur in swales at mile 0.5, 1.3, and Zanja de Cota Creek and between 5.2 and 5.7, and 15.7 and 17.0. Less than 1 acre would be affected.

Specific mitigation measures to be used include:

- Wetland soils will be removed in 18 inch deep "lifts" and stored intact at the locations indicated on the drawings and specifications. The soil will be kept moist. Following construction, the area will be recontoured and the hydrology will be restored. Then the lifts of wetland soil will be replaced in reverse order of removal. These areas will not be reseeded to maintain present species assemblages, but will be monitored for weeds.
- If natural vegetation does not survive, seed and plugs of wetland plants will be collected from the local area and planted at the site. Mitigation will not be complete until the wetland vegetation is restored.
- The construction corridor will be narrowed to the extent feasible (50 feet minimum) through this community. Monetary incentives will be given to the contractors to minimize impacts to this habitat.

- Restored sites will be monitored for weeds annually. All weeds will be removed by hand, although spraying with herbicides known to be environmentally safe in this habitat may be permitted for heavy weed infestation upon approval of and under the direction of a biologist. The site will be considered restored when the diversity, cover, and species composition is approximately equal to preconstruction conditions, and weedy vegetation does not occur at higher levels than it does at nearby wetlands that are not disturbed.

5.2.6 Oak Woodlands

5.2.6.1 Coast Live Oak Woodland

This community is dominated by coast live oak. Associated species include annual grasses, toyon (*Heteromeles arbutifolia*) and poison oak. About 25 acres would be affected. Specific mitigation measures will include:

- Where feasible, flag an exclusion zone 6 feet beyond the canopy dripline of individual mature trees not scheduled for removal. Vehicular access and disturbance of topsoil will be prohibited within this zone. Where an exclusion zone of this size is not feasible, damage to the tree shall be minimized through pruning limbs and sealing of cut surfaces, including roots under direction of the environmental monitors.
- Remove, store, and replace topsoil as described in the Mitigation Program.
- Seal all roots over 1 inch in diameter after cleanly cutting on day of cutting.
- Collect acorns along the corridor for direct planting and for growing oak seedlings in a nursery to replace trees lost. The density of oak trees will be increased within areas sparsely populated by oaks near the construction ROW, and trees will be replanted in the construction easement and in a portion of the permanent easement (excluding the area directly over the pipeline). The planting ratio will depend on the methods used, but a minimum of 5 saplings established after 5 years will be obtained for each tree lost during construction.
- In revegetated areas, plant understory species specific to each area cleared as specified in the technical manuals.

- Monitor revegetated areas and implement remedial actions (as necessary) until woodland becomes established at levels specified in restoration criteria.
- Trees cut inside the construction corridor shall be left intact at the edge of the construction corridor as dead fall after cutting, except where this would create a fire hazard, or mulched for use in root protection and revegetation. Cut trees shall not be placed in a pile but left individually. The stumps of trees outside the permanent corridor shall not be killed with herbicides but allowed to sprout and grow.

Creation and maintenance of this habitat off site (outside the permanent easement) at an acre-per-acre (1:1) ratio may be necessary to replace losses within the permanent easement (see section 7).

5.2.6.2 Valley Oak Woodland

Valley oak (*Quercus lobata*) dominates this open woodland. About 1 acre would be affected. Specific mitigation measures will be as described for coast live oak woodland.

5.2.7 Forests

5.2.7.1 Coast Live Oak Forest

This closed-canopy forest is dominated by coast live oak. About 3 acres will be affected. Specific mitigation measures will be as described for coast live oak woodland.

5.2.7.2 Introduced Forest

Stands of introduced tree species, particularly gum (*Eucalyptus* spp.) have been planted as windbreaks and for landscaping. Approximately 2 acres would be removed. This loss is not a significant impact, and no mitigation is recommended.

5.2.8 Special Vegetation Types

Native bunchgrass habitats and areas of significant wildflower displays will be included in this mitigation plan because of the uniqueness of these resources.

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5.2.8.1 Native Bunchgrass

Native grasslands are generally dominated by *Stipa* spp. (needlegrass), although bentgrass (*Agrostis hooveri*) is also locally common in Burton Mesa chaparral areas. This vegetation type, because of its scarcity, is listed by the CNPS as a sensitive habitat; it is also considered an Environmentally Sensitive Habitat by Santa Barbara County. Several significant stands of native perennial bunchgrass were noted during field surveys, particularly on Vandenberg AFB and along Highway 246 in the vicinity of La Purisima Golf Course.

Mitigation measures that will be enacted at these sites are:

- Collect bunchgrass plugs from the corridor prior to construction.
- Vegetate restored site with suitable locally collected seed mix; plant with bunchgrass plugs and irrigate as necessary.
- Monitor restored sites, conduct active weed control (including removal of nonnative grasses), and perform remedial actions (as necessary) until native grasses become established at preestablished density.

5.2.8.2 Wildflowers

Several sites of extraordinary wildflower displays were noted and mapped during spring surveys. While not considered biologically sensitive, mitigation for these sites will be revegetation of the restored site with a seed mix containing the flowering species that were originally present as can be obtained commercially or collected in the local project area.

5.2.9 Wetlands and Waters of the United States

The project will impact wetlands and water bodies that are within the jurisdiction of the U.S. Army Corps of Engineers (USACE). Nationwide permit verifications for utility line backfill and bedding, bank stabilization, and minor discharges into waters of the United States appear applicable for the crossings proposed. Obtaining nationwide permit verifications may require actions that would minimize adverse effects of discharges of fill material to biological resources such as:

- Appropriate erosion and siltation controls must be used and maintained in effective operating condition during construction, and all exposed soil and other fill must be permanently stabilized at the earliest practicable time.

- No activity may substantially disrupt the movement of those species of aquatic life indigenous to the water body, including those species which normally migrate through the area.
- Heavy equipment working in wetlands (e.g., at Zanja de Cota Creek) must be placed on mats, or other measures must be taken to minimize soil disturbance.
- Discharges into breeding areas for migratory waterfowl shall be avoided.
- No activity is authorized which is likely to jeopardize the continued existence of a threatened or endangered species or a species proposed for such designation as identified under the federal Endangered Species Act or which is likely to destroy or adversely modify the critical habitat of such species.

The mitigation measures presented in this plan meet the requirements of these conditions. Appendix B lists the wetlands and water bodies of the United States for which nationwide permit verifications from the USACE would be appropriate for project construction.

Streams are also under the jurisdiction of CDFG, and a Streambed Alteration Agreement will be required for all crossings to be trenched. Specific conditions to minimize impacts and for restoration after construction will be included in this agreement.

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6.0 AFFECTED SENSITIVE BIOLOGICAL RESOURCES BY FACILITY

6.1 INTRODUCTION

This section presents biological resources that may be significantly impacted and are found or potentially found within the construction ROW for the Mission Hills and Santa Ynez extensions (including stream crossings) and at each permanent pipeline-related facility, new access roads and powerlines, and temporary construction staging areas. Also included are two areas of Burton Mesa chaparral within the Coastal Branch (at Tank 5 and near Nipomo). Construction reaches corresponding to the segments for which construction contracts will be awarded have not been established at this time, so information is given for the entire route. Table 6-1 lists vegetation types and sensitive resources. By referring to the information presented in sections 4 and 5, a comprehensive mitigation plan for biological resources within each of the extensions results. The project maps (scale of 1 inch = 100 feet) will show the specific mitigation measures required along the ROW.

The list of sensitive wildlife and plant species in this section has been revised based on results of the 1993 preconstruction surveys. In addition, the status of several species has changed.

6.2 PIPELINE CORRIDOR

The Mission Hills/Santa Ynez Extension begins at the terminus of the Coastal Branch, Phase II at Tank 5 on Vandenberg AFB and extends approximately 42.5 miles to Lake Cachuma. Table 6-1 lists the vegetation types and sensitive resources for which significant environmental impacts could occur within the construction easement (nominally 100 to 120 feet wide) and the section of the report that discusses mitigation measures. Avoidance of impacts has been incorporated into the project design to the extent feasible.

Mitigation will focus on riparian/wetland habitats, oak woodlands, and Burton Mesa chaparral. These habitats include most of the sensitive plant and wildlife species such as (1) the state-listed willow flycatcher and seaside bird's beak, and (2) the red-legged frog and southwestern pond turtle that are category 1 candidates for federal listing. CESA consultation will be required for the state listed species, and a "take" permit may be necessary for the seaside bird's beak (if present in the corridor). ESA consultation may be necessary for the federally listed (endangered) bald eagle and unarmored threespine stickleback. Neither species would be affected by the project as currently designed and with implementation of the mitigation measures included in this plan.

Table 6-1

**MISSION HILLS/SANTA YNEZ EXTENSION
SUMMARY OF VEGETATION IMPACTS AND LOCATIONS OF POTENTIAL IMPACTS
TO SENSITIVE SPECIES**

| VEGETATION TYPE | REPORT SECTION | ACRES |
|--|---|-------|
| Agricultural/Disturbed | NA | 288 |
| Grassland | 5.2.1 | 164 |
| Southern willow scrub | 5.2.4.2 | 2 |
| Marsh | 5.2.5 | 1 |
| Coast live oak forest | 5.2.7.1 | 3 |
| Coast live oak woodland | 5.2.6.1 | 25 |
| Chaparral | 5.2.2 | 48 |
| Venturan coastal sage scrub | 5.2.3 | 41 |
| Central coast scrub | 5.2.3 | 20 |
| Southern cottonwood-willow riparian forest | 5.2.4.1 | 2 |
| Central coast live oak riparian forest | 5.2.4.3 | 1 |
| Valley oak woodland | 5.2.6.2 | 1 |
| Introduced forest | 5.2.7.2 | 2 |
| SENSITIVE WILDLIFE (SECTION 4.2) | | |
| | LOCATION (MILEPOST) | |
| Long-eared owl | potential at 35.5, 25.2(A) | |
| Tricolored blackbird | 17.2 | |
| American badger | sign 2-3, 23.5; potential in many locations | |
| Yellow warbler | 2-3, 3.2, 25.5(A), 28.4, 35.5, 41.9 | |
| Southwestern willow flycatcher | potential at 3.2, 25.5(A) | |
| Yellow-breasted chat | 3.0, 3.2, 28.4, 35.5, 25.5(A) | |
| California horned lizard | potential at 0-11 | |
| Southwestern pond turtle | 3.2, 20.5, 42; potential at 17.2, 25.5(A), 35.5 | |
| California red-legged frog | potential at 3.2, 17.2, 20.5, 35.5 | |
| Unarmored threespine stickleback | 3.2 | |
| California tiger salamander | 20.5 | |
| Cooper's hawk | potential at 0-11, 20.4, 35.5, 25.5(A) | |
| Bald eagle | 42.5 | |
| SENSITIVE PLANTS (SECTION 4.3) | | |
| | LOCATION (MILEPOST) | |
| Shagbark manzanita | 0-0.3, 5.6-5.7, 8.8-10.0 | |
| Seaside bird's beak | potential at 10.1-11.1 | |
| Hoover's bentgrass | 10.1 | |
| Parry's delphinium | 4.6; potential at 9.5-11.0 | |
| Black-flowered figwort | 0.7; potential at 9.5-11.0 | |
| Purisima manzanita | 0.0-0.3, 6.9-7.3, 7.6-8.6, 9.0-9.8, 10.1-11.0 | |

Note:

A number of realignments have been made to reduce impacts, and these have been surveyed for sensitive species during the appropriate seasons in 1993. Alternative route locations are indicated by (A).
Chaparral includes 12.8 acres in the Coastal Branch; all but 2.5 acres is Burton Mesa chaparral.
Acres impacted are based on maps at 1:24,000 and the pipeline route as of May 1993. More accurate values will be available once the preconstruction survey data are entered into the computer at a scale of 1" = 100' and all segments of the pipeline are set.

Vegetation along the ROW is dominated by agriculture and nonnative grassland. Scrub (Venturan coastal sage and central coast), chaparral, and oak woodlands are also important components. Scrub and grassland communities provide habitat for sensitive species such as American badger, tricolored blackbird, and black-shouldered kite. Chaparral and scrub habitats with sandy soils support populations of the California horned lizard while wetlands provide habitat for southwestern pond turtles and the California tiger salamander. Measures to minimize the area disturbed and to restore vegetation to preconstruction conditions (as close as feasible) will be necessary throughout the pipeline corridor.

6.3 TEMPORARY CONSTRUCTION FACILITIES

Sixteen staging areas are planned for the pipeline.

- **PICNIC GROUNDS** (staging area number 1). An area of 300 feet by 580 feet at mile 0.8 would be used for staging in non-native grassland interspersed with coastal sage scrub. The California horned lizard could be present.
- **SAN ANTONIO ROAD STAGING AREA** (staging area number 2). This site (300 feet by 625 feet) is in an agricultural field at mile 3.3. No sensitive species are present.
- **SANTA LUCIA CREEK STAGING AREA** (staging area number 3). This site is 300 feet by 725 feet located at mile 6.5 in a mosaic of grassland and scrub adjacent to an agricultural field. No sensitive species are present.
- **VANDENBERG VILLAGE STAGING AREA** (staging area number 4). An area of about 300 feet by 600 feet will be used for staging. It is located in grassland, and the California horned lizard could be present.
- **HARRIS GRADE ROAD STAGING AREA** (staging area number 5). An area of 300 feet by 600 feet in grassland periodically disked for fire control at mile 11.5 will be used for staging. This is potential habitat for the American badger.
- **HIGHWAY 246 #1 STAGING AREA** (staging area number 6). This staging area is located at mile 14.6. An area of 300 feet by 800 feet in an agricultural field will be used. No sensitive species are present.

- **HAPGOOD ROAD STAGING AREA** (staging area number 7). At mile 18.7, an area that is approximately 375 feet by 450 feet (nearly triangular) will be used for staging. This is in an agricultural field with no sensitive species present.
- **DRUM CANYON ROAD STAGING AREA** (staging area number 8). An area of 300 feet by 600 feet at mile 22.2 will provide space for staging equipment and supplies. The site is in an agricultural field, and no sensitive species are present.
- **TANK 7 STAGING AREA** (staging area number 9). A staging area of 400 feet by 400 feet will be needed for Tank 7 construction. It is located in grassland at mile 23.6. This area is potential habitat for American badgers.
- **SANTA YNEZ RIVER** (staging area number 10). This staging area of approximately 300 feet by 600 feet is associated with the alternative route. It will be located in agricultural fields adjacent to the Santa Ynez River (one or both sides of the river). No sensitive species are expected in this area.
- **BUELLTON TURNOUT STAGING AREA** (staging area number 11). The Buellton turnout is located at mile 27.1 in an agricultural field with no sensitive species present. The staging area is 300 feet by 500 feet. It will not be needed if the alternative route is selected.
- **BUELLTON BRIDGE STAGING AREA** (staging area number 12). The western river crossing has been placed on Avenue of the Flags bridge, and the associated staging area (200 feet by 870 feet) is located on the south side of the river at mile 28.9; it will be in an agricultural field with no sensitive species present. If the alternative route is selected, this staging area will be moved to an agricultural field along Santa Rosa Road.
- **GRANITE PROPERTY STAGING AREA** (staging area number 13). This triangular staging area (3.2 acres) is located in a fallow field (weedy grassland) at mile 29.7. No sensitive species are present.
- **ALISAL BRIDGE STAGING AREA** (staging area number 14). This staging area will also serve the Solvang turnout. It is located at mile 32.5 in an area of maintained grassland. The dimensions are 200 feet by 1,000 feet. No sensitive species are present.

- **REFUGIO ROAD STAGING AREA** (staging area number 15). Located in an agricultural field at mile 34.6, this staging area is 300 feet by 600 feet.
- **ID#1 STAGING AREA** (staging area number 16). This staging area of 300 feet by 600 feet is at mile 37.5 in grassland that is potential habitat for the American badger.
- **CACHUMA DISCHARGE STAGING AREA** (staging area number 17). The specific size and shape of these two staging areas at mile 42 and 42.3 have not been determined at this time. Approximately 4 acres is necessary. It would be in grassland, scrub, and disturbed habitats, possibly with some oak and sycamore trees that would not be disturbed. No sensitive species are expected.

In addition, a staging area of 2.4 acres will be associated with the Tank 5 site at the terminus of the Coastal Branch. This site is in Burton Mesa chaparral and contains potential habitat for the California horned lizard, American badger, and several sensitive plant species.

6.4 PERMANENT FACILITIES

The project contains the following permanent project facilities:

- **TANK 5 AND ACCESS ROAD.** This site of 400 feet by 600 feet (5.5 acres) is located in Burton Mesa chaparral. It is potential habitat for the California horned lizard, American badger, and several sensitive plant species (e.g., sand mesa manzanita and Purisima manzanita).
- **VANDENBERG AFB TURNOUT.** The turnout, at mile 4.0, would require clearing 0.01 acre of weedy grassland and possibly shrubs. The California horned lizard could be present.
- **TANK 7 AND ACCESS ROAD.** The tank site (2.5 acres) would be located in grassland at mile 23.5. A short access road (about 1,000 feet long) will be through grassland. This is potential habitat for the American badger.
- **BUELLTON TURNOUT.** The Buellton turnout is in an agricultural field adjacent to State Route 246 at mile 27.3. If the alternative route is selected, the turnout will be located at Santa Rosa Road south of the Avenue of the Flags bridge. The area affected will be 0.01 acre. No sensitive species are present.

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- **SOLVANG TURNOUT.** The turnout for Solvang is located on the west side of Alisal Road at mile 32.4. About 0.01 acre of disturbed habitat would be affected with no sensitive species present.
- **SANTA YNEZ TURNOUT.** The Santa Ynez turnout (0.01 acre) is located in grassland at mile 34.2 in potential American badger habitat.
- **SANTA YNEZ PUMPING PLANT, DECHLORAMINATION STATION, AND MAINTENANCE FACILITY.** About 6.2 acres of agriculture at mile 34.7 would be used for these facilities. Alternative sites in grassland are also being considered. This was in potential American badger habitat prior to cultivation in 1993.
- **TERMINUS.** The Santa Ynez Extension will end in Lake Cachuma near the south abutment of Bradbury Dam. The terminus will be a diffuser located in the lake at a depth of about 100 feet below the maximum pool elevation. Bald eagles and several special concern bird species use the lake surface, but none are expected to be present where the terminus is to be constructed. Alternatively, the water may be discharged from the existing tunnel through Bradbury Dam.

6.5 STREAM CROSSINGS AND WETLANDS

The pipeline route crosses one perennial stream, San Antonio Creek, and numerous intermittent or ephemeral drainages including the Santa Ynez River. These habitats are characterized in Table 6-2 along with the sensitive species that may be present. The Campbell Road vernal pools and several ponds are located adjacent to the ROW, and several support sensitive species that could be affected indirectly. These are included in Table 6-2 as well.

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Table 6-2
STREAMS AND WETLANDS IN THE MISSION HILLS/SANTA YNEZ EXTENSION
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| <i>Site</i> | <i>Habitat</i> | <i>Description</i> | <i>Sensitive Species</i> |
|-------------|--------------------------------------|---|---|
| 35 | Unnamed ST (mi. 0.8, 1.6, 3.1) | Ephemeral tributary to San Antonio Creek; willow riparian zone sparse at crossings. | Yellow warbler and yellow-breasted chat between miles 2 and 3. |
| 1 | San Antonio Creek (mi. 3.2) | Perennial flow; willow scrub riparian zone; wetland along stream margin. | Yellow warbler, yellow-breasted chat, southwestern pond turtle, and unarmored threespine stickleback; potential habitat for southwestern willow flycatcher and red-legged frog. |
| 36 | Santa Lucia Creek (mi. 6.4) | Ephemeral flow; coastal sage adjacent; no wetlands. | None expected. |
| 2 | Unnamed A2 (mi. 9.1) | Ephemeral; oak woodland. | None expected. |
| 3 | Unnamed A (mi 10.1) | Intermittent flow; riparian willow woodland above and below pipeline corridor; scrub at crossing. | Seaside bird's beak potentially on adjacent uplands; black-flowered figwort possible. |
| 4 | Purisima Creek (mi 13.0) | Ephemeral; channelized | None expected. |
| 5 | Cebada Creek | No longer crossed. | |
| 6 | Unnamed B (mi 15.1) | Ephemeral; channelized | None expected. |
| 7 | Unnamed C2 (mi 15.5) | Ephemeral; no riparian vegetation | None expected. |
| 8 | Unnamed D2 (mi. 15.8) | Ephemeral; no riparian vegetation | None expected. |
| 9 | Unnamed D (mi 16.0) | Ephemeral; no riparian vegetation | None expected. |
| 10 | Unnamed PGC (mi. 16.3) | Ephemeral; no riparian vegetation | None expected. |

Table 6-2
STREAMS AND WETLANDS IN THE MISSION HILLS/SANTA YNEZ EXTENSION
 (page 2 of 4)

| <i>Site</i> | <i>Habitat</i> | <i>Description</i> | <i>Sensitive Species</i> |
|-------------|---------------------------------|--|--|
| 11 | Silt basin & pond (mi. 17.2) | Basin dries in summer; pond perennial; willows at basin, freshwater marsh around pond. | Tricolored blackbird. |
| 12 | Unnamed E (mi 17.6) | Ephemeral; channelized | None expected. |
| 13 | Unnamed F2 (mi. 18.3) | Ephemeral; sparse riparian scrub | None expected. |
| 14 | Unnamed F (mi 19.1) | Ephemeral; channelized with narrow riparian scrub | None expected. |
| 39 | Campbell vernal pools (mi 20.5) | Ephemeral; excavated (adjacent to corridor) | California tiger salamander (breeding); southwestern pond turtle; red-legged frog (potential). |
| 15 | Santa Rosa Creek (mi 22.3) | Ephemeral; sparse riparian vegetation | None expected. |
| 16 | Unnamed H (mi 23.4) | Ephemeral; sparse oak riparian. | None expected. |
| 17 | Unnamed PB4 (mi 23.7) | Ephemeral; little or no riparian scrub | None expected. |
| 18 | Unnamed PB2 (mi 23.9) | Ephemeral; some oak woodland | None expected. |
| 19 | Unnamed PB1 (mi 25.5) | Ephemeral; no riparian vegetation | None expected. |
| 20 | Cañada de la Laguna (mi 26.4) | Ephemeral; sparse oak/riparian woodland | None expected. |
| 21 | Unnamed I (mi 26.9) | Ephemeral; sparse oak woodland | None expected. |
| 23 | Zaca Creek (mi. 28.2) | Ephemeral; channelized with sparse riparian scrub. | None expected. |

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Table 6-2
STREAMS AND WETLANDS IN THE MISSION HILLS/SANTA YNEZ EXTENSION
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| <i>Site</i> | <i>Habitat</i> | <i>Description</i> | <i>Sensitive Species</i> |
|-------------|-------------------------------|--|--|
| 22 | Santa Ynez River (mi 28.9) | Intermittent; riparian and willow scrub sparse adjacent to bridge. | Yellow warbler and yellow-breasted chat. |
| 24 | Nojoqui Creek (mi 29.3) | Intermittent; disturbed with sparse riparian scrub | None expected. |
| 25 | Unnamed J (mi 31.4) | Ephemeral; sparse oak woodland | None expected. |
| 26 | Santa Ynez River (mi 32.4) | Intermittent; sparse riparian scrub | None expected. |
| 27 | Alamo Pintado Creek (mi 33.2) | Intermittent; cottonwood-willow riparian forest | None expected. |
| 37 | Unnamed K2 (mi. 33.6) | Ephemeral; no riparian vegetation. | None expected. |
| 28 | Unnamed K (mi 34.2) | Intermittent; sparse riparian scrub; freshwater marsh | None expected. |
| 29 | Unnamed L (mi 34.9) | Ephemeral; disturbed, sparse oak woodland | None expected. |
| 30 | Zanja de Cota (mi 35.5) | Perennial pond; edge of well-developed willow/box elder riparian forest; wetland along banks | Yellow warbler and yellow-breasted chat; potential red-legged frog, southwestern pond turtle, Cooper's hawk, long-eared owl habitat. |
| 31 | Unnamed M (mi 36.2) | No longer crossed. | |
| 32 | Unnamed N (mi 36.2) | Intermittent; valley oak savanna; seasonal wetland in channel. | None expected. |
| 38 | Hilton Creek (mi 42) | Ephemeral; oak woodland on banks (may be avoided). | None expected. |

Table 6-2
STREAMS AND WETLANDS IN THE MISSION HILLS/SANTA YNEZ EXTENSION
 (page 4 of 4)

| <i>Site</i> | <i>Habitat</i> | <i>Description</i> | <i>Sensitive Species</i> |
|--|-------------------------------|---|--|
| | Lake Cachuma (mi 42.5) | Impoundment; riprap shore with sparse riparian scrub. | Bald eagles forage over lake; southwestern pond turtle. |
| Alternative route bypasses 19-22 but adds: | | | |
| 40 | Santa Ynez River (mi 25.5) | Intermittent. | Yellow warbler and yellow-breasted chat; potential southwestern willow flycatcher, southwestern pond turtle, California red-legged frog. |
| 41 | Three to four unnamed streams | Ephemeral (survey to be conducted July 1993). | None expected. |

Sources: BioSystems 1991; Hendrickson 1992; aerial photographs; field observations.

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7.0 ACQUISITION OF REPLACEMENT LANDS

7.1 INTRODUCTION

Several ecologically important plant communities will be adversely affected by construction of the Mission Hills Extension and Santa Ynez Extension, and not all of these impacts can be fully mitigated through on-site restoration. Off-site replacement through preservation or enhancement of disturbed sites will be necessary to compensate for losses of sensitive vegetation from:

- permanent facility sites;
- areas kept clear for pipeline inspection and facility maintenance

The acreages necessary will be determined through consultations with regulatory and resource management agencies.

The following sections present the proposed methods to:

1. Determine the amounts of various vegetation types to acquire.
2. Propose the method for selecting appropriate replacement lands.
3. Describe the management plans to obtain the desired resource values.
4. Provide for CDFG and other appropriate agency review in the establishment and management of replacement lands.

7.2 DETERMINATION OF HABITAT ACREAGES TO ACQUIRE

Acreages of various sensitive vegetation types permanently lost can only be estimated at this time based on figures derived from planimetric analysis of project maps and assumptions concerning how much of each type could be restored on site. The actual amount of vegetation that will be permanently lost depends on several factors such as mitigation measures to narrow the ROW and avoid sensitive resources, success in corridor restoration, and the amount of cleared area required above the pipeline for inspection and maintenance considerations. Therefore, the acreages of each vegetation type to be replaced will be based on preconstruction and postconstruction surveys that will measure the actual acreages of impacted vegetation types.

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For planning purposes, planimetry of vegetation maps for the Mission Hills/Santa Ynez Extension has been used to estimate the amount of each sensitive vegetation type that could require off-site mitigation through a replacement program (see Table 7-1).

As noted in section 4, acquisition of lands to replace nonnative grasslands is not proposed as all temporarily impacted areas of grasslands, including the permanently cleared area above the pipeline, will be seeded with grasses and the amount of area of grassland permanently lost at facility sites is not significant considering the large amount of grassland in the project area. For Burton Mesa chaparral losses, restoration of degraded areas within the Unocal Preserve is being planned. Eradication of pampas grass from upwind areas is also being evaluated for partial mitigation of long-term impacts.

Approximately 20 acres may need to be replaced off site at a ratio of 1:1, assuming that restoration of most of the construction easement (120 feet wide) is feasible and that only a 20-foot wide clear zone will be maintained free of large trees. This estimate also does not take into consideration any additional tree planting within the permanent ROW. The amount of off-site replacement will depend on the actual loss, amount restored on site, and mitigation ratio required.

After preconstruction surveys and drawings and specifications have been completed, CCWA will prepare a Replacement Lands Report that will propose the amount of land to be purchased, by vegetation type, based on acreages of vegetation types permanently removed by project construction. The report will identify where the ROW will be narrowed or where the contractors will be given incentives to avoid sensitive vegetation and how much of the ROW will be restored after construction is completed. Acreages of land to be purchased to compensate for loss of threatened or endangered species habitat will be determined through consultation with appropriate regulatory agencies. Revisions to the report will be made if necessary after post-construction surveys are completed. The Replacement Lands Report will contain Notification of Proposed Acquisition Forms.

CDFG, USFWS, and other agencies with regulatory authority will review the Replacement Lands Report to determine if it meets the requirements of any agreements that may be entered into pursuant to this mitigation plan. After determining that the above requirements have been met, CCWA shall purchase the lands, or in the case of restoration, shall enter into a binding contract to ensure the long-term protection of the restored or enhanced habitat.

7.3 PROPOSED METHOD FOR SELECTION OF REPLACEMENT LANDS

Replacement lands will be acquired with the following criteria as guidance:

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Table 7-1

**ESTIMATED VEGETATION LOSSES (ACRES) AT PERMANENT FACILITY SITES
AND IN THE PIPELINE PERMANENT ROW**

| <i>Vegetation Type</i> | <i>Facility Sites</i> | <i>ROW¹</i> | <i>Total Permanent Loss</i> | <i>Off-Site Replacement²</i> |
|--|-----------------------|------------------------|-----------------------------|---|
| Burton Mesa chaparral ³ | 8 | 6.6 | 14.6 | 14.6 |
| Coast live oak forest | 0 | 0.5 | 0.5 | 0.5 |
| Coast live oak woodland | 0 | 4.2 | 4.2 | 4.2 |
| Valley oak woodland | 0 | 0.2 | 0.2 | 0.2 |
| Southern cottonwood-willow riparian forest | 0 | 0.3 | 0.3 | 0.3 |
| Central coast live oak riparian forest | 0 | 0.2 | 0.2 | 0.2 |
| TOTAL | 8 | 12.0 | 20.0 | 20.0 |

Notes:

1. Assumed 20-foot wide clear zone within permanent ROW.
2. Replacement ratio is 1:1.
3. Facility sites includes Tank 5 in the Coastal Branch. The ROW includes 5 acres within the Coastal Branch (3 acres near Tank 5 and 2 acres near Nipomo).

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- Suitability to provide the vegetative and habitat values that are to be replaced. Lands that can be restored and have had desired vegetative types removed or degraded by past activities that can be restored will be given preference over lands that would require vegetation type conversion or lands currently in the vegetation type desired. The rationale is to acquire lands that will yield the greatest mitigation value in terms of successfully replacing or restoring a vegetative type or habitat.
- Size and location of the lands. Additions to existing preserves or public land holdings will be given high consideration, as will lands that enlarge existing sensitive habitats and increase their habitat value. Lands located near the impacted lands that are to be replaced will also be a factor strongly considered.
- Price and availability of the lands will be an important factor considered.

7.4 MANAGEMENT PLANS

After purchase of the replacement lands or arrangement with the public entity administering public lands where replacement is proposed, CCWA will prepare management plans for each replacement situs that does not already have an adequate management plan. The management plans will contain:

- A description of the methods to establish the vegetation types on that situs.
- The short- and long-term maintenance requirements of the vegetation.
- A schedule for establishment and maintenance of vegetation types.
- Criteria to determine success of the management plans.
- Remedial actions to be taken if success criteria are not met.

Other considerations that do not conflict with the primary objective of providing replacement for project impacts, such as use of the lands for recreational or educational purposes, may be included in the management plans.

The management plans will be prepared in consultation with the CDFG, USFWS, and other agencies with regulatory authority, as appropriate.

| | |
|---------------|---------|
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7.5 CDFG, USFWS, AND OTHER AGENCY REVIEW

As appropriate, CDFG, USFWS, and other agencies with regulatory authority will review the following documents:

- Replacement Lands Report.
- Notification of Proposed Acquisition forms.
- Habitat Management Plans.

The exact role that CDFG will play in approval of any replacement plan activities shall be specified in the Management Agreement. Additional CDFG involvement in the replacement plan will be through the CESA processes.

7.6 SCHEDULE FOR REPLACEMENT PLAN

The schedule for enactment of the replacement plan is dependent on the final design, preconstruction biological surveys, and the construction schedule and, therefore, is presented in periods after construction contracts have been awarded. The reports or activities listed below may occur sooner than the given schedule.

The proposed schedule is:

| <u>Event</u> | <u>Months after Construction Contracts Awarded</u> |
|--------------------------------|--|
| Replacement Lands Report | 6 |
| Purchase of Lands ¹ | 18 |
| Management Plans | 24 |
| Enactment of Management Plans | ongoing |

Note 1. Or contract with County and state regarding Burton Mesa Preserve.

7.7 FINAL DISPOSITION OF THE LANDS PURCHASED BY CCWA

Where purchase of replacement lands occurs, CCWA has not yet determined the long-term disposition of the lands. Currently, CCWA has two options. The first option is to maintain ownership and manage the land as a natural preserve and component of the Mission Hills and Santa Ynez extension projects. The second option is to work out an agreement with a third party (CDFG, Santa Barbara County, or The Nature Conservancy, for example) to manage the area.

In the Management Plan for such lands, CCWA will specify how and by whom the lands will be managed.

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Appendix A
REVEGETATION TECHNICAL MANUALS

**These are in the process of being developed using literature data
and the information collected
during 1993 preconstruction field surveys.**

**The manuals will be for each vegetation type and for individual
species.**

| | |
|----------------------|-------------|
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Appendix B

WETLANDS AND WATERS OF THE UNITED STATES

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Table B
STREAMS AND WETLANDS IN THE MISSION HILLS/SANTA YNEZ EXTENSION
 (page 1 of 8)

| <i>Site</i> | <i>Habitat</i> | <i>Description</i> | <i>Sensitive Species¹</i> | <i>Mitigation Measures</i> |
|-------------|--------------------------------------|---|---|---|
| 35 | Unnamed ST (mi. 0.8, 1.6, 3.1) | Ephemeral tributary to San Antonio Creek; willow riparian zone sparse at crossings. | Yellow warbler and yellow-breasted chat from mile 2 to mile 3. | <ul style="list-style-type: none"> • Survey in spring to determine if sensitive birds are nesting and if so schedule construction for after young fledge (about mid-July). |
| 1 | San Antonio Creek (mi. 3.2) | Perennial flow; willow scrub riparian zone; wetland along stream margin. | Yellow warbler, yellow-breasted chat, southwestern pond turtle, and unarmored threespine stickleback; potential habitat for southwestern willow flycatcher and red-legged frog. | <ul style="list-style-type: none"> • Span or bore under creek. • Construct during dry season (1 Apr-1 Nov) • Erosion control measures • Survey in spring to determine if sensitive birds are nesting and if so schedule construction for after young fledge (about mid-July). |
| 36 | Santa Lucia Creek (mi. 6.4) | Ephemeral flow; coastal sage adjacent; no wetlands. | None expected. | |
| 2 | Unnamed A2 (mi. 9.1) | Ephemeral; oak woodland. | None expected. | |

Table B
STREAMS AND WETLANDS IN THE MISSION HILLS/SANTA YNEZ EXTENSION
 (page 2 of 8)

| <i>Site</i> | <i>Habitat</i> | <i>Description</i> | <i>Sensitive Species¹</i> | <i>Mitigation Measures</i> |
|-------------|----------------------------|--|---|--|
| 3 | Unnamed A (mi 10.1) | Intermittent flow; riparian willow woodland above and below pipeline corridor; scrub but no trees at crossing. | Seaside bird's beak potentially on adjacent uplands; black-flowered figwort possible. | <ul style="list-style-type: none"> • Survey during 1993 flowering period to determine if present. • If present, quantify numbers affected and collect seed for revegetation. |
| 4 | Purisma Creek (mi 13.0) | Ephemeral; channelized. | None expected. | |
| 5 | Cebada Creek | No longer crossed. | | |
| 6 | Unnamed B (mi 15.1) | Ephemeral; channelized. | None expected. | |
| 7 | Unnamed C2 (mi 15.5) | Ephemeral; no riparian vegetation. | None expected. | |
| 8 | Unnamed D2 (mi. 15.8) | Ephemeral; no riparian vegetation. | None expected. | |
| 9 | Unnamed D (mi 16.0) | Ephemeral; no riparian vegetation. | None expected. | |

Table B
STREAMS AND WETLANDS IN THE MISSION HILLS/SANTA YNEZ EXTENSION
 (page 3 of 8)

| <i>Site</i> | <i>Habitat</i> | <i>Description</i> | <i>Sensitive Species¹</i> | <i>Mitigation Measures</i> |
|-------------|---------------------------------|--|--------------------------------------|---|
| 10 | Unnamed PGC (mi. 16.3) | Ephemeral; no riparian vegetation. | None expected. | |
| 11 | Silt basin & pond (mi. 17.2) | Basin dries in summer; pond perennial; willows at basin, freshwater marsh around pond. | Tricolored blackbird. | <ul style="list-style-type: none"> • Schedule construction by pond for after nesting season (about 1 August) if possible; if not, maintain 20-foot buffer from pond. |
| 12 | Unnamed E (mi 17.6) | Ephemeral; channelized. | None expected. | |
| 13 | Unnamed F2 (mi. 18.3) | Ephemeral; sparse riparian scrub. | None expected. | |
| 14 | Unnamed F (mi 19.1) | Ephemeral; channelized with narrow riparian scrub. | None expected. | |

Table B
STREAMS AND WETLANDS IN THE MISSION HILLS/SANTA YNEZ EXTENSION
 (page 4 of 8)

| <i>Site</i> | <i>Habitat</i> | <i>Description</i> | <i>Sensitive Species¹</i> | <i>Mitigation Measures</i> |
|-------------|---------------------------------|---|--|---|
| 39 | Campbell vernal pools (mi 20.5) | Ephemeral; excavated portion is perennial; marsh and vernal pool vegetation (adjacent to corridor). | California tiger salamander (breeding); southwestern pond turtle; red-legged frog (potential). | <ul style="list-style-type: none"> • Construction during dry season (1 July-1 Nov). • Erosion control • Narrow construction corridor to 60 feet and fence to keep pond turtles and salamanders out. • Monitors present during trench excavation. • Restore site to preconstruction contours. • Design construction so that trench will not interrupt any ground-water flow to pools. • Move corridor to south side of Highway 246. |
| 15 | Santa Rosa Creek (mi 22.3) | Ephemeral; sparse riparian vegetation. | None expected. | |
| 16 | Unnamed H (mi 23.4) | Ephemeral; sparse oak riparian. | None expected. | |
| 17 | Unnamed PB4 (mi 23.7) | Ephemeral; little or no riparian scrub. | None expected. | |

Table B
STREAMS AND WETLANDS IN THE MISSION HILLS/SANTA YNEZ EXTENSION
 (page 5 of 8)

| <i>Site</i> | <i>Habitat</i> | <i>Description</i> | <i>Sensitive Species¹</i> | <i>Mitigation Measures</i> |
|-------------|-------------------------------------|---|---|--|
| 18 | Unnamed PB2 (mi 23.9) | Ephemeral; some oak woodland. | None expected. | |
| 19 | Unnamed PBI (mi 25.5) | Ephemeral; no riparian vegetation. | None expected. | |
| 20 | Cañada de la Laguna (mi 26.4) | Ephemeral; sparse oak/riparian woodland. | None expected. | |
| 21 | Unnamed I (mi 26.9) | Ephemeral; sparse oak woodland. | None expected. | |
| 23 | Zaca Creek (mi. 28.2) | Ephemeral; channelized with sparse riparian scrub. | None expected. | |
| 22 | Santa Ynez River (mi 28.9) | Intermittent; riparian and willow scrub sparse adjacent to bridge; wetland in low flow channel. | Yellow warbler and yellow-breasted chat. | <ul style="list-style-type: none"> Place pipeline on Avenue of the Flags bridge |
| 24 | Nojoqui Creek (mi 29.3) | Intermittent; disturbed with sparse riparian scrub. | None expected. | |
| 25 | Unnamed J (mi 31.4) | Ephemeral; sparse oak woodland. | None expected. | |
| 26 | Santa Ynez River (mi 32.4) | Intermittent; sparse riparian scrub; seasonal wetland in low flow channel. | None expected. | <ul style="list-style-type: none"> Place pipeline on Alisal Road bridge |

Table B
STREAMS AND WETLANDS IN THE MISSION HILLS/SANTA YNEZ EXTENSION
 (page 6 of 8)

| <i>Site</i> | <i>Habitat</i> | <i>Description</i> | <i>Sensitive Species¹</i> | <i>Mitigation Measures</i> |
|-------------|-------------------------------|---|--|--|
| 27 | Alamo Pintado Creek (mi 33.2) | Intermittent; cottonwood-willow riparian forest; seasonal wetland in channel. | None expected. | |
| 37 | Unnamed K2 (mi. 33.6) | Ephemeral; no riparian vegetation. | None expected. | |
| 28 | Unnamed K (mi 34.2) | Intermittent; sparse riparian scrub; freshwater marsh vegetation (wetland) in channel. | None expected. | |
| 29 | Unnamed L (mi 34.9) | Ephemeral; disturbed, sparse oak woodland. | None expected. | |
| 30 | Zanja de Cota (mi 35.5) | Perennial pond; edge of well-developed willow/box elder riparian forest; wetland along banks. | Yellow warbler and yellow-breasted chat; potential red-legged frog, southwestern pond turtle, Cooper's hawk, long-eared owl habitat. | <ul style="list-style-type: none"> • Preconstruction surveys to verify absence or presence of sensitive species. • If sensitive birds breeding in ROW, schedule construction for after young have fledged (mid-July). • If sensitive birds breeding in area, maintain 50-foot buffer between construction activity and nesting habitat. |

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Table B
STREAMS AND WETLANDS IN THE MISSION HILLS/SANTA YNEZ EXTENSION
 (page 7 of 8)

| <i>Site</i> | <i>Habitat</i> | <i>Description</i> | <i>Sensitive Species¹</i> | <i>Mitigation Measures</i> |
|--|-------------------------------|--|--|--|
| 31 | Unnamed M | No longer crossed. | | |
| 32 | Unnamed N (mi 36.2) | Intermittent; valley oak savanna; seasonal wetland in channel. | None expected. | |
| 38 | Hilton Creek (mi. 42.0) | Ephemeral tributary to Santa Ynez River; oak woodland on banks. | None expected. | <ul style="list-style-type: none"> • Span creek or avoid by using tunnel through Bradbury Dam. |
| | Lake Cachuma (mi 42.5) | Impoundment; riprap shore with sparse riparian scrub. | Bald eagles forage over lake; southwestern pond turtle. | <ul style="list-style-type: none"> • Construct terminus into lake in late summer (July to Nov) when few eagles are present. |
| Alternative route bypasses 19-22 but adds: | | | | |
| 40 | Santa Ynez River (mi 25.5) | Intermittent. | Yellow warbler and yellow-breasted chat; potential for southwestern willow flycatcher, southwestern pond turtle, and California red-legged frog. | <ul style="list-style-type: none"> • Bore under river. |
| 41 | 3 to 4 unnamed streams | Ephemeral (surveys to be conducted July 1993). | None expected. | |

Table B
STREAMS AND WETLANDS IN THE MISSION HILLS/SANTA YNEZ EXTENSION
 (page 8 of 8)

| <u>Note:</u> | <i>1. Sensitive species status:</i> | <i>Federal</i> | <i>State</i> |
|--------------|-------------------------------------|----------------|--------------|
| | Unarmored threespine stickleback | B | B |
| | Bald eagle | B | B |
| | Southwestern pond turtle | C1 | SSC |
| | Red-legged frog | C1 | SSC |
| | California tiger salamander | C2 | SSC |
| | Southwestern willow flycatcher | C1 | B |
| | Yellow warbler | . | SSC |
| | Yellow-breasted chat | . | SSC |
| | Tricolored blackbird | C2 | . |
| | Cooper's hawk | . | SSC |
| | Long-eared owl | . | SSC |
| | Black-flowered figwort | C2 | . |
| | Seaside bird's beak | C1 | B |

Federal Status (determined by U.S. Fish and Wildlife Service):

- B Listed as Endangered by the Federal Government.
- C1 Category I Candidate for Federal listing. U.S. Fish and Wildlife Service has sufficient biological information to support a proposal to list as Endangered or Threatened.
- C2 Information indicates that proposing to list these species is possibly appropriate, though more data on vulnerability and threat is necessary.

State Status

- B Listed as Endangered by the State of California.
- SSC California Department of Fish and Game "Species of Special Concern."

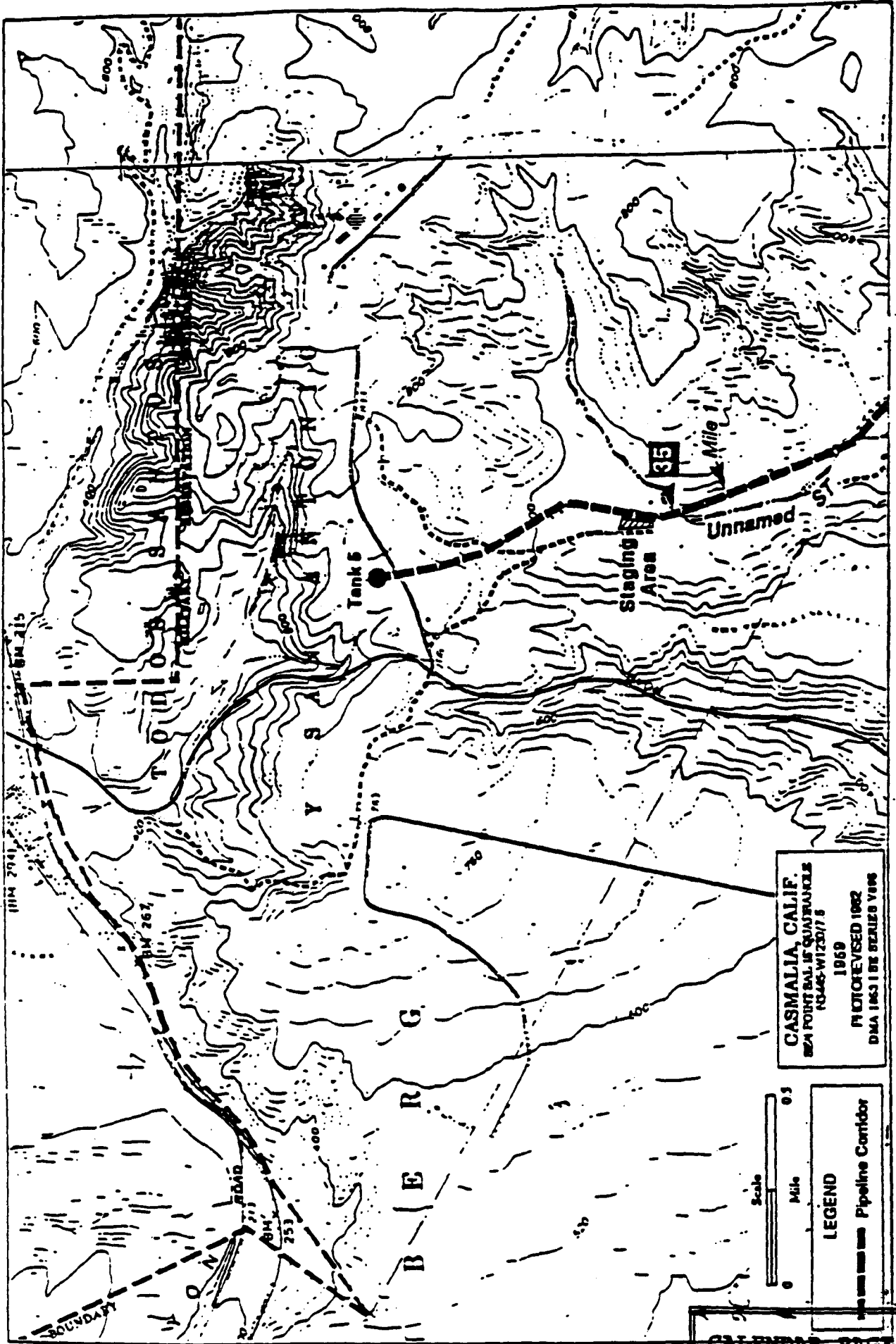
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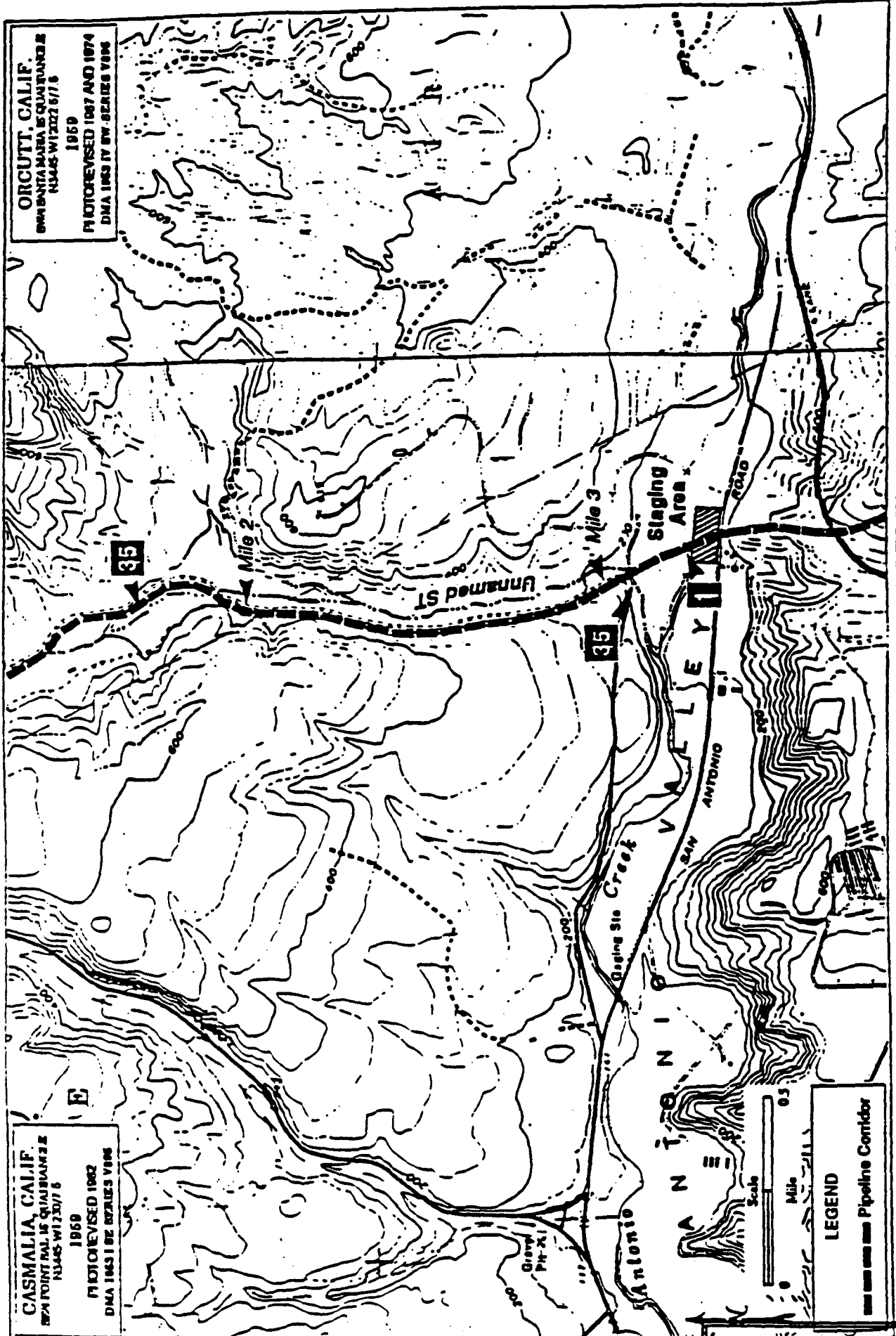
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Appendix C

**MAPS OF THE PIPELINE CORRIDOR
AND ASSOCIATED FACILITIES**

| | |
|----------------------|-------------|
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ORCUTT, CALIF.
 SAN ANTONIO VALLEY QUADRANGLE
 NS44S-W12E2 6/7 8
 1969
 PHOTOREVISED 1967 AND 1974
 DMA 1963 BY SW. SERIES 7096

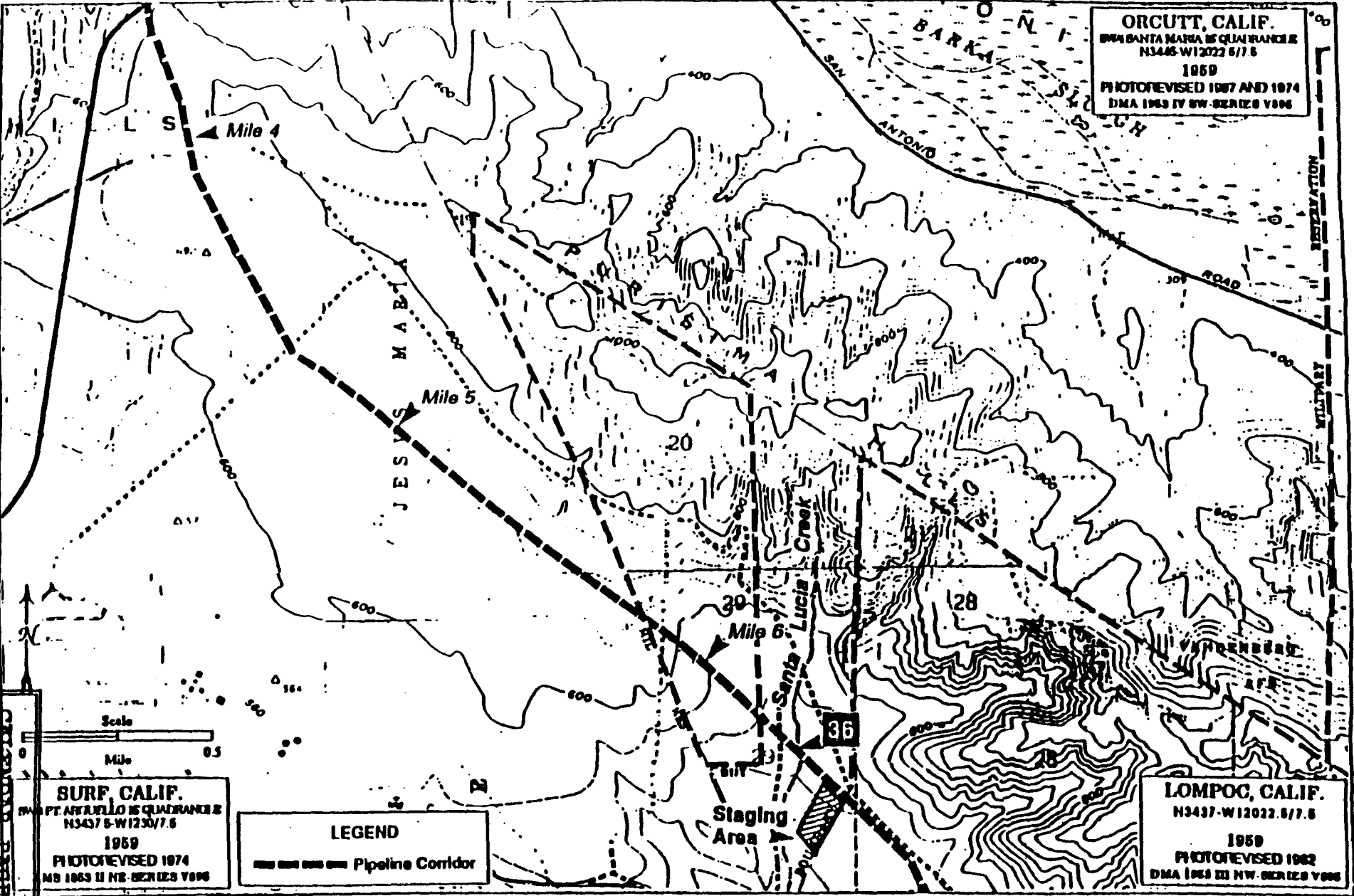
CASIMELIA, CALIF.
 SAN ANTONIO VALLEY QUADRANGLE
 NS44S-W12E2 6/7 8
 1969
 PHOTOREVISED 1967
 DMA 1963 BY SW. SERIES 7096

Scale
 Mile 0.5
 1000
 2000
 3000
 4000
 5000
 6000
 7000
 8000
 9000
 10000
 Feet

LEGEND
 Pipeline Corridor

Appendix C
 CCWA PIPELINE CORRIDOR

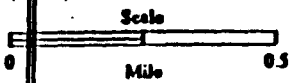
ORCUTT, CALIF.
 SW 1/4 SANTA MARIA IS QUADRANGLE
 N3445-W12022 6/7.5
 1959
 PHOTOREVISED 1987 AND 1974
 DMA 1963 IV NW-SERIES V896



LOMPOC, CALIF.
 N3437-W12022 6/7.5
 1959
 PHOTOREVISED 1982
 DMA 1963 III NW-SERIES V896

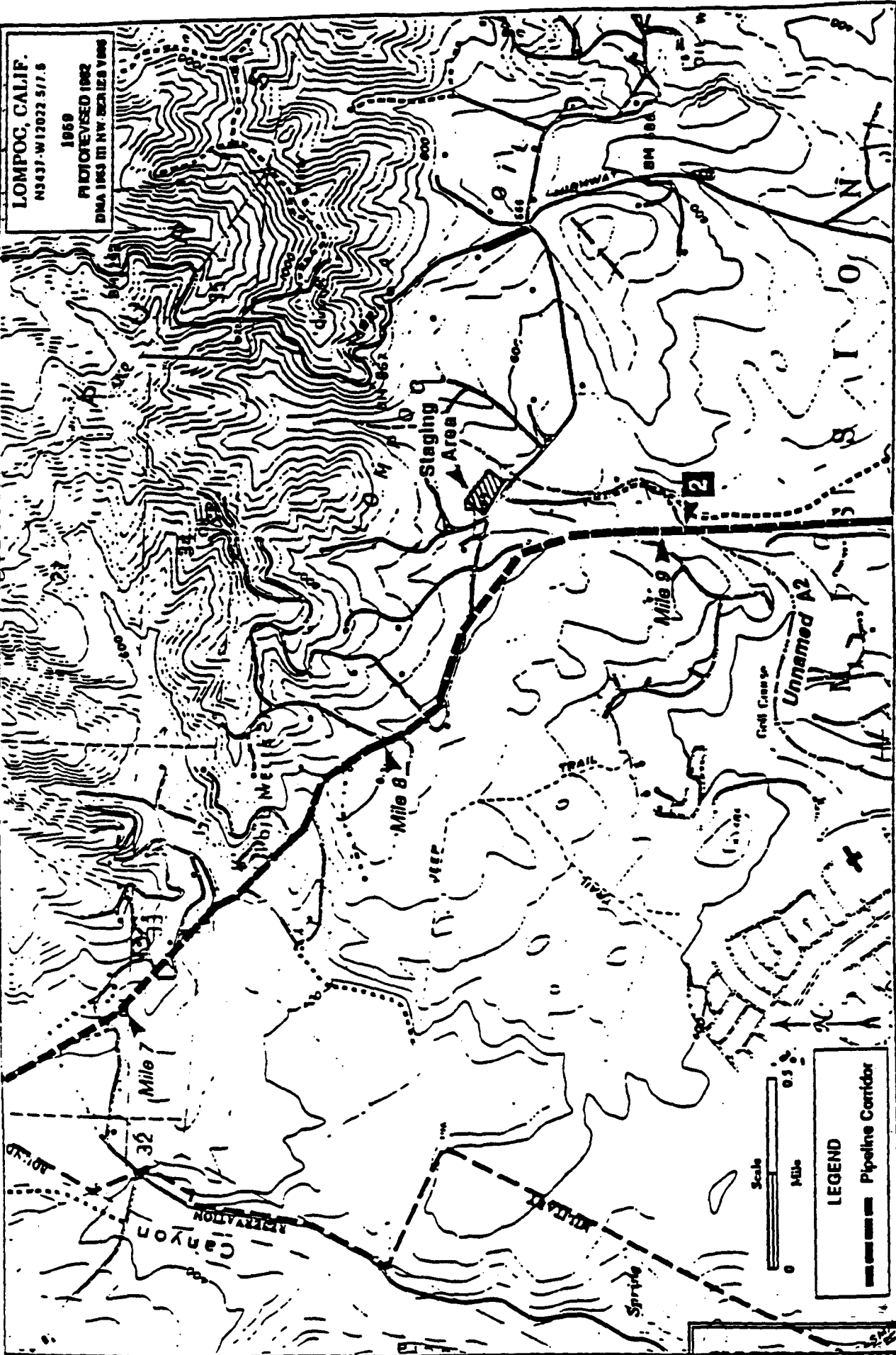
LEGEND
 ——— Pipeline Corridor

SURF, CALIF.
 SW 1/4 PT ANTONIO IS QUADRANGLE
 N3437 5-W1230/7.5
 1959
 PHOTOREVISED 1974
 MS 1963 II NE-SERIES V896



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Appendix C
CCWA PIPELINE CORRIDOR



LOMPOC, CALIF.
 N3437-W12022 5/7.8
 1969
 PHOTOYSED 1962
 DMA 1963 IN NY. BECALIA V1008

LEGEND
 Pipeline Corridor



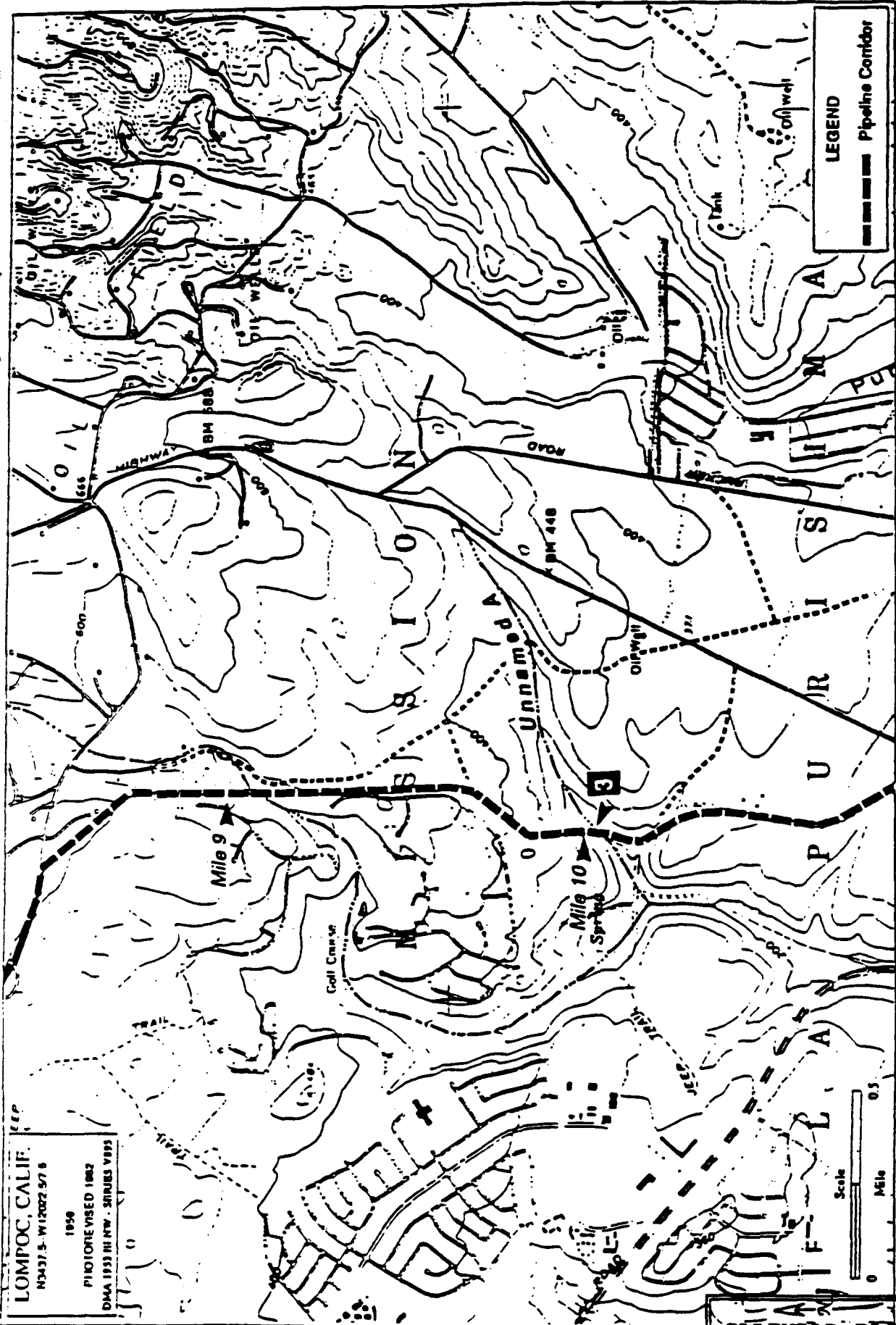
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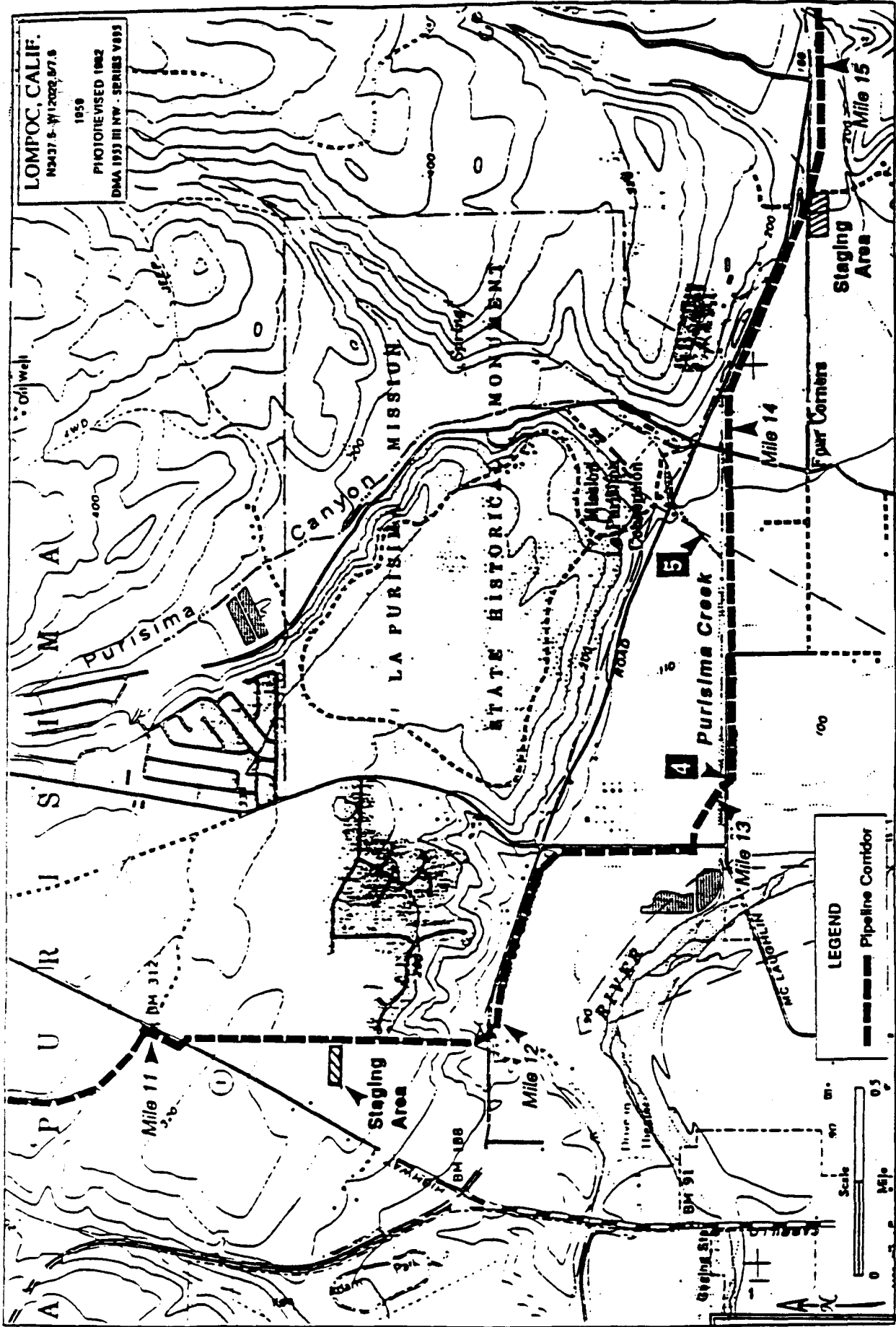
1398

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 CCWA PIPELINE CORRIDOR



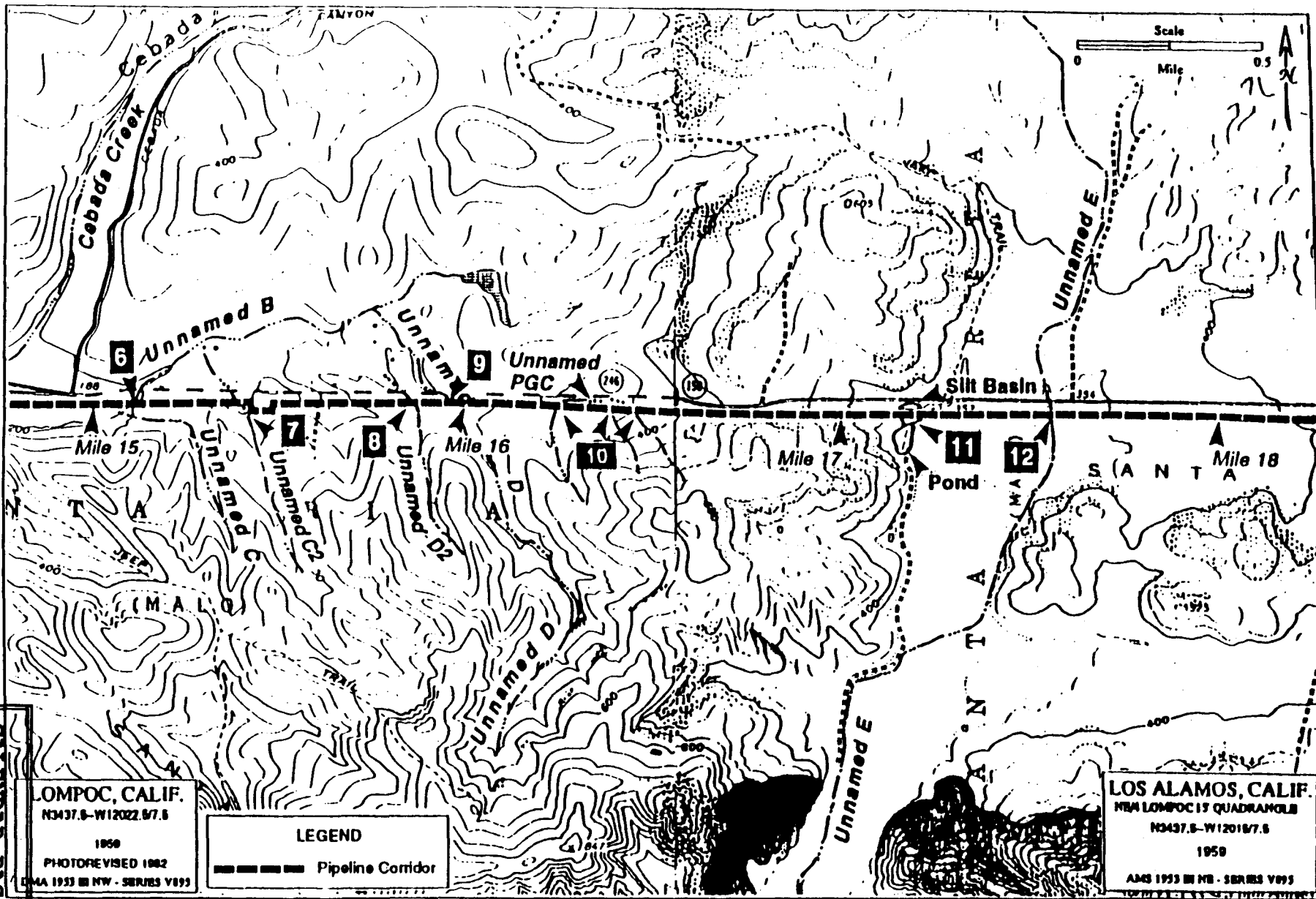
Appendix C

CCWA PIPELINE CORRIDOR



Appendix C

CCWA PIPELINE CORRIDOR



Appendix C

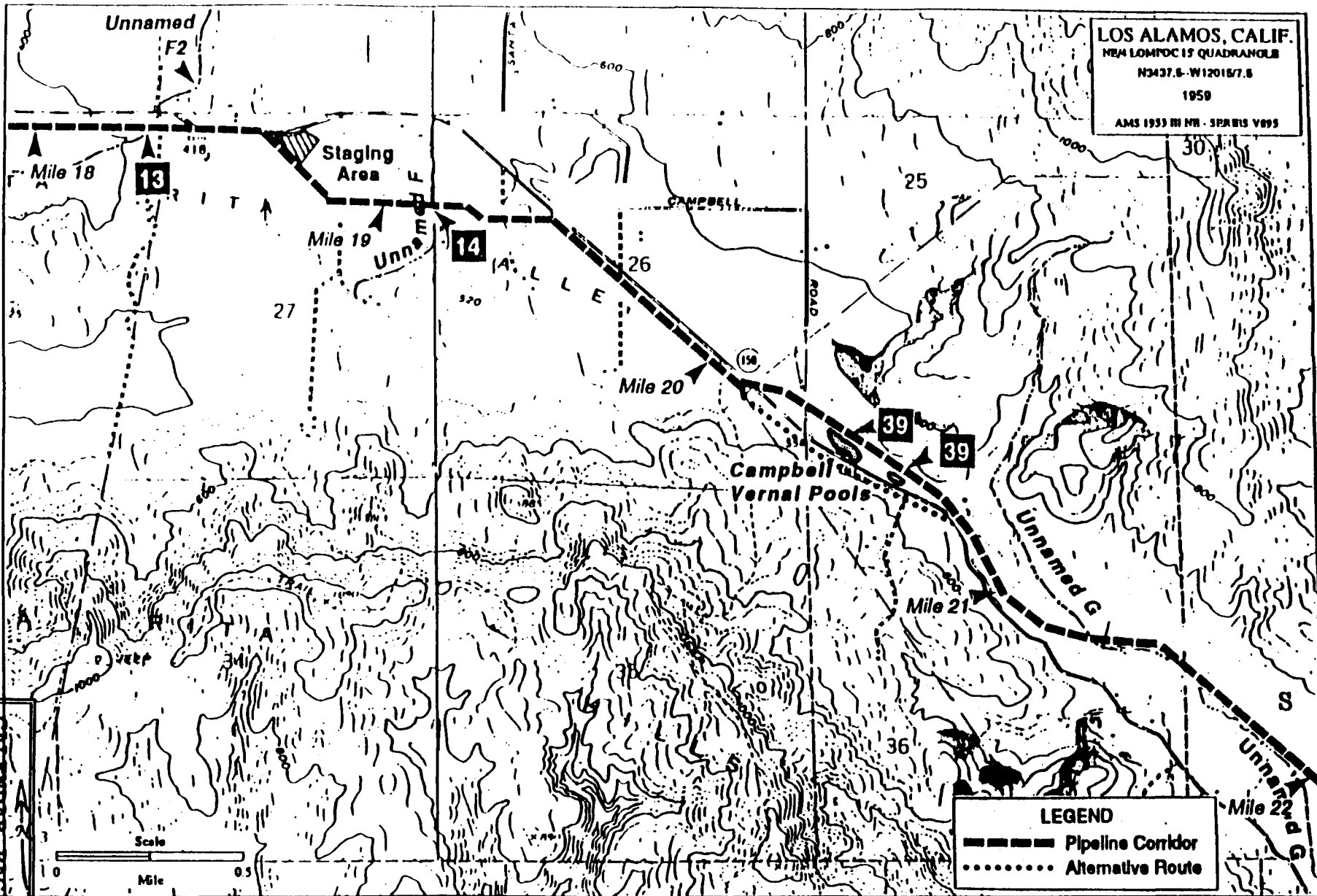
CCWA PIPELINE CORRIDOR

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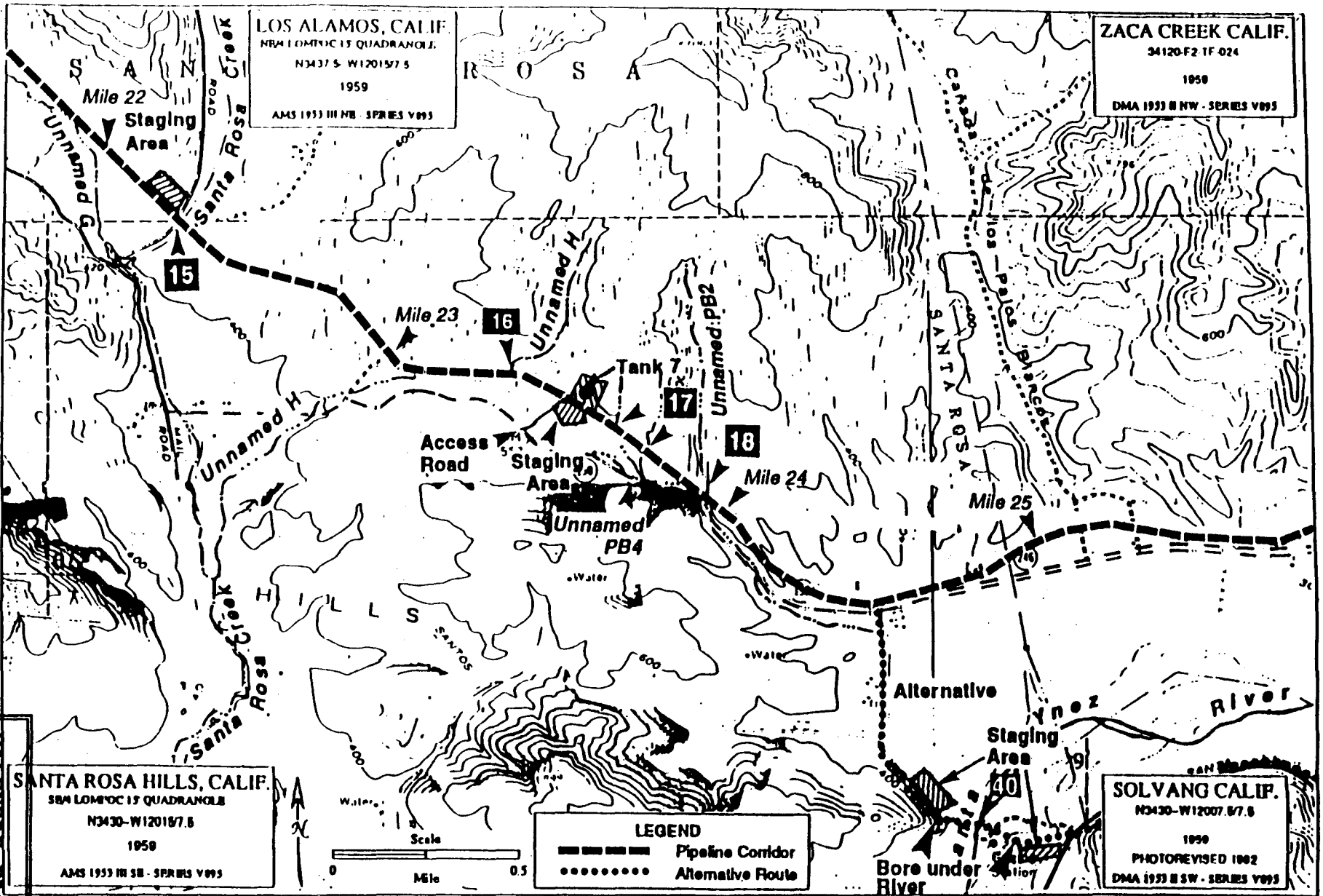
1401

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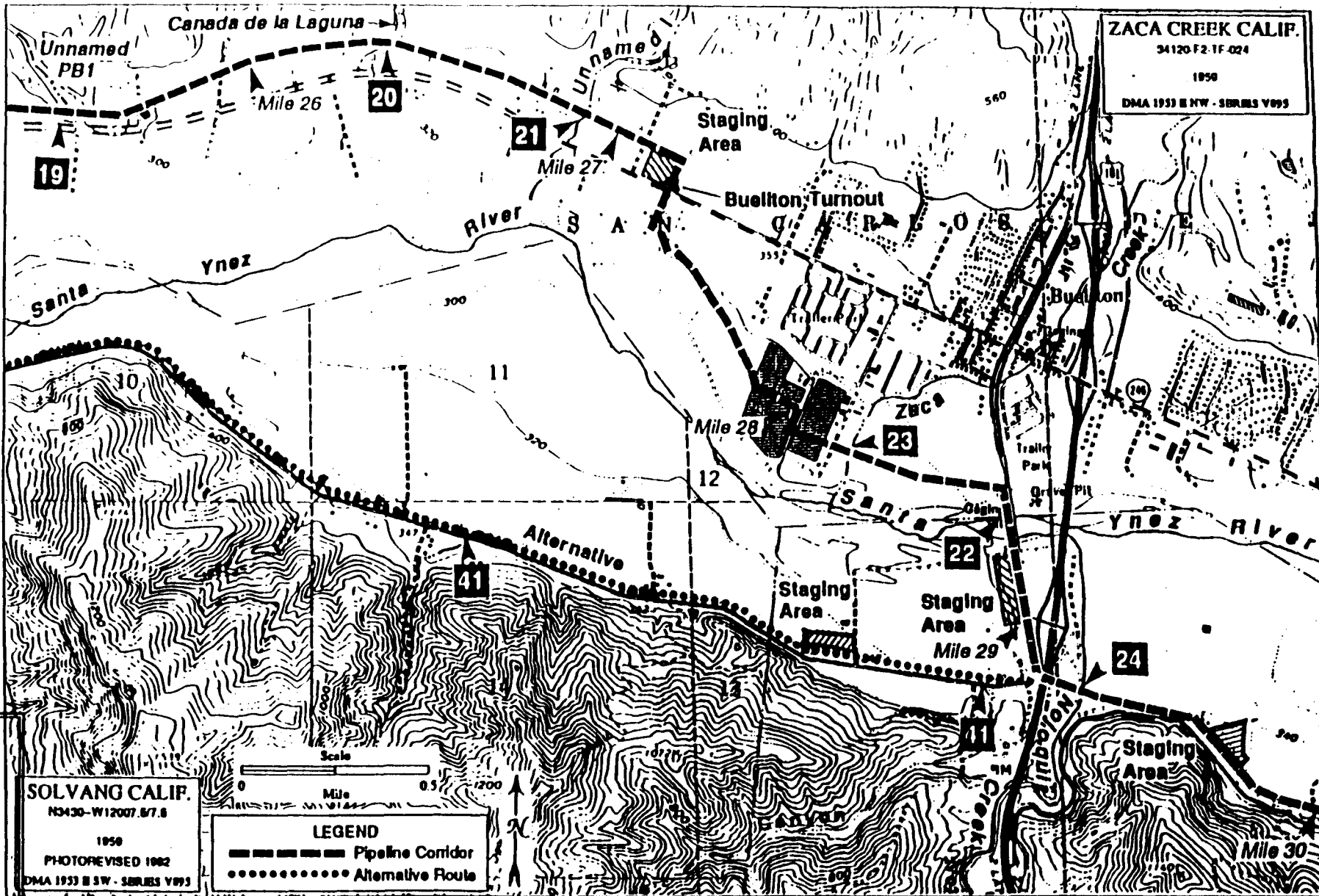


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 CCWA PIPELINE CORRIDOR

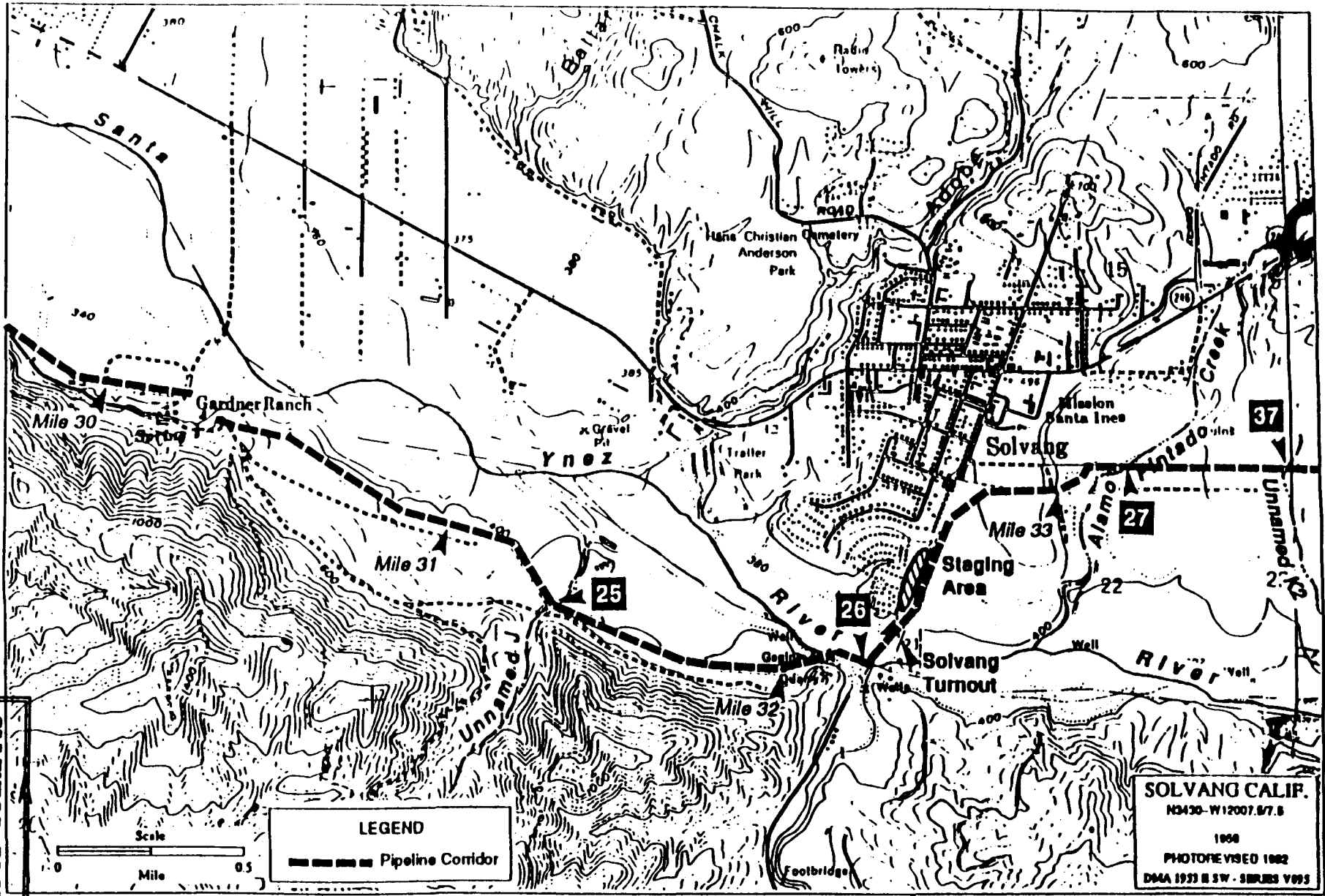


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CCWA PIPELINE CORRIDOR

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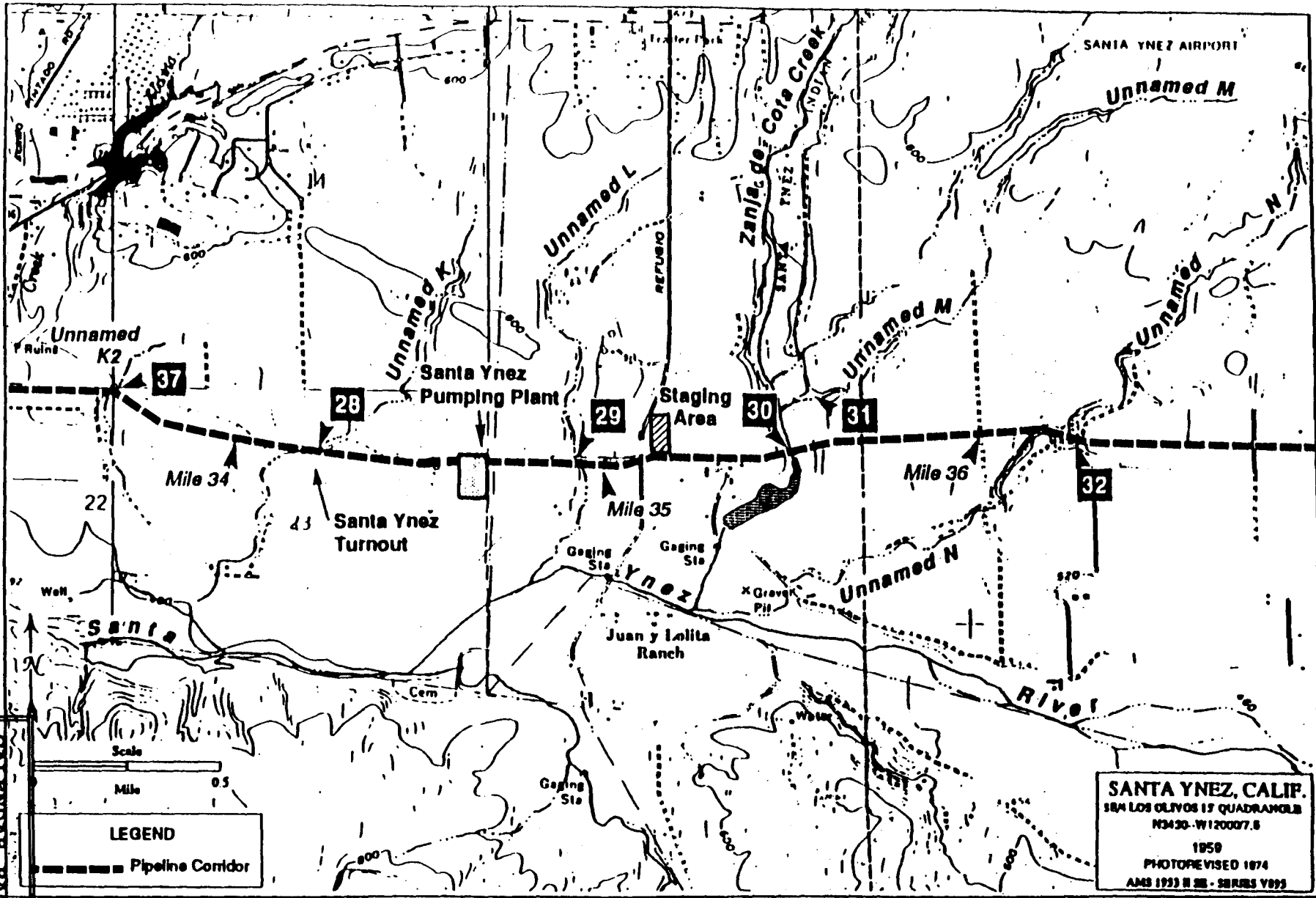


Appendix C
CCWA PIPELINE CORRIDOR



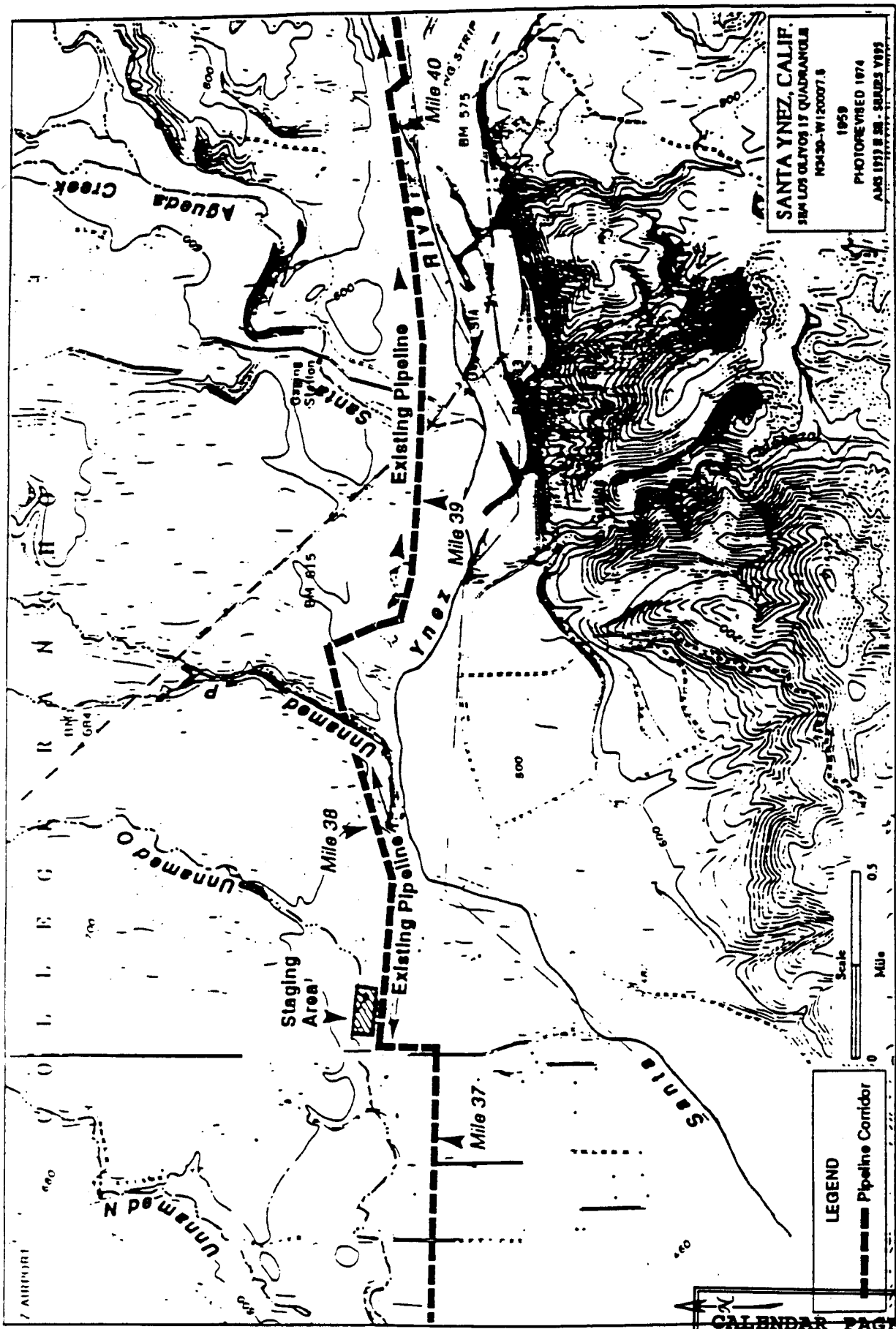
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Appendix C
 CCWA PIPELINE CORRIDOR



Appendix C
 CCWA PIPELINE CORRIDOR

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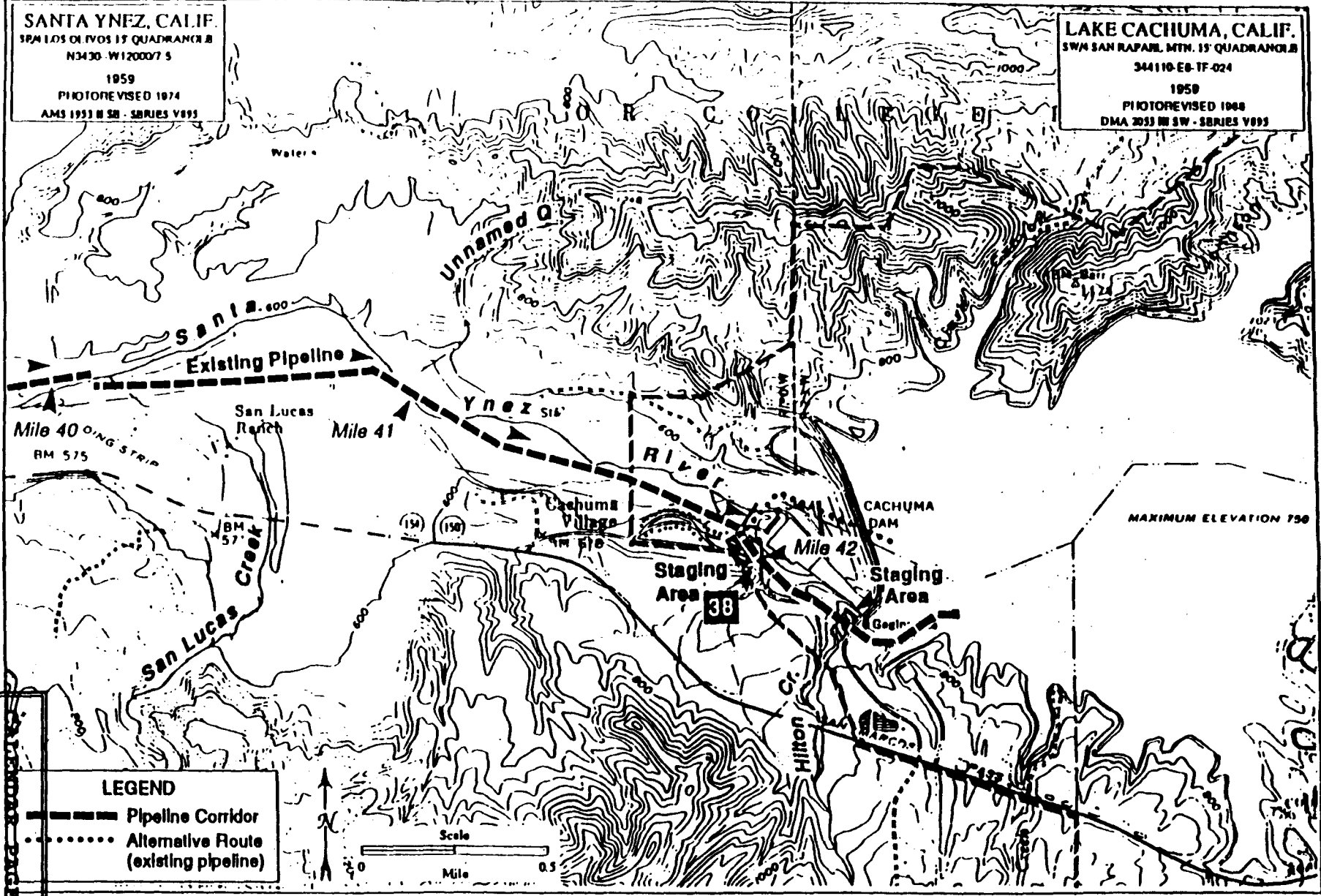
SANTA YNEZ, CALIF.
 384 LOS OLIVOS 17 QUADRANGLE
 1959
 PHOTO REPRODUCED 1974
 AUG 1973 BY DE - SEAS 8895
 10430-W12007.8

Appendix C

CCWA PIPELINE CORRIDOR

SANTA YNEZ, CALIF.
 SW 1/4 OLIVOS 15' QUADRANGLE
 N3430 W120007 5
 1959
 PHOTO REVISION 1974
 AMS 1953 II SW - SERIES V893

LAKE CACHIUMA, CALIF.
 SW 1/4 SAN RAFAEL MTN. 15' QUADRANGLE
 344116 EB-TF-024
 1959
 PHOTO REVISION 1968
 DMA 2053 III SW - SERIES V893



LEGEND
 - - - - - Pipeline Corridor
 Alternative Route
 (existing pipeline)

Scale
 0 0.5
 Mile

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Appendix C
 CCWA PIPELINE CORRIDOR

**Final
Mitigation Program
for the Mission Hills Extension
and Santa Ynez Extension**

September 1993

Prepared for

**Central Coast Water Authority
1933 Cliff Drive, Suite 12
Santa Barbara,
California 93109**

Prepared by



An Employee-Owned Company

Science Applications International Corporation

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Environmental Programs Divs

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Final

Mitigation Program

**for the Mission Hills Extension
and Santa Ynez Extension**

September 1993

Prepared for

**Central Coast Water Authority
1933 Cliff Drive, Suite 12
Santa Barbara, California 93109**

Prepared by

**Science Applications International Corporation
Environmental Programs Division
816 State Street, Suite 500
Santa Barbara, California 93101**

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1.0 INTRODUCTION

This mitigation program for the Mission Hills Extension and the Santa Ynez Extension, both local projects associated with Phase II of the Coastal Branch extension of the State Water Project, has been prepared to specify the measures necessary to mitigate impacts that were identified in the environmental impact reports (EIRs) for these projects (DWR 1991; SAIC 1991). The mitigation monitoring plan developed for the pipelines as part of the EIR process is included in this program. The mitigation program consists of this document, which discusses overall mitigation measures, and specific mitigation plans for biological, cultural, and paleontological resources. The latter three are separate documents. Planning and design processes for the Mission Hills and Santa Ynez extensions are still underway, and consequently, some of the mitigations cannot be presented in complete detail at this time.

1.1 PURPOSE AND SCOPE

The goal of the mitigation program is to reduce the project caused impacts to a level not considered significant. For animal or plant species that are listed or candidates for listing as threatened or endangered under state or federal laws, the mitigation goal will be no-net-loss of habitat or species viability. The mitigation goal for sensitive species that are not candidate or listed species and for native plant communities will be replacement in kind, to the extent practicable. For other resources, the goal is to avoid impacts where feasible and to reduce the level of impact to insignificant levels whenever such impacts are unavoidable, particularly in the long term. This mitigation program is also intended to support a Management Agreement/Management Permit to be issued by the California Department of Fish and Game (CDFG) pursuant to Fish and Game Code Section 2081 for the state listed seaside bird's beak, unarmored threespine stickleback, bald eagle, and southwestern willow flycatcher. Other sensitive species that could become listed prior to or during construction are also included (southwestern pond turtle, red-legged frog, California tiger salamander, arroyo southwestern toad, California horned lizard, yellow warbler, yellow-breasted chat, burrowing owl, long-eared owl, Cooper's hawk, American badger, and tricolored blackbird).

1.2 DOCUMENT ORGANIZATION

This document has been divided into four sections. Section 1 contains the project description. The organization, personnel qualifications, and reporting procedures for carrying out the mitigation program are presented in section 2, Mitigation Program Management. Section 3, Project-Wide Mitigation Measures, describes specifications that will be incorporated into construction contracts throughout the ROW and facilities to minimize construction impacts to the extent feasible. References are listed in section 4.

1.3 PROJECT DESCRIPTION

1.3.1 Route Description

The routes for the two projects are contiguous and follow a 43.5-mile long corridor that originates at the end of the proposed Coastal Branch facilities at Tank 5 on Vandenberg AFB, Santa Barbara County, and extends south and east to terminate on the south side of Lake Cachuma near Bradbury Dam (see Figure 1-1). An alternative route segment being considered would involve boring under the Santa Ynez River about 3 miles west of Buellton and would follow Santa Rosa Road to Highway 101. Use of an existing water pipeline from just south of Santa Ynez to Bradbury Dam will eliminate construction of 4.5 miles of pipeline.

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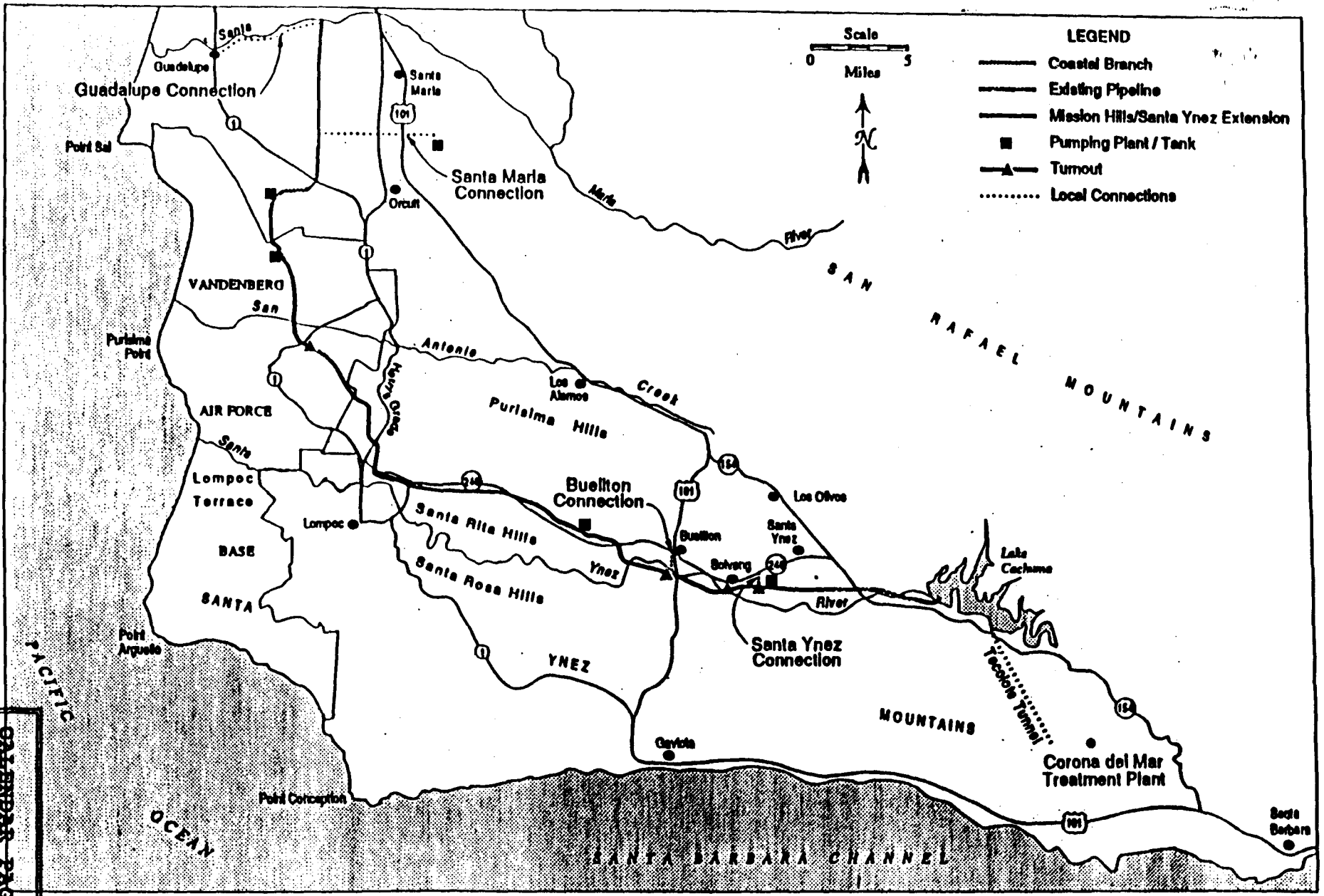


Figure 2-2

LOCATION MAP FOR STATE WATER PIPELINES IN SANTA BARBARA COUNTY

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1.3.2 Permanent Facilities

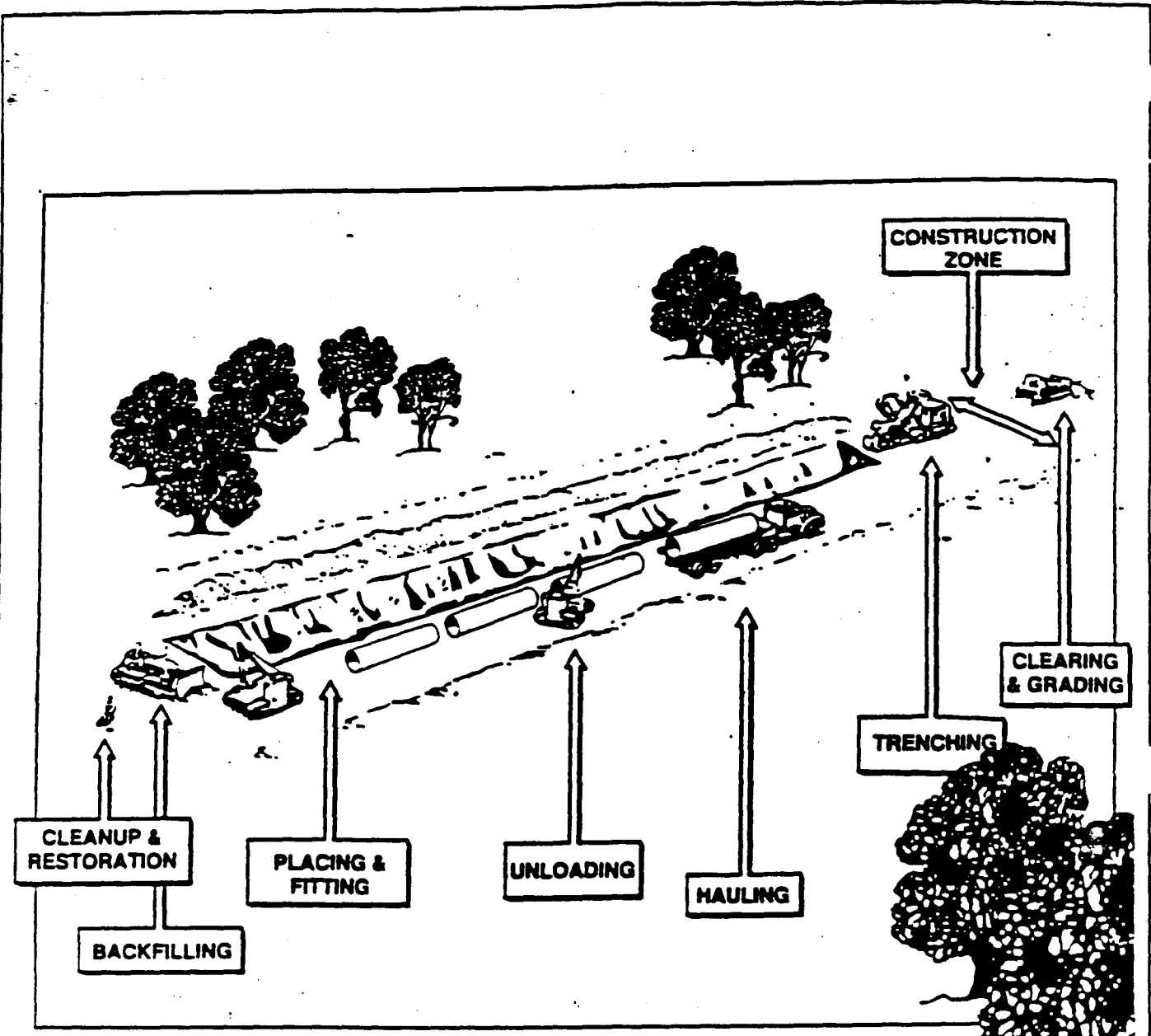
The two projects consist of a buried pipeline with pumping and service turnout facilities. Permanent facilities include the buried pipeline, one pumping plant, a dechloramination station, one tank site, four water supply turnouts, and the terminus facilities. A water treatment plant will also be built by CCWA at Polonio Pass in San Luis Obispo County at the Tank 1 site for the Coastal Branch. The Department of Water Resources (DWR) will grade the site and will mitigate any resulting environmental impacts. Specific permanent facilities are:

- **Vandenberg AFB Turnout.** The turnout is located adjacent to an existing road and would require clearing of 0.01 acre.
- **Tank 7 and Access Road.** The tank site (2.5 acres) is located on the north side of State Route 246 near existing buildings. A short access road (approximately 1,000 feet long) will be required.
- **Buellton Turnout.** The Buellton turnout (0.01 acre) will be adjacent to State Route 246 just west of Buellton or adjacent to Avenue of the Flags on the south side of the Santa Ynez River.
- **Solvang Turnout.** The turnout (0.01 acre) for Solvang is located on the west side of Alisal Road on the north side of the Santa Ynez River.
- **Santa Ynez Turnout.** The Santa Ynez turnout (0.01 acre) is located to the south of Santa Ynez.
- **Santa Ynez Pumping Plant.** About 6.2 acres would be used for the pumping plant, dechloramination station, and maintenance facility.
- **Terminus.** The Santa Ynez Extension will end near the south abutment of Bradbury Dam. The pipeline would extend into the lake and end in a diffuser at a depth of approximately 100 feet below the maximum pool elevation. An alternative to be used, if found to be feasible, is discharge via the existing tunnel through the dam.

A permanent 50- to 60-foot right of way (ROW) easement will be required for the pipeline alignment. At least a portion of the permanent ROW will be kept cleared of vegetation other than grass and small shrubs to permit aerial surveillance and access for maintenance. One short permanent road will be needed to serve Tank 7. Most facilities also will require electrical power service.

Drawings and specifications (at a scale of 1 inch = 50 feet) will be prepared during final design to show all project facilities in detail. Sensitive resources and site-specific mitigations will be shown on these drawings. These drawings, because of their number and bulk, are incorporated into this program by reference. They will be made available to users of this program as needed. (Aerial photography for use in making the maps was flown in early August 1992 with additional photographs taken of realignments in the Spring of 1993, and mapping will be completed by July 1993. Biological and cultural resource surveys will be conducted as maps are available and weather permits.)

In addition, two short segments and the Tank 5 facility of the Coastal Branch pipeline (to be constructed by DWR) have been included in this mitigation program for mitigation of impacts to Burton Mesa chaparral. The pipeline segment lengths are 700 feet near Nipomo and 1,100 feet north from Bishop Road. The tank site, located adjacent to Bishop Road, is 5.5 acres.



Source: DWR 1991.

Figure 1-2

SCHEMATIC OF GENERAL STEPS IN CONSTRUCTING A BURIED PIPELINE

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1.3.3 Temporary Construction Requirements

The construction ROW will generally be 100 to 120 feet wide. Some areas such as steep hillsides or sandy streambeds may require a greater ROW width, while in certain areas it may be reduced to about 50 feet for short distances. Within the ROW, the pipe trench will generally be a 15- to 30-foot wide excavation. The top of the pipe will be buried about 4 to 5 feet. Figure 1-2 illustrates the general construction steps.

Temporary staging areas will be required to store equipment and materials. Generally, staging areas will be about 4 acres but two will be 5.5 acres. The staging areas have been located based on environmental and construction considerations. Staging areas will be shown on the project drawings and specifications. The staging areas are:

- Picnic grounds – 300 feet by 580 feet
- San Antonio Bridge – 300 feet by 625 feet.
- Santa Lucia Creek – 300 feet by 725 feet.
- Vandenberg Village – 300 feet by 600 feet.
- Harris Grade Road – 300 feet by 600 feet.
- Highway 246 #1 – 300 feet by 800 feet.
- Hapgood Road – about 375 feet by 450 feet (triangular).
- Drum Canyon Road – 300 feet by 600 feet.
- Tank 7 – 400 feet by 400 feet.
- Santa Ynez River (alternative route only) – [dimensions undetermined]
- Buellton turnout – 300 feet by 500 feet (not needed for alternative route).
- Buellton Bridge – 200 feet by 870 feet (moved to Santa Rosa Road for alternative route).
- Granite property – 570 feet by 570 feet by 570 feet (triangular).
- Alisal Bridge – 200 feet by 1,000 feet.
- Refugio Road – 300 feet by 600 feet.
- ID #1 – 300 feet by 600 feet.
- Cachuma discharge – approximately 4 acres.
- Tank 5 – 2.4 acres

Construction contractors may request additional staging areas. These will have to meet criteria in the design specifications (e.g., no impacts to biological and cultural resources) and be approved by CCWA. The PEPM will evaluate all proposed new staging areas to determine if environmental criteria are met.

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Excavation materials will be stored along the pipeline trench in the construction ROW. Other spoil stockpile areas may be required where the width of the ROW is reduced to avoid sensitive resources.

Access onto the ROW will be from existing roads or the new permanent road providing access to Tank 7. Temporary access roads will be constructed only where steep slopes dictate the need for such roads.

Some material will need to be imported for backfill in areas where excavated materials (primarily rock) are unsuitable for backfill. These materials will be obtained from existing commercial mining operations; no borrow areas will be developed within the ROW. All excess materials will be disposed of in an approved manner, such as at established disposal/storage areas or by spreading along the ROW.

The aqueduct will cross four major streams and many small drainages. These crossings are listed in Table 1-1. San Antonio Creek will be spanned or bored under, Hilton Creek will be spanned, and both of the Santa Ynez River crossings will be placed on bridges. For the Santa Rosa Road alternative route only, one of the river crossings would be by boring or microtunneling rather than on a bridge.

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Table 1-1

STREAMS AND WETLANDS CROSSED BY THE PIPELINE CORRIDOR

(page 1 of 3)

| <i>Habitat</i> | <i>Description</i> |
|--------------------------------|--|
| Tributary to San Antonio Creek | Ephemeral flow; sparse willow scrub along narrow channel; crossed 3 times at roads. |
| San Antonio Creek | Perennial flow; deeply incised (about 25 ft); willow scrub riparian zone; wetland along stream margin; to be spanned or bored under. |
| Santa Lucia Creek | Ephemeral flow; coastal sage scrub adjacent to narrow channel (headwaters); no wetlands. |
| Unnamed A2 | Ephemeral flow; small drainage through oak woodland. |
| Unnamed A | Intermittent flow; shrub riparian zone along small channel. |
| Purisma Creek | Ephemeral flow; channelized (concrete lined). |
| Unnamed B | Ephemeral flow; channelized (earthen berms) with narrow channel. |
| Unnamed C2 | Ephemeral flow; no riparian vegetation; indistinct channel. |
| Unnamed D2 | Ephemeral flow; no riparian vegetation along narrow incised channel. |
| Unnamed D | Ephemeral flow; no riparian vegetation; broad (about 120 ft) incised stream bed. |
| Unnamed PGC | Ephemeral flow; 4 small erosional channels with no riparian vegetation. |
| Silt basin | Basin dries in summer; a few willows. |
| Unnamed E | Ephemeral flow; channelized (earthen banks). |
| Unnamed F2 | Ephemeral flow; sparse riparian scrub along small channel. |
| Unnamed F | Ephemeral flow; channelized (earthen berms) with narrow riparian scrub. |
| Santa Rosa Creek | Ephemeral flow; deeply incised stream with little riparian vegetation |

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Table 1-1

STREAMS AND WETLANDS CROSSED BY THE PIPELINE CORRIDOR

(page 2 of 3)

| <i>Habitat</i> | <i>Description</i> |
|---------------------|--|
| Unnamed H | Ephemeral flow; oak riparian along narrow channel. |
| Unnamed PB4 | Ephemeral flow; 2 erosional channels with little or no riparian scrub. |
| Unnamed PB2 | Ephemeral flow; deeply incised narrow channel with some oak woodland adjacent to corridor. |
| Unnamed PB1 | Ephemeral flow; drainage ditch along road; no riparian vegetation. |
| Cañada de la Laguna | Ephemeral flow; sparse oak/riparian woodland along small channel. |
| Unnamed I | Ephemeral flow; sparse oak woodland along small channel. |
| Zaca Creek | Ephemeral flow; channelized (earthen berms) with riparian scrub on banks. |
| Santa Ynez River | Intermittent flow; sparse riparian and willow scrub; suspended on Avenue of the Flags bridge. |
| Nojoqui Creek | Intermittent flow; disturbed by grading; sparse riparian scrub. |
| Unnamed J | Ephemeral flow; sparse oak woodland along narrow incised channel. |
| Santa Ynez River | Intermittent flow; sparse riparian scrub; suspended from Alisal Road bridge. |
| Alamo Pintado Creek | Intermittent flow; sparse willow scrub along shallow channel. |
| Unnamed K2 | Ephemeral flow; no riparian zone. |
| Unnamed K | Intermittent flow with perennial pool; no riparian zone; freshwater marsh in small channel. |
| Unnamed L | Ephemeral flow; small channel with sparse oak woodland. |
| Zanja de Cota | Intermittent flow; perennial pond below; edge of well-developed willow/box elder riparian forest; wetland along banks. |

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Table 1-1

STREAMS AND WETLANDS CROSSED BY THE PIPELINE CORRIDOR

(page 3 of 3)

| <i>Habitat</i> | <i>Description</i> |
|--|---|
| Unnamed N | Intermittent flow; small drainage through valley oak savanna; seasonal wetland in channel. |
| Hilton Creek | Ephemeral flow; deeply incised stream with oak woodland on banks; to be spanned or avoided. |
| Lake Cachuma | Impoundment with fluctuating water level; bank near spillway is riprapped; sparse riparian scrub in drawdown zone. |
| Alternative route segment (avoids PB1, Cañada de la Laguna, I, Zaca Creek, and Santa Ynez River at Buellton) | |
| Santa Ynez River | Intermittent flow; cottonwood-willow forest along banks and willow scrub in areas of riverbed not scoured; seasonal wetland in parts of bed; bored under river. |
| Unnamed | Three or four ephemeral drainages with little to no riparian vegetation (to be surveyed in July 1993). |

Note: All stream crossings will be buried except at San Antonio Creek, the Santa Ynez River, and Hilton Creek. Directional drilling is also being considered for San Antonio Creek and the Santa Ynez River west of Buellton.

Sources: BioSystems 1991; Hendrickson 1992; aerial photographs; field observations.

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2.0 MITIGATION PROGRAM MANAGEMENT

2.1 ORGANIZATION OF MITIGATION PROGRAM MANAGEMENT

CCWA will assign qualified environmental personnel or contract with a qualified environmental consultant to monitor and carry out the mitigation program. The environmental personnel shall conduct preconstruction surveys and mitigation activities (section 3.1), monitor construction activities to assure compliance with construction contract specifications (section 3.2), monitor vegetation restoration after construction activities (section 3.3.1 and sections 4 and 5 of the Biological Resources Mitigation Plan), and prepare and implement habitat replacement requirements (section 7 of the Biological Resources Mitigation Plan). The environmental monitoring personnel also will be responsible for preparing all required monitoring reports, providing environmental awareness training to construction workers, and maintaining contact with resource agencies.

Primary responsibility for managing construction contracts resides with the Construction Manager retained by CCWA. During construction activities, Environmental Compliance Monitoring reports, including reports of violations or recommendations for changes in contract specifications, will be delivered to the Construction Manager for appropriate action. Appeal and oversight provisions are provided for conflict resolution and to provide for changes in contract specifications if necessary (section 2.5). A schematic representation of Mitigation Program Management is presented in Figure 2-1.

2.1.1 Project Environmental Program Manager

The CCWA Deputy Director (responsible for project management) shall appoint an employee or hire a consultant to act as the Project Environmental Program Manager (PEPM). The PEPM will be responsible for implementing and managing the mitigation program.

The PEPM shall have the following duties and responsibilities:

- Manage the mitigation program, environmental monitoring, and compliance activities.
- Supervise the preparation and conduct of training programs in section 2.4.
- Prepare or supervise preparation of all manuals, pamphlets, plans, and reports required in this plan.
- Supervise and coordinate activities of environmental personnel.
- In consultation with the CCWA Deputy Director, coordinate environmental matters with assigned California Department of Fish and Game (CDFG) personnel and other agencies concerning all aspects of the mitigation program.
- Certify all monitoring reports prepared by the Onsite Environmental Coordinator.
- Design, approve, or provide criteria for any environmental facilities such as escape ramps, flagging, fencing, etc.
- To temporarily (less than 1/2 hour) suspend work in a specific location to assure compliance with the

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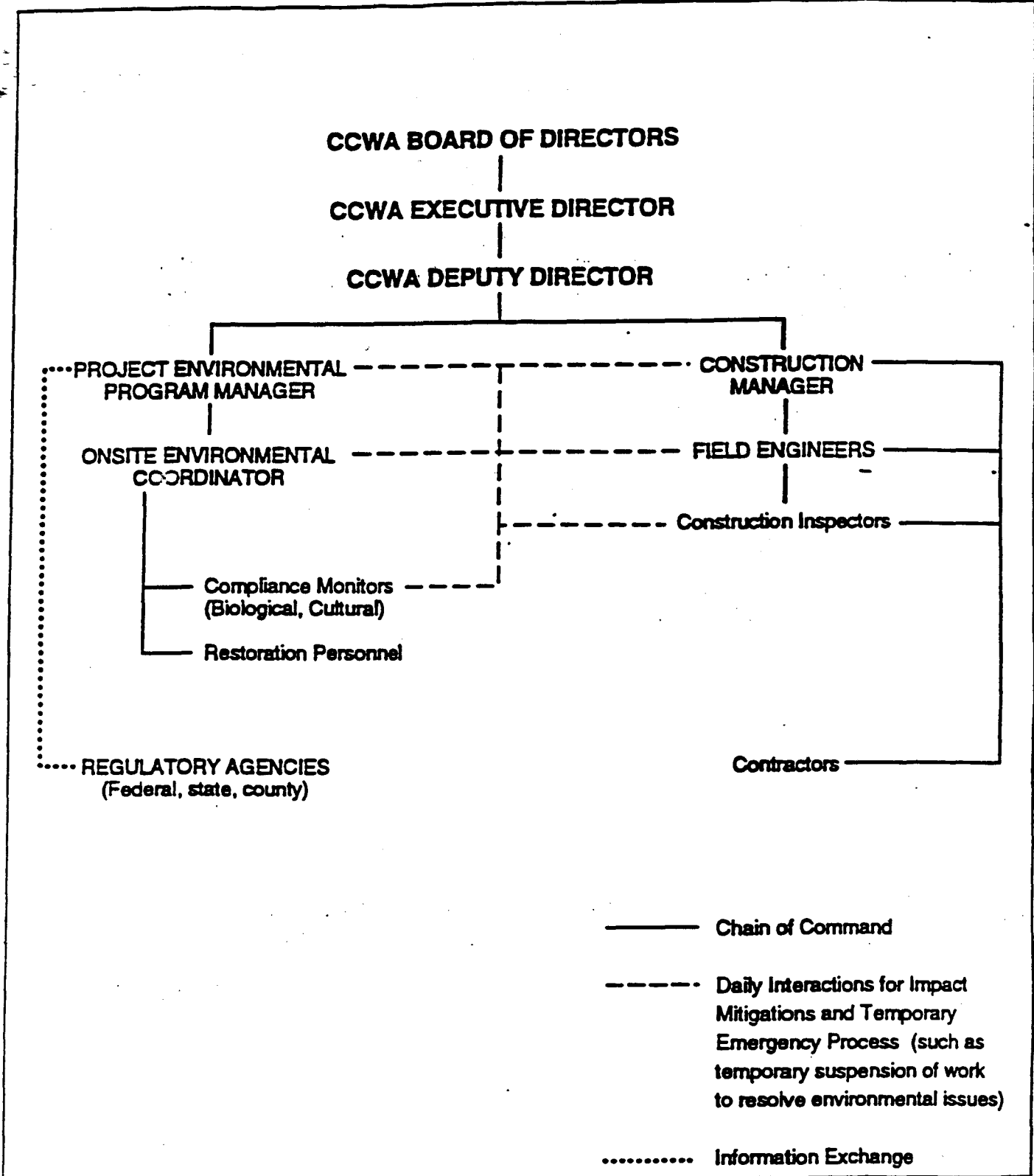


Figure 2-1

MITIGATION PROGRAM MANAGEMENT

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mitigation program. This will allow time for construction management staff to address the issue.

- Work with the CCWA Deputy Director and Construction Manager to develop and implement modifications to project-wide mitigation measures to meet field conditions.
- Enact all aspects of mitigation measures presented in the Biological Resources, Cultural Resources, and Paleontological Resources Mitigation Plans and other plans developed for the project.
- Enact all aspects of the replacement program as presented in section 7 of the Biological Resources Mitigation Plan.

The PEPM shall recommend to the Deputy Director the hiring of additional staff or contractors as is determined necessary to carry out all aspects of the mitigation program. Additional personnel could be hired to serve as environmental compliance monitors, intermediate level supervisors, specialists in various resource areas, and support staff for preconstruction surveys, sensitive species relocation, seed collection, revegetation, or other activities.

2.1.2 Compliance Monitors

The required number of compliance monitors (biological, cultural, and Native American) will vary depending upon the number and type of construction activities. The monitors may assist the PEPM in marking sensitive biological/cultural resources prior to construction and in briefing construction personnel. The Onsite Environmental Coordinator will direct the field monitoring activities.

A minimum of one compliance monitor will be present at each major work area more than 1 mile apart during all earth moving activities such as clearing and grubbing, grading (if not concurrent with clearing and grubbing), and trenching in areas having or potentially having sensitive resources. Biological monitors will not be needed in agricultural fields and only periodically during trenching if in previously cleared and graded areas. Cultural monitors and Native Americans may not be required on steep slopes or other areas where no cultural resources are expected. Areas where monitors are not required will be indicated on the drawings and specifications. A biological monitor will be present for periodic checking during final cleanup activities in all but agricultural fields.

During other construction activities such as pipe laying, backfilling, and contouring, Compliance Monitors will periodically check the integrity of flagged exclusion zones and advise Field Engineers on general compliance with all project-wide mitigation measures required in construction contract specifications. The monitors will work with the CCWA construction management staff to suspend or redirect work in the case of a significant violation of these measures if the PEPM cannot be notified in time to stop additional damage to the resource. The PEPM, however, would be notified as soon as feasible. For example, a cultural resource monitor could work with a construction inspector to stop excavation if a buried cultural site were encountered during trenching and the equipment operator did not recognize this. The work could be redirected to another area beyond the site discovered. Any variations in, adjustments to, or resolution of conflicts over contract specifications will be handled as described in section 2.5.

Sensitive species habitat will be identified in the drawings and specifications. Avoidance areas for cultural resource sites will also be identified on the maps as well as areas of moderate to high sensitivity for paleontological resources.

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2.1.3 Restoration Personnel

Qualified personnel will be retained by CCWA for revegetation of disturbed areas. These personnel will work under the supervision of the PEPM, and the restoration work will be monitored by the Compliance Monitors.

2.1.4 Communications

Hand-held two-way radios or equivalent communications equipment shall be supplied to all on-site monitors to provide immediate communications with their immediate supervisors. Vehicles shall be provided with cellular telephones or other communication equipment to permit immediate contact with the PEPM and construction management staff. This equipment assures prompt reporting of any problems or potential violations of the mitigation program and permits rapid deployment of personnel to areas where they are needed. On-site monitors shall keep daily logs of observations and notes on problems and potential measures for their resolution. These logs shall be submitted to the Onsite Environmental Coordinator, who will forward reports to the PEPM for submittal to appropriate agencies (e.g., CDFG) at the end of each week, and to the construction management staff.

2.2 PERSONNEL QUALIFICATIONS

The minimum requirements for environmental personnel are listed in the following sections.

2.2.1 Project Environmental Program Manager

The PEPM should be a senior level environmental scientist with at least five years of experience in conducting or carrying out mitigation or environmental monitoring programs. Educational requirements shall be a bachelor of science degree in biological or natural sciences or equivalent on the job training. Experience in environmental monitoring of other pipeline projects, habitat restoration, and management is required.

2.2.2 Support Crew

Support crew should be trained in natural resource sciences as found acceptable by the PEPM. Specialists in wildlife, botany, habitat restoration, archaeology, geology, or other disciplines may be retained as needed. The Compliance Monitors must be able to identify sensitive natural resources in the field and be familiar with monitoring.

2.3 COORDINATION OF MITIGATION PROGRAM WITH AGENCIES

The mitigation program has been developed by CCWA with input from the CDFG. The following sections describe how information regarding compliance with the mitigation and monitoring requirements will be transferred to the various agencies that have jurisdiction over the project (or parts thereof).

2.3.1 Reporting Procedures

The PEPM shall establish reporting procedures to keep the CCWA Deputy Director informed of the progress and problems with implementation of the mitigation program. Information regarding permit and mitigation program compliance will be recorded in a computer database management system. Individual Environmental Quality Control Report (EQCR) forms will be filled out upon satisfactory completion of specific construction tasks related to permit conditions or mitigation requirements and when construction activities are not in compliance with permit conditions or requirements. An EQCR summary (in tabular form) will be attached to each

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Monthly Report. The CCWA Deputy Director will establish a system to transfer required reports to CDFG, U.S. Fish and Wildlife Service (USFWS), U.S. Army Corps of Engineers (COE), and other agencies with jurisdiction over the project. Contact persons will be specified in a Management Agreement with CDFG. The reporting program will be designed to meet the California Environmental Quality Act (CEQA) monitoring requirements. Reports, manuals, and plans required to be prepared under this mitigation program are listed in Table 2-1. The following reporting requirements are minimum standards and are not intended to preclude additional reporting if the CCWA Deputy Director or PEPM determines an additional reporting need exists.

2.3.1.1 Preconstruction Survey Reports

After easements for the ROW are identified, environmental surveys will be conducted to identify, flag, and map sensitive resources either during or after the ROW is land surveyed. Reports shall be prepared that summarize the resources found within the area surveyed, including lists of the sensitive species identified and the resources flagged, and any change from the findings of any previous surveys conducted in the area. These preconstruction reports shall be provided to the CDFG and other appropriate agencies within 30 days following completion of the survey.

2.3.1.2 Monthly Reports

A monthly report shall be prepared by the PEPM and provided to the CCWA Deputy Director and Construction Manager within five working days of the beginning of each month. Within ten days of the beginning of each month the PEPM shall send the report to CDFG. This report shall describe the progress in implementing mitigation measures; report on environmental monitoring of construction activities; describe any incident reports filed for violation of construction restrictions and specifications and the corrective actions taken; and discuss any other problems, issues, or recommendations to improve the mitigation program.

2.3.1.3 Incident Report

Any violation of an environmental work restriction resulting in cessation of work shall be documented by the PEPM and Construction Manager immediately and the documentation transmitted to the CCWA Deputy Director within 24 hours of the incident. CDFG and other appropriate agencies shall be notified verbally no later than the next business day. A written report shall be delivered to these agencies within three business days following the incident.

2.3.1.4 Post-Construction Compliance Report

Within 90 days after construction contractors have completed work within each construction reach, the PEPM shall prepare a post construction environmental compliance report describing and documenting all monitoring efforts, environmental contract specification compliance, deviations from the mitigation program, changes (with rationale) to make the mitigation program more effective, and follow up surveys or other work needed to complete all aspects of the mitigation program except for replacement described in section 7 of the Biological Resources Mitigation Plan.

2.3.1.5 Revegetation Progress Report

Revegetation progress reports shall be prepared annually and submitted to CDFG and other agencies as permits require. Reporting will continue from the time revegetation begins until the revegetation criteria are met. The latter will vary by plant community and may exceed 5 years in oak woodlands and chaparral. The reports will describe the revegetation program.

Table 2-1

MITIGATION PROGRAM REPORTS, MANUALS, AND PLANS

| <i>Title</i> | <i>Periodicity</i> | <i>Section</i> | ESTIMATED SCHEDULE | | |
|-------------------------------------|--------------------------|----------------|---------------------------|---------------------|-------------|
| | | | <i>Pre</i> | <i>Construction</i> | <i>Post</i> |
| Survey Reports | As Completed | 23.1.1 | xxx | | |
| Training Manual | Once | 2.4 | xxx | | |
| Monitoring Reports | Monthly | 23.1.2 | | xxx | |
| Incident Report | As Necessary | 23.1.3 | | xxx | |
| Replacement Lands Report | Once | 7 ^a | | xxx | |
| Replacement Lands Management Report | Once | 7 ^a | | xxx | |
| Post-Construction Compliance Report | Annually As Necessary | 23.1.4 | | | xx |
| Revegetation Progress Report | Annually | 23.1.5 | | | xx |
| Final Mitigation Program Report | Once | 23.1.6 | | | xx |

Note a. Section 7 of the Biological Resources Mitigation Plan.

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accomplishments toward the success criteria and recommend additional work or remedial measures where criteria are not being met.

2.3.1.6 Final Mitigation Program Report

A final mitigation program report shall be prepared after all aspects of the program are enacted but no sooner than five years after all vegetation planting requirements have been completed. The report shall contain a summary of the information contained in the post construction compliance reports, the results of any follow up surveys or mitigation work conducted since the post construction compliance reports, and a detailed presentation of the results, accomplishment, problems, and proposed solutions of the replacement program.

2.4 TRAINING PROGRAM

Training programs for construction workers, environmental monitoring personnel, restoration contractor personnel, and agency monitors/visitors will be developed by or under the direction of the PEPM. These programs will include a description of the sensitive resources (biological, cultural, etc.) along the project route, a summary of the specifications in the construction contracts to protect these resources, a review of the penalties associated with violation of the specifications, and an outline of procedures to be followed in case of questions or conflicts. These training programs shall be conducted at the beginning of all new construction, including changes in work crews, and regular briefings of construction workers and monitors will be held to transfer new information or revisions in procedures.

2.4.1 Monitoring Personnel

All environmental monitoring personnel shall undergo a training program developed under the supervision of the PEPM. During the training program, personnel will be provided with information outlining all environmental requirements, methods to meet these requirements, responsibilities of the monitors, the chain of command for reporting deviation from the mitigation program and limits of their authority, construction safety requirements and rules, types of construction equipment and their limitations, how to relate to construction personnel, and other relevant information.

Where applicable, training also shall be provided on the identification and handling of sensitive species, cultural resources, and paleontological resources.

The training program will be submitted to the CDFG and other appropriate agencies for review and comment at least 60 days before its use.

2.4.2 Construction Workers

All construction personnel shall take a brief (about 1/2 hour) environmental training course before conducting work on the site and periodically thereafter when new information must be passed on. The course shall be prepared and administered under the direction of the PEPM and will describe the resources being protected, contract specifications, and procedures and rules to protect the resources. It shall also outline penalties for not complying with the procedures and rules, and how to report any problems or recommendations they may have concerning the program. Construction personnel shall be given brief and concise written materials describing and identifying sensitive resources and environmental contract specifications in their construction area and shall be required to sign a statement that they have read, understand, and will follow the environmental requirements. Decals for hardhat ~~and wallet sized cards shall be~~ issued to those completing the course so that monitors can identify personnel who have not been

trained. A database listing all those who have completed the training shall be maintained and distributed.

Construction workers or personnel delivering materials within construction areas that have not received the environmental training course will be permitted within construction areas containing sensitive resources only if escorted by personnel who have received the training. The escort will be responsible for the activities of the untrained personnel. The untrained personnel will take the environmental training course within five days of beginning work.

2.4.3 Restoration Contractor Personnel

Restoration field supervisors shall be given a training course before beginning work on the project. This will include briefing on the status of the areas to be restored, methods for restoration, procedures for reporting problems, and quality assurance checks. These field supervisors are then responsible for passing the information on to their field personnel.

2.4.4 Agency Monitors and Visitors

Agency representatives and visitors to the construction ROW may be provided the construction worker environmental materials. Depending on the length of time they will be at construction sites and the degree of CCWA supervision, they may be required to certify that they will follow the procedures.

2.5 VARIATIONS, ADJUSTMENTS, AND CONFLICT RESOLUTION CONCERNING CONSTRUCTION CONTRACT SPECIFICATIONS

Variations, adjustments, and resolution of conflicts concerning construction contract specifications shall be made in conformity with the following procedures. Contract specifications shall include clauses incorporating these procedures.

If a change in the specifications of a construction contract is required that potentially affects the mitigation program or sensitive resources (including all fish and wildlife), the changes shall be reviewed by the PEPM. The PEPM, after consultation with resource experts, shall work with the Construction Manager if the proposed change could cause a significant adverse impact to these resources and shall report the determination to the CCWA Deputy Director. The CCWA Deputy Director shall consult with the CDFG and USFWS if the change involves candidate or listed threatened or endangered species, with the SHPO if cultural resources are involved, with the COE and CDFG if stream crossings or wetlands would be affected, and with CDFG if fish and wildlife resources would be affected. If the change will not cause a significant adverse impact to sensitive resources, and with concurrence of the CCWA Deputy Director, the PEPM shall recommend to the Construction Manager to make the change. If, after consultation with the CCWA Deputy Director, the PEPM determines that the proposed change could cause significant adverse impacts to sensitive resources and the Construction Manager finds the change necessary for construction of the project, the matter will be referred to the CCWA Deputy Director who shall prepare the necessary environmental documents and obtain the required permits for the change.

Any project changes needed to avoid or minimize impacts to one resource will be checked to make sure that no other resources would be impacted by the change. If a conflict between resources arises, the PEPM will consult with resource experts to obtain the information necessary to resolve the conflict so that impacts are minimized on all resources. The PEPM will then make a recommendation to the Construction Manager. In

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mitigation may be necessary. The required measures will be added to the mitigation plan and documented in the Monthly Reports.

If a conflict arises over the interpretation of a construction contract specification for project-wide mitigation measures, the Construction Manager shall make a ruling on the conflict. If the PEPM does not agree with the Construction Manager's ruling, the matter will be forwarded to the CCWA Deputy Director. After a briefing by the PEPM and the Construction Manager, the CCWA Deputy Director shall attempt to resolve the issue. They may consult with CCWA Executive Director and Board of Directors to make a final ruling (see Figure 2-1).

As noted above (section 2.1.2), Compliance Monitors will work with construction management staff to temporarily suspend or redirect construction activities when a significant violation of construction contract specifications or mitigation measures occurs and the PEPM cannot be reached in time to prevent additional environmental damage. The issue will be resolved as quickly as feasible in the field by the PEPM; consultation with the Construction Manager will occur. In addition, a temporary work halt can be exercised by the construction management staff working with the construction monitors or PEPM if a specific offense is observed more than once in the same week or four times within the same month.

Throughout these procedures, no work shall be done contrary to existing specifications or, in a conflict resolution process, requiring exercise of the specification in question. However, work can be directed around the problem area during the resolution process to minimize impacts on construction schedules. All changes made in construction contract specifications that affect the environment shall be reported in the Monthly Reports.

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3.0 PROJECT-WIDE MITIGATION MEASURES

Numerous mitigation measures were identified in the EIRs for the project, and a mitigation monitoring program was developed. This section describes the measures that apply to resources such as air quality, noise, aesthetics, geology and soils, traffic, and hazardous materials. These measures generally apply to the entire project, although some may be site specific. In the latter case, particular specifications will be noted on the detailed design drawings and specifications for the project. Some of the measures may directly or indirectly apply to biological resources.

For biological, cultural, and paleontological resources separate mitigation plans have been developed under the mitigation program. These are presented in separate documents.

3.1 PRECONSTRUCTION PHASE

3.1.1 Preconstruction Surveys

The entire ROW will be surveyed for biological and cultural resources before construction by qualified biologists and archaeologists. In addition, plots (adjacent to the ROW) representative of each vegetation type will be permanently marked for use in assessing restoration success within the ROW. Information gathered during the preconstruction surveys shall be used to:

- Identify, inventory, and refine maps of the vegetation types and sensitive resources of the final ROW.
- Make final adjustments, where technically feasible, in or to the ROW to avoid or minimize impact to sensitive species and cultural resources.
- Establish exclusion zones at sensitive resource sites that can be avoided to be fenced or staked by monitors immediately prior to construction.
- Quantify the acreages and quality of sensitive vegetation types and numbers and types of mature trees that (1) will be restored on-site and (2) cannot be mitigated on-site.
- Document existing conditions at stream crossings and other sensitive habitats in enough detail to guide restoration of the habitat to pre-project conditions.

The biological surveys will be conducted during the appropriate seasons during or after the ROW land surveys. The cultural resources surveys will be conducted as soon as the alignment is established and be completed prior to construction. Adequate time (minimum of one year) has to be provided between marking the ROW and construction activities (1) to allow completion of the preconstruction mitigation activities, especially those that are dependent on season, and (2) to allow final adjustments to the ROW before pipeline specifications are submitted to vendors. The area to be mitigated on-site and off-site will be calculated using the construction corridor width specified on the drawings and specifications and the width of the "clear zone" (area maintained with no trees but little other maintenance) over the pipeline by vegetation type (varies from 0 to about 20 feet).

3.1.2 Preconstruction Mitigation Activities

Preconstruction mitigation activities shall include activities to:

- Flag the ROW boundary and sensitive resources to be avoided.

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- Mark sections of the ROW where the width of the construction zone will be restricted.
- Photograph and/or videotape (on the ground) specific locations in the alignment and at the associated assessment plots to guide restoration. A videotape of the entire alignment was taken from the air in March 1993. (August 1992 aerial photographs are available.)
- Collect seeds or plants from the construction area (beginning one year prior to construction).
- Move sensitive plants or animals from the construction area.
- Fill sensitive wildlife dens or burrows in the construction area.
- Identify faults crossed by the ROW for use during final design.
- Locate potential landslide and liquefaction areas and avoid where feasible.

Additional activities for sensitive species are listed in sections 4 and 5 of the Biological Resources Mitigation Plan. Other activities may be necessary as are identified in the technical manuals or at the discretion of the CCWA Deputy Director or PEPM. The preconstruction mitigation activities shall be carried out under direction of the PEPM by mitigation program personnel. The PEPM shall provide progress reports on status to CDFG. Special design features to be considered at fault crossings include use of steel pipe, emergency shutoff valves, and cohesionless backfill. Structures will be designed for seismic zone 4 of the UBC.

3.2 CONSTRUCTION PHASE

On-site mitigation measures to minimize construction impacts to all resources are presented in this section. Table 3-1 presents a summary of project wide construction mitigation measures that are described in more detail below. These mitigation measures will be implemented through specifications placed in construction contracts and on the drawings and specifications, including incentives to avoid impacts to sensitive vegetation in the ROW. Penalties for violation of these specifications shall be placed in the contracts and include (1) loss of jobs by personnel in flagrant and/or repeated violations, (2) cost of restoration/compensation for violations of contract specifications for protection of sensitive resources in and outside the ROW to be paid by contractor, and (3) substantial monetary fine or damages to be paid by contractor when a specific violation occurs more than once in a week or four times in any four-week period.

Requirements that can be depicted in a linear reference, i.e., ROW width, grading width allowed, etc., shall be shown on the drawings and specifications. Requirements that are specific to certain areas or sites, such as areas containing listed wildlife species habitat, sensitive species exclusion zones, etc., also shall be delineated on the drawings.

In other pipeline construction projects, private landowners have often requested pipeline contractors to perform maintenance work as compensation for access, primarily in the form of road repair or minor grading that require use of large equipment (Storrier and Semonsen 1991). Since such work may require County permits and could have environmental impacts that the contractor may be responsible for, no work beyond that permitted for the pipeline should be conducted without prior approval of CCWA and the appropriate County agencies. This requirement will be discussed in the training program (section 2.4) and be made a part of construction contracts.

Table 3-1

SUMMARY OF PROJECT-WIDE CONSTRUCTION MITIGATION MEASURES
(page 1 of 2)

Controls on Construction Noise, Traffic, and Access (Section 3.2.1)

1. All activities restricted to designated areas.
2. Traffic outside of designated areas prohibited.
3. Noise control near sensitive receptors.

Clearing, Grubbing, Grading, and Dust Control (Section 3.2.2)

1. Special clearing and grubbing specifications required.
2. Flagged resources shall be avoided.
3. Grading and similar disturbances limited to area within the flagged ROW.
4. Special provisions for grading in streambeds.
5. Water pollution measures required.
6. Dust control required.

Erosion Control (Section 3.2.3)

1. Special erosion control specifications required.

Topsoil Salvage and Handling (Section 3.2.4)

1. Topsoil salvage and restoration specifications are required.
2. Provisions for handling topsoil.
3. Additional provisions for topsoil handling where sensitive resources are present.

Trenching, Blasting, and Inspections (Section 3.2.5)

1. Escape ramps for wildlife required.
2. Special requirements for blasting to protect sensitive resources.

Backfilling (Section 3.2.6)

1. The trench must be backfilled as soon as possible.

Construction Material and Equipment Storage (Section 3.2.7)

1. Inspections of open construction pipes, culverts, or similar structures for sensitive wildlife required.
 2. In-place pipeline segments shall be capped daily.
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Table 3-1

SUMMARY OF PROJECT-WIDE CONSTRUCTION MITIGATION MEASURES
(page 2 of 2)

Pets, Camping, Firearms, and Use of Area (Section 3.2.8)

1. No camping in any construction area.
2. No pets in any construction area.
3. Firearms prohibited in construction areas.
4. Unauthorized persons not permitted off the designated construction area.
5. Unauthorized persons not permitted at construction areas during non-scheduled hours.

Trash Control (Section 3.2.9)

1. All trash and litter shall be collected, removed, and disposed at a legal disposal site.

Handling and Disposal of Hazardous Materials and Pollution Control (Section 3.2.10)

1. Use, transfer, refueling, and storage of hazardous materials shall be limited to designated areas within the staging areas or ROW.
2. Storage or use of hazardous materials shall be consistent with all applicable regulations.
3. Special requirements for equipment washing and refueling.
4. Construction vehicles shall be regularly maintained.
5. Special requirements for equipment operation to reduce NO_x emissions.

Fire Control Procedures (Section 3.2.11)

1. No trash burning fires permitted in construction areas.
2. Smoking restrictions; spark arrestors on equipment.
3. Fire extinguishers required at all construction sites and on all vehicles.
4. Local fire-fighting agencies to be consulted throughout the dry season.
5. Fire conditions shall be communicated to all construction personnel.

Collection and Harassment of Species/Collection of Cultural Artifacts (Section 3.2.12)

1. No harassment, killing, or collection of plants or animals is permitted, except as provided for in the Biological Resources Mitigation Plan.
2. If wildlife species enter construction areas, removal will be under the direction of environmental personnel.
3. No collection of cultural resource artifacts is permitted except as specified in the Cultural Resources Mitigation Plan.

Cleanup (Section 3.2.13)

1. All construction materials, refuse, and wastes shall be removed from site after construction.

Surface Restoration (Section 3.2.14)

1. Surface restoration specifications are required.

3.2.1 Controls on Construction Noise, Traffic, and Access

Project-related vehicle traffic, construction activities, and equipment storage shall be restricted to established roads, designated access roads, the construction ROW, and staging areas designated for material and equipment storage and vehicle parking. All designated areas will be marked by flagging. Off-road traffic outside of designated areas is prohibited. Staging areas and the construction ROW shall be clearly identified by flagging or other marking.

After construction is completed, physical barriers and signs will be installed on the ROW and any temporary access roads to prevent, to the extent feasible, use by off-road vehicles.

Locations where pipeline construction is expected to generate significant impacts on noise-sensitive human receptors will be marked on the drawings and specifications. At these locations, the following measures shall be used, as appropriate:

- All equipment and vehicles shall be properly equipped with mufflers and silencers in accordance with OSHA requirements.
- All equipment and vehicles shall receive the necessary preventative maintenance to assure minimum noise levels are in accordance with manufacturer specifications.
- Construction activities near noise sensitive receptors shall be limited to between 7 A.M. and 6 P.M. during weekdays. No construction would occur during weekends near noise-sensitive receptors. Exceptions in unusual circumstances may be approved by the CCWA Deputy Director in order to reduce overall impacts.
- Use blast mats, if needed, near noise-sensitive receptors (human and wildlife).
- Schedule noisiest operations during peak noise periods during day or speed up construction near dense residential areas to minimize the number of days of annoyance.
- Locate noise-generating stationary equipment away from noise-sensitive receptors.
- Reroute materials transport trucks to avoid noise-sensitive receptors, where feasible.
- Use low noise-generating equipment where identified on drawings and specifications.

Traffic impacts can be minimized by using the following measures:

- Use carpooling and van pools, where feasible.
- Disperse deliveries of pipe along ROW.
- Provide detours around trench crossings and use jacked crossings under major roads.
- Restore all roads and driveways to preconstruction specifications.

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In addition, the following measures may be necessary at specific access points to reduce the potential for vehicle accidents:

- Schedule pipe delivery for non-peak traffic hours.
- Have escort vehicles in front and behind pipe delivery trucks.
- Use flagmen wearing orange vests.
- Post signs before access points.
- Coordinate with California Highway Patrol or local police.

3.2.2 Clearing, Grubbing, Grading and Dust Control

Construction contract specifications shall specify clearing and grubbing techniques to be used within each construction reach. Specifications shall include provisions to:

- Avoid trees, large shrubs, and other sensitive resources that have been flagged by the monitors within construction areas.
- Mulch and save dense native vegetation removed from ROW; after construction, spread this mulch over the ROW to provide organic material to the surface and provide wildlife cover as specified in section 5 of the Biological Resources Mitigation Plan.
- Cut certain brush and tree species at soil surface level to preserve root systems (see section 5 of Biological Resources Mitigation Plan).

Grading shall be limited to that area necessary to permit movement and operation of equipment within the flagged ROW. Grading shall not be permitted in areas where sensitive plants occur until the sensitive plants are removed, seeds collected, or mitigation measures identified in section 4 of the Biological Resources Mitigation Plan are enacted. Grading generally shall not occur in stream channels during the period from 1 November to 30 June. Exceptions to this (e.g., grading in small ephemeral streams if they are dry) shall be developed on a stream-by-stream basis and specific limitations will be noted for individual streams on the drawings and specifications. Any stockpiled topsoil or backfill material shall be stored above the stream high water mark, outside any riparian zone, and in an area where the material can be prevented from washing back into the stream. Additional erosion control methods are discussed in section 3.2.3. Topsoil shall be salvaged and handled as described in section 3.2.4 and section 4 of the Biological Resources Mitigation Plan.

The construction contractors shall prepare a Dust Control plan to be approved by the PEPM and construction management. This plan will include the following measures (or modifications thereof) described in the Final EIR (SAIC 1991) to the extent applicable and feasible.

- Grading activities will cease when wind speeds are such that the application of water and other particulate regulation techniques are ineffective to control dust generation.
- Stockpiles will be covered or other particulate control techniques shall be used to minimize dust generation.

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- Vehicle speeds in construction corridor and on unpaved access roads will be enforced at no greater than 20 miles per hour, except in areas where water and other particulate regulation techniques are used to control dust generation.
- After clearing, grading, earth moving or excavation is completed, the entire area of disturbed soil will be treated immediately by watering, revegetating, or spreading soil binders to prevent wind pick-up of the soil until the area is restored or otherwise developed so that dust generation will not occur. Organic mulches or other soil stabilizers will be applied to exposed ground areas that would be left in a disturbed state for a period of more than one month.

The following measures will be required in the plan:

- Haul roads and construction site roads shall be kept damp enough to prevent dust from leaving the site. If necessary, this may include watering twice a day, in the late morning and after work is complete for the day. Additional watering may be necessary whenever the wind speed exceeds 15 mph.
- Haul trucks traveling off the site will be covered. Haul trucks traveling on the site will be covered as necessary to prevent dust from leaving the site.

A person or persons shall be designated to monitor the dust control program and to work with construction management to order increased watering as necessary to prevent transport of dust off-site. Their duties shall include holiday and weekend periods when work may not be in progress. The name and telephone number of such persons shall be provided to the Santa Barbara County Air Pollution Control District. Watering (with added chemical dust suppressants as necessary) will follow these guidelines:

- Water will not be taken from local aquatic habitats, but water from existing water supply systems or treated wastewater is appropriate.
- Water trucks or sprinkler systems shall be used in sufficient quantities, and with sufficient frequency, to prevent dust from leaving the site and to create a crust after each day's activities cease.
- Water trucks or sprinkler systems shall be used to keep all areas of vehicle movement damp enough to prevent dust from leaving the site. At a minimum, this would include wetting down such areas in the later morning and after work is completed for the day and whenever wind exceeds 15 miles per hour.

3.2.3 Erosion Control

The contractor shall prepare an erosion control/drainage plan for approval by CCWA as requested in the design specifications. It shall include measures to control and minimize soil erosion. In areas with steep slopes and at stream crossings, construction activities shall be limited to the dry season. These locations will be identified on the drawings and specifications. The erosion control/drainage plan shall describe where and how the following erosion control devices shall be placed along the pipeline alignment, at facilities or new access roads, and at stream crossings.

Waterbars

Waterbars or checkdams shall be used where the ROW crosses up and down slopes. Portions of the route where waterbars will likely be constructed include sections with steep slopes or significant slope length. These locations will be shown on the drawings and specifications.

Waterbars shall be constructed of compacted earthen materials (topsoil in areas to be revegetated) and shall be placed at an angle (based on the average gradient of the slope, but not exceeding 45 degrees) to the slope. Drainage collected from the waterbar will be channeled by the waterbar onto a preferably less steep, vegetated, undisturbed area, outside the ROW where flowing water will not cause an erosion problem.

Waterbars shall be constructed at intervals along the ROW not to exceed spacing limits based on slope and erosion potential. Existing waterbars or other diversion/retention structures will be repaired or improved where they cross the ROW.

Mulching

Mulching may be used to control erosion and enhance revegetation. Mulch should be clean cereal grain straw or native or naturalized grass hay (red brome, wild oats, or wild barley). Punching, crimping, or fiber netting is used to hold the mulch in place. Up to 2 tons per acre of straw or hay mulch is the suggested application rate, depending on the slope. Hydromulching may also be used.

Conveyance Systems

Conveyance systems or culverts shall be used in the construction of access roads where appropriate. Temporary drainage devices (e.g., plastic or corrugated steel pipe) shall be available for carrying runoff over or around disturbed areas to a stable, safe discharge point, if necessary.

Retention Devices

Retention devices such as check dams in stream channels, sediment basins, and retentive waterbars shall be used where appropriate during construction of the pipeline and other facilities. These devices shall be constructed of clean materials that will cause little or no increase in turbidity or siltation. After construction is completed, materials used in construction of the devices and sediments and debris caught by these devices shall be removed from the stream channel unless specified by a specific stream crossing restoration plan.

Diversion

In addition to waterbars, water diversion structures shall be constructed where appropriate to direct runoff from short slopes to planting basins, thereby increasing available moisture in conjunction with seeding or planting efforts.

Other

During construction activities, straw bales (hay if straw not available), sand bags, or earth berms shall be used to retain or divert run-on or runoff on the ROW to desired outlets during and following precipitation events. Straw bales and/or silt curtains shall be used to provide temporary sedimentation control in and near riparian areas at stream crossings. Bales must be grounded, staked, and positioned as required to control sheet and minor channelized flows. In potential heavy runoff areas, two rows of straw bales that are trenched, staggered, and lined with

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filter fabric should be used. Sedimentation basins shall be used for water pumped from the trench where the ROW crosses streams or where perched water is encountered. All structures shall be checked and maintained regularly during runoff events. Those in stream beds shall be removed as soon as not needed to allow normal aquatic animal movements to continue. On steep slopes adjacent to streams, erosion control matting may be necessary.

3.2.4 Topsoil Salvage and Handling

Contract specifications shall specify how topsoil shall be removed, stored, and restored to all construction sites. Additional special topsoil methods, which will be conducted by the environmental mitigation personnel, are required in areas containing sensitive plants and habitats and will be listed in site-specific vegetation restoration plans (see the Biological Resources Mitigation Plan). The removal, storage, and replacement of this topsoil will be coordinated with the construction contractors by the PEPM to avoid conflicts, delays, or loss of salvaged material.

Several topsoil methods are available and would be used as appropriate for site-specific conditions along the ROW. Generally, to minimize the amount of construction ROW required to store excavated materials, topsoil will be saved by removing the surface material from the excavation and placing it to one side of the construction ROW. This material will be covered with a marker, such as wheat straw or an inert colored substance that is environmentally benign, to indicate the boundary between topsoil and subsoil. Spoil material from the rest of the excavation will be stored over and next to the surface material. The materials are replaced in the excavation in the reverse of the order removed and with equipment that will minimize mixing of the surface and subsurface materials. This method is applicable where topsoils are deep and native vegetation is not present.

In specifically marked areas of native vegetation, topsoil shall be preserved by scraping the surface soils to a specified depth to one side of the ROW and stockpiling trench spoils either on the other side of the ROW or in a separate windrow. A "double-lift" procedure may be appropriate in specific sensitive resource areas of limited size where topsoil averages more than 12 inches thick. In this case, a first pass by bladed equipment is made to remove the top layer of surface soil that is stored in a windrow (or pile if topsoil is thin and corridor must be narrow) at the edge of the spoils storage side of the ROW. A second cut is then made removing the remainder of the topsoil material and that is stored next to the surface material windrow. Then the trench is excavated and the spoils are stored in a third windrow, avoiding mixing with the other windrows. Locations and descriptions for specific salvage measures will be placed on the drawings and specifications.

In agricultural areas, input will be requested from agricultural land owners regarding any special techniques for handling agricultural soils they may request on their properties. After being confirmed as necessary and practical through consultations among the landowner, the Soil Conservation Service (for areas in USDA Conservation Reserve Program), and CCWA, special techniques determined by CCWA to be practical will be specified in construction contracts.

Topsoil storage areas shall be protected from loss through wind and/or water erosion, especially during the rainy season, and from inadvertent mixing with subsoils. The top layer of soil from native plant communities shall be kept cool and dry by covering to protect the seed bank until corridor restoration occurs as identified on the drawings and specifications. Except where erosion control considerations prevent it or a gently graded bench in a sloped area is required for access along the pipeline, all areas shall be graded back to approximate original contours.

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3.2.5 Trenching, Blasting, and Inspections

For trenches with side slopes steeper than 0.5 to 1 that are not filled by day's end, escape ramps (slope no greater than 0.5 to 1) for wildlife shall be installed at distances no greater than 0.25 mile apart.

When blasting is required for trench excavation, mats, shields, or earth padding shall be placed as necessary and appropriate to protect sensitive vegetation.

3.2.6 Backfilling

The trench must be backfilled as soon as feasible following installation of the pipe. Each day prior to backfilling, environmental monitors shall inspect the trench when left open overnight, and any animals found shall be removed (by qualified personnel) or allowed to escape before filling begins. During backfilling, spoil and topsoil shall be pulled or pushed back into the trench in a manner that avoids vehicular or equipment traffic outside the ROW. The backfill will be compacted, and the surface will be graded to preproject levels except a slight crown (about 10 inches) shall be left over the trench to compensate for subsidence. Materials unsuitable for backfill will be disposed of in accordance with all regulations and as approved by the affected landowner and the construction management staff. Excess fill will not be placed in any drainage or on unstable slopes, but spread over the ROW or disposed of in accordance with all regulations and as approved by the affected landowner and the construction management staff. Excess subsoils shall not be spread over existing topsoil. Site-specific variations to this will be given in the drawings and specifications.

3.2.7 Construction Material and Equipment Storage

All open construction pipes, culverts, or similar structures stored in stockpile areas or on the ROW shall be inspected for small mammals or reptiles (e.g., California horned lizard) before the pipe is buried, capped or otherwise used or moved. All in-place pipeline segments shall be capped daily until buried to prevent entry of animals.

3.2.8 Pets, Camping, Firearms, and Use of Area

No camping shall be allowed on the ROW. Only authorized off site, established camping areas may be used.

To prevent harassment, mortality, or destruction of dens or burrows of wildlife species, pets will not be allowed on the ROW, staging areas, access roads, or any other construction sites. Possession of firearms also shall be prohibited in the same areas unless approved by the PEPM. Construction workers or other personnel shall stay within the marked ROW or facility site. Exceptions which will not cause environmental impacts to biological resources may be granted by the Construction Manager after consultation with the PEPM staff if a job-related need arises. Workers not assigned by the contractor to work shall not be permitted at construction areas during non-scheduled hours.

3.2.9 Trash Control

All trash and litter (wrappers, cans, bottles, scraps, etc.) shall be placed in closed containers and disposed of at an authorized disposal site as necessary to avoid attracting sensitive animals. The ROW and construction areas shall be policed daily by construction personnel and any trash or garbage collected and removed.

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3.2.10 Handling and Disposal of Hazardous Materials and Pollution Control

Hazardous (toxic) materials most likely to be used in the construction area include fuels, lubricants, solvents, and explosives. Storage of these materials shall be at designated staging areas. Servicing of equipment and refueling shall occur within the ROW but shall not be allowed within 600 feet of any flagged sensitive resource or streambed unless approved by the PEPM. Sorbent materials shall be maintained on site for use in cleaning up minor spills. Any such spills shall be cleaned up immediately. Construction contractors shall prepare a spill response plan for review and approval by the Construction Manager and PEPM that specifies excavation and transportation procedures for spills that contact natural soils, regulatory compliance and documentation procedures, and designation of a destination for proper treatment and/or disposal of contaminated materials. Storage or use of hazardous materials in or near streams shall be consistent with CDFG regulations and other state laws.

Water used for pressure testing and cleaning the pipeline will likely be obtained from local wells or municipal supplies. Water used for disinfection of the line will have a high chlorine content. The testing and cleaning water shall be treated on site to remove debris before disposal, and the disinfection water shall either be retained in the pipe until no toxic chlorine residual remains or where approved by the PEPM a temporary bermed area can be used to hold the chlorinated water until no toxic chlorine residual remains. The contractor shall submit a plan to the CCWA that specifies and demonstrates where concrete and other equipment shall be washed along with methods for wash water containment and disposal, and how pipeline testing/cleaning shall be handled to prevent damage to sensitive resources. Groundwater encountered during trenching across streams shall be screened for hydrogen sulfide. If hydrogen sulfide is found, water shall be aerated before discharge into streambed. No wastewaters will be discharged into waters of the United States except as specified by the Regional Water Quality Control Board. A draft Water Discharge and Spill Contingency Plan has been prepared by CCWA and is included as Appendix A.

The contractor shall also prepare a NO_x Reduction Plan to be reviewed and approved by the PEPM and construction management. The plan will address the following:

- The contractor will maintain engine and emission systems in all equipment in proper operating condition. Appropriate maintenance schedules will be defined and implemented. Equipment will be subject to inspection by CCWA. If equipment is observed to be out of tune (as determined by the CCWA representative), the contractor will be required to cease using the equipment until after it has been tuned up and approved for use by the CCWA representative.
- Where the contractor has a choice among several pieces of equipment for the job, the contractor will obtain emissions data for each piece and will select the lowest-emitting (preferably less than 5 gms/bhp-hr of NO_x) equipment for service. The contractor shall include the data in the NO_x Reduction Plan for review and approval by the PEPM.
- The construction contractor will use reformulated diesel fuel on all diesel powered equipment if reformulated diesel fuel is commercially available locally.
- The construction contractor will address the feasibility of implementing 2-degree engine timing retard.
- The construction contractor will address the feasibility of installing high pressure fuel injectors on all equipment which utilizes these injectors.

- The construction contractor will be encouraged to substitute CNG-powered vehicles for diesel or gasoline-powered vehicles. The feasibility of using CNG-powered vehicles will be described.
- The construction contractor will address the feasibility of installing catalytic converters on gasoline-powered equipment.
- During Stage 2 alerts, the contractor will be required to reduce construction activity.

3.2.11 Fire Control Procedures

The construction contractor will prepare and implement a CCWA-approved fire prevention and control plan in consultation with the PEPM and fire protection agencies. The plan will contain the specifications listed below and other specifications developed in consultation with the PEPM and fire protection agencies.

No fires shall be permitted in the construction area. Smoking shall be allowed only in areas cleared of vegetation or in enclosed vehicles. All construction equipment and workers' vehicles shall be equipped with appropriate spark arrestors. Fire extinguishers shall be available at all construction sites and on all construction-related vehicles. Construction supervisors shall maintain contact with local firefighting agencies throughout the dry season to be updated on fire conditions. Fire conditions shall be communicated to all construction personnel. Vehicles are restricted to designated cleared ROW and construction areas.

3.2.12 Collection and Harassment of Species/Collection of Cultural Artifacts

No intentional intrusions upon, killing, or collection of plants or animals at or around the construction site shall be permitted, except as provided for in the Biological Resources Mitigation Plan. If sensitive wildlife species are found within the construction areas, they will be removed by mitigation program personnel who are qualified to handle these species and who possess the appropriate permits. The protocol for dealing with listed and candidate species will be established in the Management Agreement/Permit pursuant to the CESA and the federal Biological Opinion pursuant to the ESA (if any such species are present in the project area).

No collection of prehistoric or historic cultural resource artifacts shall be permitted along the pipeline route or at project facilities except as specified in the Cultural Resources Mitigation Plan. If artifacts are found within construction areas, they will be removed by mitigation program personnel who are familiar with the procedures for handling these materials. The protocol for dealing with cultural resources will be established in the Memorandum of Agreement with State Historic Preservation Office.

3.2.13 Cleanup

After construction is completed, a final ROW cleanup shall include removal of stakes, lath, flagging, barrels, cans, drums, accidental spills (not covered under section 3.2.10), hazardous materials, contaminated soils, and any other trash, debris, refuse, or wastes generated by or during construction activities. Structures and materials placed in streams that are not designed to withstand high seasonal flows shall be removed to areas above the highwater mark before such flows occur.

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3.2.14 Surface Restoration

Contract specifications developed by CCWA shall specify how the surface of the ROW shall be restored. General methods for surface restoration are presented in sections 3.2.2, 3.2.3, 3.2.4, and 3.2.6. The contract specifications shall be guided by the following principles.

The pipeline alignment, staging areas, and other temporary construction sites shall be contoured to approximate the original topography once construction is completed, except where a gently graded bench is required (as shown on Plans) on sloped areas for access along the pipeline. Heavily compacted surface soils shall be loosened by a cultivator or similar device. Stockpiled topsoil shall be replaced on the surface of the excavation (see section 3.2.4). With replacement of the topsoil, rock and natural plant debris also shall be replaced in areas where such material was originally found to the degree practical. Contouring to natural grade must be done without disruption to adjacent undisturbed areas. Sediment collected in any sediment traps shall be removed and deposited at a site where it will not erode back into a water course. Permanent water breaks or terraces shall be constructed where necessary to prevent erosion. On steep grades, earth-filled sacks or stone riprap shall be used as necessary to stabilize the slope.

3.3 POST-CONSTRUCTION PHASE

3.3.1 Revegetation and Aesthetic Enhancement

All areas where vegetation is removed and not covered with permanent facilities (e.g., roads, storage tanks, and the pumping plant) shall be revegetated. Erosion control through soil stabilization or revegetation will be required immediately after construction activities are completed using annual species that have minimal competition with recolonizing native species or with efforts to reestablish native vegetation. Areas of native vegetation will be restored in the appropriate season using methods presented in section 5 of the Biological Resources Mitigation Plan. Vegetation restoration and monitoring shall be the responsibility of the contractor(s) specified by CCWA and may not necessarily be the construction contractor.

Revegetation of the pipeline corridor will reduce aesthetic effects of the project. New structures such as the pumping plant will be screened with vegetation compatible with surrounding land uses and vegetation communities. Exterior lighting will be low-intensity, hooded, and shielded inward to minimize glare. The exterior of buildings will have natural colors compatible with the surrounding terrain or neighborhood.

3.3.2 Post-Construction Access Control

Post construction access control shall be implemented to prevent the ROW from becoming a new travel corridor to unauthorized persons. Gates and signs will be used as appropriate to limit access at intersections with existing roads. Control of access to the ROW shall be determined in conjunction with the desires of ROW landowners. A letter should be sent during the ROW and access road acquisition requesting the landowners to inform CCWA of any special access requirements for their properties. Any special requirements will be specified in construction contracts, after being confirmed as necessary and feasible through consultations between the landowner and CCWA.

3.3.3 Post-Construction Environmental Monitoring and Reporting

Post-construction monitoring shall meet three basic objectives: (1) to assess actual impacts that occurred during construction as compared to the predicted impacts, (2) to monitor revegetation and other mitigation measures, and (3) to meet the monitoring reporting requirements of CEQA.

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3.4.6 Growth Control

CCWA member contractors shall keep records of supply, demand, and groundwater extractions. These records shall be available for public review upon request.

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| CALENDAR PAGE | 274.244 |
| MINUTE PAGE | 1444 |

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Appendix A

WATER DISCHARGE AND SPILL CONTINGENCY PLAN

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CENTRAL COAST WATER AUTHORITY

WATER DISCHARGE AND SPILL CONTINGENCY PLAN

May 11, 1993

SECTION I - PURPOSE OF PLAN

The purpose of the water discharge and spill contingency plan is to provide a response program for the Central Coast Water Authority (CCWA) staff and its contractors in the event of a planned discharge or unplanned spill of chlorinated or chloraminated water (potable drinking water) from the pipeline and related facilities of the CCWA.

SECTION II - SYSTEM DESCRIPTION

The Central Coast Water Authority (CCWA) was formed to bring State Project water into Santa Barbara County. The project is being designed and constructed in conjunction with another project - Phase II of the Coastal Branch of the State Water Project. Phase II of the Coastal Branch is being planned, designed and constructed by the California Department of Water Resources. The overall project begins at the Devils Den Pumping plant in northwestern Kern County and terminates at Lake Cachuma in central Santa Barbara County. It includes approximately 147 miles of buried pipeline, five pumping plants, six reservoirs, a water treatment plant, and a power plant.

The Coastal Branch, Phase II, to be built and operated by DWR, consists of 102 miles of buried pipelines, five tank sites, four pumping plants, and one power recovery station. The Coastal Branch, Phase II, will terminate at Tank 5 on Vandenberg Air Force Base, in northwestern Santa Barbara County.

The Central Coast Water Authority project consists of three principal elements: (1) the Mission Hills Extension, (2) the Santa Ynez Extension, and (3) the Polonio Pass Water Treatment Plant. The Mission Hills and Santa Ynez extensions are known collectively as the Aqueduct Extension. The Aqueduct Extension incorporates 45 miles of 30-39 inch pipeline, one 2.5 million gallon reservoir (Tank 7), and one pumping plant at Santa Ynez, which consists of a forebay, pumps, dechloramination facilities and the control/administration complex. Treated water enters the system at the Polonio Pass Water Treatment Plant, which has a capacity of approximately 43 million gallons per day. Three DWR pumping plants and approximately 12 miles of DWR pipe will transport raw water to the CCWA water treatment

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plant. The treated water will be transported approximately 126 miles through DWR and CCWA pipe to the CCWA Santa Ynez pumping plant where the chloramines will be removed prior to the water entering Lake Cachuma.

WATER TREATMENT

Since the system is designed to deliver treated water to Santa Barbara County, the pipeline, tanks, and Casmalia and Santa Ynez pump stations will be continuously operated with treated water. During the initial start up of the system, the pipeline may be flushed, then pressure tested and finally disinfected. This disinfection operation will employ superchlorinated water. After the pipeline is put into operation, normal treatment of the water will include initial treatment with chlorine, followed by addition of ammonia to form chloramines. Chloramines will form the residual disinfectant which will remain in the water as it moves through the pipeline. At the Santa Ynez pump station, the chloramines will be removed and dechloraminated water will be delivered through the remainder of the pipeline to Lake Cachuma.

TREATED WATER QUALITY

The concern with discharge of potable water to the environment primarily relates to the effects of the disinfection chemicals on the fish and other aquatic animals with gills that may be present in streams which receive the discharges. The two chemicals of concern are chlorine and ammonia. The recommended 1 hour average Quality Criteria goal for aquatic life protection for total chlorine residual in ambient fresh water is 0.019 mg/liter; for ammonia at a typical pH of 8.0 and a temperature of 15° C, it is 0.184 mg/liter of un-ionized ammonia and 6.9 mg/liter for total ammonia. (Quality Criteria for Water 1986, USEPA 440/5-86-001).

During normal operation of the system, the chloraminated water is expected to have a maximum of 2.0 mg/liter of total chlorine residual and 0.5 mg/liter of total ammonia at the exit of the water treatment plant. At the typical pH of 8.0 in the pipeline, the un-ionized residual of ammonia will be 0.027 mg/liter, which is well below the water quality goal of 0.184 mg/liter. Therefore, ammonia is not expected to be a water quality issue if fish are exposed to this water. It is expected that the total chlorine residual will essentially be approximately 0.4 mg/liter at the Santa Ynez pump station. The entire length of the pipeline during normal operations will have levels for chlorine residual which are higher than the recommended EPA standards stated above. As a result, CCWA plans to implement procedures to eliminate controlled discharges of treated water which exceed EPA standards, where the discharges may reach streams with fish.

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As water with chloramines is released from a blow-off structure, tank or pump station, the chloramines will dissipate. This dissipation of the chlorine will accelerate as soon as the water is in contact with the atmosphere. The rate of dissipation depends on the concentration, temperature, and the amount of spreading and aeration. The slowest dissipation will occur during colder weather. The un-ionized ammonia will be well below water quality goals at the pH levels found in the treated water and in the soils and streams where the water might flow. Facilities to remove chloramines from the discharged water are only required where the treated water may enter a stream before the chloramine residuals have been reduced below water quality goal levels.

POSSIBLE EFFECTS OF A SPILL ON STREAMS

Water which is discharged during the project may find its way to local streams by flowing over land to the stream. In some cases, the water may percolate into the ground before reaching the stream. During normal operations, spills due to operational requirements and resulting from accidents may occur. Spills which can be predicted or controlled will receive treatment to eliminate the chloramines from the water. However, some events are not predictable or controllable. In these rare cases, chloraminated water may be released from the pipeline in a manner which allows chloraminated water to reach local waters. Special situations and accidental discharge scenarios are discussed below.

The exact effects of any chloraminated water on receiving waters is very difficult to determine due to the large number of variables which affect the dissipation rate. The single biggest variable is the presence of organic material in the receiving waters or on the ground surface over which the water flows. If high amounts of organic material are present, the chlorine will react with the organic material, resulting in a reduction of the chlorine in the water. Also, high temperature will cause the chlorine to dissipate. Daylight will cause the chlorine to dissipate and the slope of the terrain will influence how quickly the water flows into the stream. The relative quantities of water from the spill and flowing in the stream will determine the relative importance of the chloraminated water on the quality of the receiving water. The season of the year will have an influence on several of the above factors. Due to the large number of variables, any estimate of a specific scenario would be speculative and the scenario would not represent a likely event. Therefore, no specific estimates of the duration of the effects of an uncontrolled chloramine spill are made in this plan. If an accidental spill occurs near a stream with fish, the resource agencies will be notified and the impacts will be analyzed.

SECTION III - WATER DISCHARGES AND SPILL CONTINGENCIES

This plan addresses the various types of potential water discharges from the system. The

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water discharge scenarios address the various ways in which significant quantities of treated water could be discharged from the pipeline during initial disinfection of the pipeline and during normal operational activities, as well as accidental discharges as a result of seismic events or other unplanned situations.

Accidental spills will be treated on a case by case basis. Pipeline spills will be minimized through incorporation of a number of different design features including:

1. The pipeline will be divided into sections which can be isolated from other sections with valves. These valves include those at pump stations, tanks and specific isolation valves near fault crossings.
2. A communications network will constantly monitor of flows and will provide automatic alarms and automatic closure of valves in the event of a spill from the pipeline, a tank or a pump station.
3. Systems designed to avoid spills at all tanks.
4. Standard operating procedures which include prompt response to spills from the pipeline and provide for stopping the flow of water as soon as possible automatically, with manual backup.

These features reduce the amount of water loss from the pipeline, and therefore limit water and flood damage during seismic events and other accidents.

WATER DISCHARGE DURING WASH AND PRESSURE TESTING

At the start up of a newly constructed or repaired treated water pipeline, the pipeline must be initially washed out to clear it of large debris. After the initial wash, it will be pressure tested to ensure that it was properly constructed and that there are no leaks. These two functions are performed with water supplied from the treatment plant site, or untreated water from wells along the pipeline route.

Wash and pressure test water will not be chloraminated. It will be obtained from wells, or the water will be dechloraminated. Currently, the schedule indicates that chloraminated water will not be available from the treatment plant when these functions are performed, so it is very unlikely that the water will need to be dechloraminated. The pipeline will be washed out to remove debris remaining from construction. When wash water is discharged, it will be directed into a settling basin to allow the debris to be separated from the water. The water will then be allowed to spread out to the local ground surface. Erosion control will be provided and will be described in the erosion control plan prepared by the contractor as a part of the stormwater control plan. Pressure test water will be treated in a similar manner, except that much less debris will need to be removed in the settling basin, since the pipeline will have already been washed out in the previous operation. If, due to the situation, alternative methods of disposal are required, these methods will be reviewed and approved by the

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resource agencies and the Regional Water Quality Control Board.

WATER DISCHARGE DURING DISINFECTION

Once the pressure test is passed, the pipeline must be disinfected to ensure that all organic material is oxidized and all microorganisms are killed. For this project, the disinfection will be performed with superchlorinated water, which has concentrations up to 50 mg/l of free chlorine residual.

The chlorine residual in the water in the pipeline will decrease over time as the chlorine reacts initially with organic materials in the water and the pipeline. Eventually, the remaining chlorine reacts with material which coats the interior wall of the pipeline. After 7 to 10 days, there will be essentially no residual remaining. The water will be tested to determine when this has occurred.

Once the residual is below the Quality Criteria Goal, the water will be drained from the pipeline. This drainage is not expected to cause any change in water quality in local streams. CCWA will require its contractors to discharge the water in a manner to avoid erosion and a significant increase in suspended solids. The methods to accomplish this include low rate and/or low pressure releases, use of temporary sediment barriers such as rows of straw bales, sand bags, silt fences and interceptor ditches or diversion dikes, and discharge of dechlorinated/dechloraminated water directly into streams where possible to avoid all local erosion.

SPILL CONTINGENCIES

There are two faults of concern along the pipeline route. The Los Alamos-Baseline Fault is located in the San Antonio Creek Valley. The pipeline in the vicinity of this fault will be provided with isolation valves located approximately 1,500 feet on either side of the fault. The pipeline will cross San Antonio Creek on a pipe bridge.

The Santa Ynez River Fault is believed to generally follow the Santa Ynez River bed, crossing the pipeline alignment at two locations; one near the Avenue of the Flags bridge, and the other near the Alisal Road Bridge. There is also a possibility that the alignment may be changed to avoid crossing at the Avenue of the Flags bridge. This alternate alignment will include a crossing under the river through a bored tunnel about 3 miles west of the Avenue of the Flags bridge. The area of the Santa Ynez River Fault will also be protected with two isolation valves. One valve will be located south of Highway 246 near Buellton. The other valve will be located just upstream of the Solvang turnout. These two valves effectively isolate any pipeline breaks that may occur along the entire reach near the Santa Ynez River

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Fault

The four isolation valves will consist of pneumatically operated valves enclosed in concrete vaults, designed to automatically close the pipeline. The valves may be equipped to react to either ground movement or sudden pressure loss, or a combination of both. During a seismic event, or any sudden pressure loss, the valves will close rapidly (15-25 seconds) to limit the loss of water from the pipeline. However, an effect called surge could rupture the pipeline and cause total loss of all water in the pipeline if the valves close suddenly with no way to dissipate the pressure. The problem will be resolved by installing 12-inch diameter bypass valves around the large isolation valves. The large valves can then be closed rapidly and the smaller bypass valves at a slower rate to prevent excessive outflow and minimize the pressure surges. The smaller valves will close in 75-125 seconds. This slow closure will protect the pipeline from surge stresses.

Tank 7 is a storage tank with a capacity of 2.5 million gallons. The nearest drainages are approximately 700 feet from the Tank. In order to minimize the effect of an earthquake, the tank will be designed as a partially buried tank with all but the top 7 feet buried. A discharge from the tank may occur in unusual circumstances if both the automatic and backup control systems fail. An overflow basin will be constructed near the tank with a capacity to hold the entire contents of one hour of flow from the pipeline (at 26 CFS, one hour of flow is 700,180 gallons). This will provide CCWA enough response time to allow pipeline operational personnel to drive to the tank site and manually shut off flow to Tank 7.

The forebay of the pump station will have a capacity of 200,000 gallons. The water entering the forebay will be dechloraminated as it enters. The nearest watercourse is the Santa Ynez River, which is approximately 2000 feet from the pump station. The site of the pump station will be graded so that discharges from the forebay will flow to an overflow basin on the property rather than into any watercourse. The overflow basin will prevent erosion and water damage to adjacent properties. This basin will have the capacity to hold one hour of flow from the pipeline (592,460 gallons). This will provide enough time for the Authority to manually shut off flow to the pump station.

Prior to startup of the pipeline, CCWA staff will develop specific Standard Operating Procedures to deal with discharges from the pipeline, Tank 7, or the forebay of the Santa Ynez Pump Station. The plans will specify procedures for dealing with emergency situations. These procedures will include identification of who would respond to various types of spills, what actions will be taken to minimize spills and the impacts of spills and notification of resource agencies in specified circumstances.

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WATER DISCHARGE DURING OPERATIONS

Water discharges during normal operations are under the control of the CCWA, and can be planned ahead of time. This advanced planning allows the Authority to avoid discharges of treated water into the local environment. During normal operations, the water will be treated with chloramines, which must be removed prior to discharge of the water into the streams or rivers.

The removal of the chloramines in the treated water is possible using the dechloramination process which is to be used at the Santa Ynez Pump Station. This process utilizes sodium bisulfite (NaHSO_3) to convert the chloramines to ammonium and chloride. This treatment process does not require extremely large equipment, so it is possible to make a portable version of the dechloramination equipment. The project will maintain a "dechloramination trailer" which will be stored at the maintenance building for the project. This trailer will hold all the required pumps, mixing equipment, valves and connections to allow dechloramination of any discharges contemplated during normal operations. Adequate storage tanks will be provided on the trailer to store enough sodium bisulfite to treat any planned discharge.

During drainage of any portion of the pipeline through the blow-offs, the dechloramination trailer will be positioned at the site of the blow-off. Connections will be provided which allow the discharged water to pass through the equipment on the trailer and then be routed to the appropriate discharge point. The trailer valves and equipment will be operated to dechloramine the water as it flows from the pipeline.

NOTICE OF DETERMINATION

93 SEP -1 PM 4: 26

TO: County Clerk, County of Santa Barbara
105 East Anapamu Street
Santa Barbara, CA 93101

CC: Office of Planning and Research
1400 Tenth Street, Room 121
Sacramento, CA 95814

FROM: Central Coast Water Authority (CCWA)
1933 Cliff Drive, Suite 12
Santa Barbara, CA 93109

COUNTY OF SANTA BARBARA
CLERK OF THE
BOARD OF SUPERVISORS

SUBJECT

Filing of Notice of Determination in Compliance with Section 21108 or 21152 of the Public Resources Code

Project Title: REVISIONS TO SANTA YNEZ EXTENSION AND MISSION HILLS EXTENSION

State Clearinghouse Number: 91031071

Lead Agency Contact Person: Dan Masnada, Executive Director

Phone: (805) 962-3294

Project Location: City of Solvang, City of Buellton, Vandenberg Air Force Base, and unincorporated area of the County of Santa Barbara — a water pipeline from the terminus of the Coastal Branch, Phase II, project constructed by the California Department of Water Resources, at Tank 5 on Vandenberg Air Force Base, to the existing Improvement District No. 1 water pipeline in Santa Ynez Valley, then to Bradbury Dam and Lake Cachuma.

Project Description: Facilities required to transport State Water Project (SWP) water conveyed to Santa Barbara County by the SWP Coastal Branch pipeline, with appurtenant turnouts to allow for local extensions, a pumping plant, dechloramination facilities, and related facilities. The original project was approved in 1992, but a number of project revisions have been approved to realign the pipeline, eliminate one water tank, consolidate dechloramination and pumping facilities at one location, and refine and redescribe the design of the water treatment plant. For more information as to the precise project revisions which are the subject of this approval, see the Final Supplement to Final Environmental Impact Reports for Santa Ynez Extension and Mission Hills Extension.

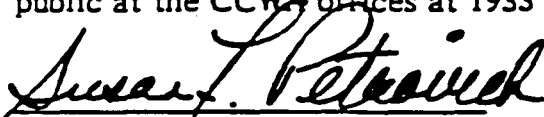
This is to advise that the Board of Directors of CCWA has approved the above-described project revisions on August 26, 1993, and has made the following determinations regarding the above-described project revisions:

1. The project, even as revised, will have a significant effect on the environment.

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2. Environmental Impact Reports (EIRs) were prepared for this project pursuant to the provisions of CEQA. A Supplement to the EIRs was prepared for the project revisions pursuant to the provisions of CEQA.
3. Mitigation measures were made a condition of the approval of the project.
4. A Statement of Overriding Considerations was adopted for this project.
5. Findings were made pursuant to the provisions of CEQA.

This is to certify that the final EIRs and the final Supplement to the EIRs with comments and responses and record of project approval are available to the general public at the CCWA offices at 1933 Cliff Drive, Suite 12, Santa Barbara, CA 93109.



Susan F. Petrovich,
Counsel for CCWA

Date: September 1, 1993

Date Received for Posting by County

Clerk 

CALIFORNIA DEPARTMENT OF FISH AND GAME
530 E. Montecito St., Room 104
Santa Barbara, California 93103
(805) 964-8849
(310) 590-5137 Region 5 Long Beach

RECEIVED
FEB 09 1994
FISH AND GAME
SANTA BARBARA, CA

February 4, 1994

Re: Agreement No. 5-012-94
Santa Ynez/Mission Hills
Extensions of State Water
Project

Dr. Rosemary Thompson
Science Applications International Corp.
816 State St., Suite 500
Santa Barbara, CA 93101

RECEIVED

FEB 7 1994

SAIC, Santa Barbara

Dear Rosemary:

Enclosed are two copies of Streambed Alteration Agreement 5-012-94. If you agree with the conditions/measures set forth in the agreement, **PLEASE SIGN BOTH COPIES AND RETURN BOTH TO OUR OFFICE FOR SIGNATURE, AT THE ABOVE ADDRESS.** Written notice of your intent to commence project activities needs to be provided to the Department at least five days in advance of commencing project activities.

The California Fish and Game Code requires that you notify the Department in writing within 14 days of receipt of this Proposal as to its acceptability. If you do not respond within this time period you will lose your right to request binding arbitration. For minor changes we suggest you contact the person responsible for writing your agreement prior to sending the written response.

If you have any questions regarding the proposed conditions please contact me at the numbers listed above.

Thank you for your cooperation in this matter.

Kenneth C. Wilson
Environmental Services Specialist
Environmental Services, Region 5

5-012-94.sa2

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CALIFORNIA DEPARTMENT OF FISH AND GAME

330 Golden Shore, Suite 50
Long Beach, California 90802

FEB 09 1994
FISH AND GAME
SANTA BARBARA, CA

Notification No. 5-012-94.sa2
Page 1 of 9 February 4, 1994

AGREEMENT REGARDING PROPOSED STREAM OR LAKE ALTERATION

THIS AGREEMENT, entered into between the State of California, Department of Fish and Game, hereinafter called the Department, and the Central Coast Water Authority (CCWA), 1933 Cliff Drive, Suite 12, Santa Barbara 93109, State of California, hereinafter called the Operator, is as follows:

WHEREAS, pursuant to Section 1603 of California Fish and Game Code, the Operator, on the 11th day of January, 1994, notified the Department that they intend to divert or obstruct the natural flow of, or change the bed, channel, or bank of, or use material from the streambed(s) of, the following water(s): 16 streams and bodies of water, Santa Barbara County, California.

WHEREAS, the Department (represented by Kenneth C. Wilson and Jim White) inspected the area on the 7th day of June 1993 and Jim White on the 8th day of June 1993 and have determined that such operations may substantially adversely affect existing fish and wildlife resources including: fishes (Unarmored-threespine stickleback, steelhead), amphibians (red-legged frog, California tiger salamander), reptiles (southwestern pond turtle, coast horned lizard), raptors (Cooper's Hawk, Longeared Owl, songbirds (least bells vireo, willow flycatcher, and other species of special concern), mammals and other aquatic and wildlife resources in the area.

THEREFORE, the Department hereby proposes measures to protect fish and wildlife resources during the Operator's work. The Operator hereby agrees to accept the following measures/conditions as part of the proposed work.

If the Operator's work changes from that stated in the notification specified above, this Agreement is no longer valid and a new notification shall be submitted to the Department of Fish and Game. Failure to comply with the provisions of this Agreement and with other pertinent code sections, including but not limited to Fish and Game Code Sections 5650, 5652, 5937, and 5948, may result in prosecution.

Nothing in this Agreement authorizes the Operator to trespass on any land or property, nor does it relieve the Operator of responsibility for compliance with applicable federal, state, or local laws or ordinances. A consummated Agreement does not constitute Department of Fish and Game endorsement of the proposed operation, or assure the Department's concurrence with permits required from other agencies.

This Agreement becomes effective on date of Department signature and terminates May 1, 1995, for project construction only. This Agreement shall remain in effect for that time necessary to satisfy the terms/conditions of this Agreement.

STREAMBED ALTERATION CONDITIONS FOR NOTIFICATION NUMBER: 5-012-94

1. The following provisions constitute the limit of activities agreed to and resolved by this Agreement. The signing of this Agreement does not imply that the Operator is precluded from doing other activities at the site. However, activities not specifically agreed to and resolved by this Agreement, shall be subject to separate notification pursuant to Fish and Game Code Sections 1600 et seq.

2. The Operator proposes to alter the streambed to install a buried water pipeline crossing the bed, bank, and channel of sixteen streams.

3. The agreed work includes activities associated with No. 2 above. The project area is located in Santa Barbara County. Specific work areas and mitigation measures are described on/in the plans (Environmental Mitigation Plans for Areas A and B Prepared by Montgomery Watson) and documents (CESA MOU and Management Authorization for the Construction and Operation of the Polonio Pass Water Treatment Plant and the Mission Hills and Santa Ynez Extension of Coastal Branch Phase II of the State Water Project, Central Coast Water Authority; Final Biological Resources Mitigation Plan, Dated September 1993; Final Mitigation Program Dated, September 1993; Section 01030 -- Environmental Mitigation Dated January 1994); topographic maps of the pipeline corridor; Tables of streams crossed and paralleled; data sheets and photos for each crossing; and aerial photos Dated 8/26/92) submitted by the Operator and **SHALL BE IMPLEMENTED AS PROPOSED, UNLESS DIRECTED DIFFERENTLY BY THIS AGREEMENT.**

4. The Operator shall request an extension of this agreement prior to its termination if all operations contemplated under this agreement have not yet been completed. Extensions may be granted for up to 12 months from the date of termination of the agreement and are subject to Departmental approval. The extension request and fees shall be submitted to the Department's Region 5 Office at the above address. If the Operator fails to request the extension prior to the agreement's termination, then the Operator shall submit a new notification with fees and required information to the Department. Any activities conducted under an expired agreement are a violation of Fish and Game Code Section 1600 et. seq. The Operator may request two extensions of this agreement for construction purposes only, and 10 extensions for restoration work.

5. All activities shall be in conformance with the CESA Memorandum of Understanding/Management Agreement (Reference Number 9322) executed with CCWA for the Mission Hills/Santa Ynez Extension project. Activities shall also be in conformance with the Mitigation Program, Biological Resources Mitigation Plan, and Environmental Mitigation Drawings and Specifications for this project.

(*6. The Operator shall submit the Stormwater Pollution Prevention Plan (SWPPP) (that includes the Erosion Control Plan and the Wastewater Disposal Plan) to the Department for review and approval. No Construction within drainages shall occur prior to Department approval of the these documents. The Department will

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approve these Plans or propose changes to such plans within 30 calendar days.

(*6a. No clearing of riparian vegetation shall occur until the Revegetation Plan has been reviewed and approved by the Department.

7. Disturbance or removal of vegetation shall not exceed the limits approved by the Department and shown on the environmental mitigation drawings and specifications. The disturbed portions of any stream channel, within the high water mark of the stream, shall be restored to their original condition under the direction of the Department.

8. Restoration shall include the revegetation of stripped or exposed areas with plant communities present prior to construction according to the Department approved revegetation plan for the project.

9. Trees and large shrubs shall be removed by cutting rather than grading, except in the trench.

10. No equipment shall be operated within actively flowing water, except under the following condition.

11. When work in a flowing stream is unavoidable, the entire stream flow shall be diverted around the work area by pumping from upstream well points, a barrier, temporary culvert, new channel, or other means approved by the Department. Location of the upstream and downstream diversion points shall be approved by the Department. Construction of the barrier and/or the new channel shall normally begin in the downstream area and continue in an upstream direction, and the flow shall be diverted only when construction of the diversion is completed. Channel bank or barrier construction shall be adequate to prevent seepage into or from the work area. Diversion berms may be made of onsite alluvium of low silt content. Channel banks or barriers shall not be made of imported earth or other substances subject to erosion unless first enclosed by some protective material. The enclosure and the supportive material shall be removed when the work is completed and removal shall normally proceed from downstream in an upstream direction.

12. The Operator shall temporarily store excavated materials within the construction easement at each site in a manner and location such that the materials will not wash or fall into the streambed or stream flows.

13. Measures shall be taken to divert runoff from steep, erodible surfaces, or from work areas adjacent to but not crossing streams, into stable areas with little erosion potential. Frequent water checks shall be placed on dirt roads, cat tracks, or other work trails to control erosion.

(*14. Spoil storage sites shall be located so not be washed back into a stream. Soil may be stored on the banks (on the streambed) when temporarily placed within the work area to protect the roots of cut vegetation, as described in the plans and specifications, or where salvaged topsoil from the

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stream is temporarily stored and kept moist to maintain roots, tubers, etc. to be used in revegetation. Spoil shall not be stored outside the work area shown on the plans or where it will cover aquatic or riparian vegetation, except as specified above. Excess materials may be removed from the streambed or spread within the streambed in a manner which minimizes the alteration of the streambed contours and is consistent with local, state, and federal regulations. No materials foreign to the streambed shall be spread within the streambed, except as allowed in Condition 11.

15. The Operator shall provide to the Department for review and approval, a plan for temporary construction and placement of silt settling basins or spreading areas and temporary berms or similar diversion devices, if proposed, for dewatering purposes. This plan shall include, but shall not be limited to, the proposed dimensions of the work area for constructing the diversion berms and channels, basins or spreading areas, installation of silt barriers (if required), stockpiling of materials, and outflow locations.

16. The Operator's operation may include subsurface dewatering through a combination of one or more techniques, such as constructing temporary well points, in close proximity to the trench, and pumping water directly from the trench, as necessary and as consistent with the conditions set forth in this agreement.

17. Any sediment accumulated during the dewatering process shall be removed from the streambed or shall be placed in the trench, above the pipe zone, during backfilling.

18. Silt settling basins or spreading areas, to be used for dewatering purposes, shall be located away from the existing live stream or pond areas to prevent discolored, silt-bearing water from reaching the live stream during any flow regime.

19. The Operator shall specify in the final plans and specifications for this project, all terms and conditions of this agreement pertinent to the project activities at each site.

(*)20. Water containing mud, silt, or other pollutants from construction related activities, shall not be allowed to enter a flowing stream. Silty/turbid water shall not be discharged into the flowing stream. Such water shall be settled, and silt shall be controlled as specified in Condition No. 15. and in a manner consistent with local, state, and federal regulations. Upon completion of construction, silt fencing, temporary berms, diversion devices, and/or other silt protective measures shall be removed from the bed, bank, and channel of the stream.

21. If a stream channel has been altered during the operations, its low flow channel shall be returned, as nearly as possible, to pre-project conditions without creating a possible future bank erosion problem, or a flat wide channel or sluice-like area. The gradient of the streambed shall be returned to pre-project grade, to the extent feasible, given the need to spread **CALENDAR PAGE 274.283** after the trench has been backfilled, unless such operation is part of a restoration project, in which case, the **MINUTE PAGE** must **1461** be approved by the Department prior to project commencement.

22. Rock, gravel, and/or other materials shall not be imported to, taken from or moved within the bed or banks of the stream, except as otherwise addressed in this Agreement.

(*)23. Clean sand, gravel, and similar alluvial materials shall be obtained from onsite or offsite sources to provide bedding and backfill under, around, and over the pipe and within the trench. Fill length, width, and height dimensions shall not exceed those of the original naturally occurring topography, contour, and elevation, except as provided in Condition 21.

24. The limits of the work area within the banks, bed, and channel of the streams shall be flagged as shown on the project drawings.

25. Vegetation shall not be removed or intentionally damaged beyond the limits specified in the previous Condition.

26. A complete inventory of plants by species with Diameter at Breast Height (DBH)s of 3 inches or greater, which could be removed, shall be recorded on the environmental mitigation drawings, for use in the revegetation, prior to commencement of construction. Any changes during construction shall be recorded by the biological monitors.

(*)27. Vegetation removed from the stream shall not be permanently stockpiled in the stream bed or on its banks; it will be removed prior to winter rains. The sites selected on which to push this material out of the stream should be selected in compliance with the other provisions of this Agreement. Where possible brush piles shall be left outside of the banks, bed, and channel of the stream to provide wildlife habitat.

28. Trees that grow over the pipeline at stream crossings which could damage the pipe or prevent future access during normal maintenance activities, over the life of the project, shall be selectively trimmed, under the direction of a qualified arborist, or removed so that the streamcourse and associated riparian vegetation are not damaged. Herbicides shall not be used on native vegetation without prior approval of the Department.

29. If mature perennial trees have been removed from the upper one-half of the stream's banks, they shall be replaced in-kind, and maintained until established, under the direction of a Department representative.

(*)30. In order to determine if the revegetation techniques used have been successful any plant species required that are listed below shall achieve the minimum growth and cover (*) at the end of three and five years (designated below). If the minimum growth is not achieved then the Operator shall be responsible for taking the appropriate corrective measures as determined by Department representatives. The Operator shall be responsible for any cost incurred during the revegetation or in subsequent corrective measures.

| SPECIES | SIZE AT PLANTING (GALLONS) | PLANTING CENTERS | HEIGHT | |
|----------------|----------------------------------|---------------------|---------|---------|
| | | | 3 years | 5 years |
| Arroyo Willow | 1 gallon | 8 ft | 10 ft | 15 ft |
| Sandbar Willow | 1 gallon | 5 ft | 4 ft | 6 ft |
| Red Willow | 1 gallon | 8 ft | 9 ft | 15 ft |
| Sycamore | 1 gallon | 20 ft | 5 ft | 9 ft |
| Cottonwood | 1 gallon | * | 7 ft | 12 ft |

* = Depending if used as supplemental species (40 ft O.C.) or if dominant species (15 ft O.C.)

All Shrub species

1 gallon *

* = Plant in naturalized clumps and randomly scattered.

31. Density and growth of plantings shall meet or exceed the standards specified in Condition Number 30, five years after planting and/or shall attain 75% of pre-project cover after 3 years and 90% of the pre-project cover after 5 years from the date of planting. If the survival and cover requirements have not been met, the Operator shall be responsible for replacement planting to achieve these requirements. Replacement plants shall be monitored with the same survival and growth requirements for 5 years after planting.

32. All planting shall be done as soon as possible following completion of construction at each location. Planting shall be done between October 1, 1994 and May 1, 1995 to take advantage of the winter rainy season, depending upon environmental conditions at the site.

33. An annual report shall be submitted to the Department by Jan. 1 of each year for 5 years after planting. This report shall include the survival rate, % cover, and height of both tree and shrub species. The number by species of plants replaced, an overview of the revegetation effort, and the method used to assess these parameters shall also be included. Photos from designated photo stations shall be included.

34. When technically feasible, plant material for revegetation shall be derived from cuttings (or rooted supercell cuttings, as appropriate) obtained from randomly selected native trees and shrubs occurring within the same drainage.

35. Any replacement tree stock which must be obtained from a native plant nursery, shall not be inoculated to rot.

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36. The Operator shall remove any invasive woody non-native vegetation (tree tobacco, castor bean, giant cane, etc.) from

the work area and shall dispose of it in a manner and a location which prevents its reestablishment. Removal shall be done at least twice annually during the spring/summer season, as needed, through the term of restoration so that competition with plantings is kept to a minimum.

37. Giant Cane shall be cut to a height of 6 inches and the stumps painted with an herbicide approved for aquatic use within 9 minutes of cutting. Herbicides shall be applied at least three times during the period from May 1 to October 1 to eradicate these plants.

38. Where control of vegetation is required within the bed, bank, or channel of the stream, the use of herbicides is necessary, and there is a possibility that the herbicides could come into contact with water, the Operator shall employ only those herbicides, such as Rodeo, which are approved for aquatic use. If surfactants are required, they shall be restricted to chemicals, such as Agri-Dex, which are approved for aquatic use.

39. The Operator shall apply any herbicides as permitted by state and federal law. No herbicides shall be used where Threatened/Endangered species occur.

40. Vehicles shall not be driven or equipment operated in water covered portions of a stream, or where wetland vegetation, riparian vegetation, or aquatic organisms may be destroyed, except as otherwise provided for in the Agreement and as necessary to complete authorized work.

41. Access to the worksite shall be as stated in the project specifications.

42. Upon Department determination that turbidity/siltation levels resulting from project related activities constitute a threat to aquatic life, activities associated with the turbidity/siltation, shall be halted until effective Department approved control devices are installed, or abatement procedures are initiated.

43. Any equipment or vehicles driven and/or operated within or adjacent to the stream shall be checked and maintained daily, to prevent leaks of materials that if introduced to water could be deleterious to aquatic life.

44. The clean-up of all spills, within or adjacent to the stream, shall begin immediately. The Department shall be notified immediately by the Operator of any spills and shall be consulted regarding clean-up procedures.

45. No equipment maintenance or refueling shall be done within or near any stream channel where petroleum products or other pollutants from the equipment may enter these areas under any flow.

46. The Operator has obtained, from the U.S. Army Corps of Engineers, a Nationwide Permit Number 12). The Operator shall

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provide to the Department a copy of any attached conditions before commencing construction. The Department shall be entitled to enforce all such conditions and the same are incorporated by reference into this Agreement.

47. The Operator shall telephone the Department's fishery biologist, Mauricio Cardenas, at (805) 568-1223, prior to commencing activities within the bed, bank, and channel of the streamcourses. The Operator shall leave his/her name, date and time called, telephone number, the river name, work location, nature of planned activities, and proposed schedule.

48. Except as otherwise provided in this Agreement, no debris, soil, silt, sand, bark, slash, sawdust, rubbish, cement or concrete or washings thereof, oil or petroleum products or other organic or earthen material from any logging, construction, or associated activity of whatever nature shall be allowed to enter into or placed where it may be washed by rainfall or runoff into, waters of the State. When operations are completed, any excess materials or debris shall be removed from the work area, except as otherwise provided in this Agreement. No rubbish shall be deposited within 150 feet of the high water mark of any stream.

49. The Operator shall comply with all litter and pollution laws. All contractors, subcontractors and employees shall also obey these laws and it shall be the responsibility of the operator to ensure compliance.

50. The Operator shall provide a copy of this Agreement to all contractors, subcontractors, and the Operator's project supervisors. A copy of this Agreement and all other permits and environmental documents shall be kept in the central field construction office at all times work is in progress, and must be presented to any Department personnel, or personnel from another agency, with jurisdiction over the project, upon demand.

Copies of this Agreement shall be readily available at the work sites at all times during periods of active work and must be presented to any Department personnel, or personnel from another agency, with jurisdiction over the project, upon demand.

51. The Operator shall notify the Department, in writing, at least five (5) days (**) prior to initiation of construction (project) activities and at least five (5) days prior to completion of construction (project) activities. Notification shall be sent to the Department at 330 Golden Shore, Suite 50, Long Beach, CA 90802, Attn: ES. FAX Number (310) 590-5192 or 5193 (Reg 5-LB)(**). The Department's signature on this agreement shall suffice for 5 day notice of intent to commence activities under this agreement.

52. The Department reserves the right to enter the project site at any time to ensure compliance with the conditions of this Agreement.

53. The Department reserves the right to suspend and/or revoke this Agreement if the Department determines that any of the following have occurred:

a. Failure to comply with the terms/conditions of this Agreement.

b. The information provided by the Operator in support of the Agreement/Notification is determined by the Department to be incomplete, or inaccurate.

c. When new information becomes available to the Department representative(s) that was not known when preparing the original terms/conditions of this Agreement (including but not limited to the occurrence of state or federally listed species in the area).

d. The project as described in the Notification/Agreement has changed, or conditions affecting fish and wildlife resources have changed.

CONCURRENCE

Central Coast Water Authority

Department of Fish and Game

Bruce Burnworth 2-8-94
(signature) (date)

Ken Wilson 9 Feb 1994
(signature) (date)

Deputy Director
(title)

Environmental Services Specialist
(title)

CENTRAL COAST WATER AUTHORITY

MAJOR PROJECT MILESTONES

| | |
|---------------|---------|
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| STA | REACHES "A"&"B" TANK 7 | WATER TREATMENT PLANT 43 MGD | REACH "C" SANTA YNEZ PUMP STATION MICRO TUNNELING |
|-------------------|---------------------------|------------------------------------|--|
| 95% SUBMITTAL | OCT 22, 1993 | NOV 16, 1993 | FEB 11, 1994 |
| FINAL COST EST. | DEC 22, 1993 | JAN 15, 1994 | MAR 23, 1994 |
| FINAL DESIGN 100% | DEC 23, 1993 | JAN 4, 1994 | APR 4, 1994 |
| ADVERTISE | JAN 18, 1994 | FEB 4, 1994 | APR 21, 1994 |
| BID OPENING | MAR 1, 1994 | APR 4, 1994 | JUN 2, 1994 |
| AWARD APPROVAL | MAR 24, 1994 | APR 28, 1994 | JUN 22, 1994 |
| BEGIN CONSTR | APR 11, 1994 | JUN 1, 1994 | JUL 12, 1994 |
| END CONSTR | APR 11, 1995 | JUN 1, 1996 | JUL 12, 1995 |

END

CALIFORNIA ENDANGERED SPECIES ACT
MEMORANDUM OF UNDERSTANDING

by and between

THE CENTRAL COAST WATER AUTHORITY
and
CALIFORNIA DEPARTMENT OF FISH AND GAME

regarding

CONSTRUCTION AND OPERATION OF THE POLONIO PASS
WATER TREATMENT PLANT AND THE
MISSION HILLS EXTENSION AND SANTA YNEZ EXTENSION
OF THE STATE WATER PROJECT

(Ref. No. 9322)

This California Endangered Species Act Memorandum of Understanding ("CESA MOU") is made and entered into by and between the Central Coast Water Authority, hereafter referred to as "CCWA", and the California Department of Fish and Game, hereafter referred to as the "Department".

The purpose of this CESA MOU, governing the management of the unarmored threespine stickleback (Gasterosteus aculeatus williamsoni), the bald eagle (Haliaeetus leucocephalus), the southwestern willow flycatcher (Empidonax traillii), the least Bell's vireo (Vireo bellii pusillus), the seaside bird's-beak (Cordulanthus rigidus littoralis), and the San Joaquin kit fox (Vulpes macrotis mutica), is to provide authority to "take" the identified state-listed threatened and endangered species under authority of section 2081 of the California Fish and Game Code. The permitted activities include the project as described in the attached California Endangered Species Act Management Authorization ("MA") (Exhibit 1). The described actions are to be undertaken as management activities for the benefit of the identified threatened and endangered species in order that the proposed project does not result individually or cumulatively in the destruction or adverse modification of habitat essential to the continued existence of the listed species. CCWA's obligations are as specified in this CESA MOU and as further set forth in the California Endangered Species Act Management Authorization, attached hereto as Exhibit 1 and which shall be executed contemporaneously with this CESA MOU.

WHEREAS, CCWA proposes to manage habitat of the unarmored threespine stickleback, the bald eagle, the southwestern willow flycatcher, the least Bell's vireo, the

seaside birds-beak, and the San Joaquin kit fox, as well as a number of other species of special concern, all of which are known to occur at or in the vicinity of the project site, and desires to minimize impacts to these species which could result from the project.

WHEREAS, pursuant to California Fish and Game Code section 1802, the Department has jurisdiction over the conservation and protection of fish, wildlife, and native plants and their habitat and holds those resources in trust for the people of California.

WHEREAS, the Department desires, consistent with the policies of the California Endangered Species Act, that there be permanent protection for the above-named state-listed species and their habitat to assure the conservation, protection, restoration, enhancement, and management of such listed species.

AND, WHEREAS, CCWA agrees to undertake the management activities contained in this CESA MOU and all exhibits attached hereto.

NOW THEREFORE, the parties agree as follows:

I. DEFINITIONS

The following definitions shall govern this CESA MOU:

Wildlife - Wildlife shall be defined consistent with the definition found at California Fish and Game Code section 711.2 to mean all wild animals, birds, plants, fish, amphibians, reptiles, and related ecological communities, including the habitat upon which the wildlife depends for its continued viability.

Take - Take shall be defined to include any act without regard to intent which results in the destruction of individuals, populations of individuals, or habitat upon which these individuals or populations rely for the continued viability of the species. (See Palila v. Hawaii Dept of Land and Natural Resources, D. Hawaii 1986, 649 F.Supp. 1070, aff'd. 852 F.2d 1106.)

Operation, management, and protection - These terms shall mean those actions required, in the discretion of the Department, to permit the species to function within a natural ecological system. Such actions may include management actions of a legal, biological, or administrative nature.

II. DUTIES

A. Conveyance of Habitat Management Lands

1. CCWA covenants and agrees to acquire, preserve, and enhance 108 acres of habitat management (HM) lands as expressly provided below. The required acreage of HM lands to be acquired, preserved, and enhanced may be adjusted based on actual project impacts and habitat character as determined by the Department from field surveys following completion of construction. If additional impacts to listed species are determined from the post-construction field surveys, CCWA covenants and agrees to acquire, preserve, and enhance an appropriate number of additional HM lands. If less impacts to listed species are determined from the post-construction field surveys, CCWA shall receive appropriate credits. CCWA covenants and agrees to enter into a binding agreement with the State Lands Commission, which shall be approved by the Department, to enhance the required acreage of HM lands as habitat within the Burton Mesa Management Area, also known as the Unocal Preserve Area. If CCWA does not enter into a binding agreement with the State Lands Commission, CCWA covenants and agrees to transfer fee title or a permanent conservation easement to the required 108 acres of HM lands to the Department or to an approved designated agent. Such designated agent may include the Nature Conservancy, The Trust for Public Lands, or any other non-profit entity organized for conservation purposes, which is acceptable to, and approved by, the Department.

The required HM lands acreage is based upon a biological assessment of CCWA's impact on listed species and an estimated acreage required to provide for enhanced biological carrying capacity at a replacement location. Management of the species has been determined by the facts of this application to require 108 acres of HM lands to replace the biological carrying capacity of the habitat subject to temporary and permanent impact at the project site. Such replacement habitat will offset the permanent loss and temporary disturbance resulting from the construction and operation of the project. CCWA's enhancement obligations are further described in Exhibit 1.

2. CCWA covenants and agrees to acquire, transfer, preserve, and complete the habitat protection activities required by this CESA MOU prior to December 31, 1995. If CCWA fails to complete the duties identified in this CESA MOU prior to December 31, 1995, the Department, at its option, may demand that CCWA cure its breach forthwith. If, by December 31, 1995, any of the acquisition, transfer, protection, or management duties detailed in this CESA MOU, including Exhibit 1, are not completed, the Department may draw upon the security to complete the task.

Additionally or in the alternative the Department may seek all legal remedies available at law or in equity.

3. All HM lands shall be approved by the Department for biological suitability. The documents conveying such lands and the conditions of title shall be approved prior to acceptance by either the Fish and Game Commission or the Department acting through the Wildlife Conservation Board. No approval shall be final until the lands are inspected and evaluated by the Department. Unless the State Lands Commission Burton Mesa Management Area ("BMMA") is used to satisfy CCWA's enhancement obligations, the Department of General Services shall review, and the Department shall review and approve, a preliminary title report for the HM lands and the instruments conveying the lands to the Department or other entity. The conveyance of the HM lands shall be subject only to those conditions of title approved by the Department.

B. Habitat Management Lands Protection

4. CCWA covenants and agrees to conduct the protection activities described in the Management Authorization as detailed in Exhibit 1 of this CESA MOU.

C. Security

5. CCWA covenants and agrees to secure, as provided in section IV of this CESA MOU and as further described in Exhibit 1, CCWA's covenant to acquire, transfer, and protect 108 acres of approved HM lands, including the permanent capital endowment principal amount.

D. Endowment

6. CCWA shall transfer to the Department prior to December 31, 1995, the sum of One Hundred Eight Thousand Dollars (\$108,000.00) to be used as a permanent capital endowment principal, the interest from which will be available for operations, management, and protection of those HM lands acquired or designated in a CCWA/State Lands Commission agreement under this CESA MOU. This amount may be adjusted based on actual project impacts and habitat character as determined by the Department from field surveys following completion of construction, but in any event shall be equal to \$1,000.00 per acre of required HM lands acquired or designated in a CCWA/State Lands Commission agreement. In addition, upon transfer of the permanent capital endowment principal, CCWA shall transfer to the Department a sum equal to twelve (12) months of interest calculated at the then-prevailing interest rate on 3-year U.S. Treasury notes, multiplied by the total capital endowment

principal. The Department shall deposit the permanent capital endowment principal in a special deposit account established pursuant to Government Code section 16370 and the principal shall not be drawn upon unless the Department finds such expenditure of principal is essential to protect the continued existence of the species. Operation, management, and protection activities shall include, but shall not be limited to, costs of attorneys, reasonable administrative overhead, biological monitoring, improvements to carrying capacity, and law enforcement, as necessary to maintain the lands in conditions suitable for the protection of the listed species.

E. Associated Project-Induced Expenses

7. CCWA covenants and agrees to reimburse the Department for reasonable expenses incurred as a result of the approval and implementation of the project, including costs of title and documentation review, expenses incurred from other state agency reviews, attorney expenses, and overhead. The parties estimate that this project will create an additional cost to the Department of \$5,000.00, which shall be billed and payable as incurred.

F. Project Mitigation Measures for Species Protection

8. CCWA covenants and agrees to comply with the project related mitigation measures set forth in Exhibit 1 attached hereto.

III. ESTIMATED COSTS

The parties to this CESA MOU estimate that the direct cost of acquiring, transferring, protecting, and managing lands will be as set forth below:

1. Acquisition and transfer of suitable habitat management lands totalling 108 acres is projected to be: \$324,000.00 (\$3,000/acre).
2. Initial enhancement and protection of habitat management lands so acquired or designated in the BMMA is projected to be: \$216,000.00 (\$2,000/acre).
3. Long-term management of habitat management lands will require a capital endowment of: \$108,000.00 (\$1,000/acre).
4. Associated project-induced expenses to be incurred by the Department are estimated to be: \$5,000.00.

Notwithstanding the above estimates, in the event that costs exceed the projected amounts, CCWA shall not be released from performance of the duties contained herein. In the event that costs of performance of acquisition and protection duties are less than estimated, CCWA shall retain title to any funds not expended.

IV. SECURITY [IRREVOCABLE STANDBY LETTER OF CREDIT]

1. As security for the performance of its obligations under this CESA MOU, CCWA hereby agrees to procure and to deliver to the Department upon execution of this CESA MOU an Irrevocable "Standby" Letter of Credit ("CREDIT") in the stated amount of \$648,000.00, substantially in the form attached as Exhibit 2. Such CREDIT shall be delivered to the General Counsel for approval as to form. The General Counsel shall then transfer the CREDIT to the accounting officer for safe keeping. The term of the CREDIT shall be for a period of not less than six (6) years. Upon timely request, CCWA shall be entitled to substitute for the permanent capital endowment portion of the CREDIT a cash payment in a sum equal to \$1,000.00 for each acre of approved HM land.

2. In selecting a bank or other financial institution as issuer of such CREDIT, CCWA may choose the Santa Barbara Bank and Trust, which is acceptable to the Department, or may choose another financial institution approved by the Department and which operates an office or branch in Sacramento, California, and at least two other cities within California.

3. The Department shall have the ability to draw any amount up to the Principal Sum of this CREDIT, in one or more drawings, upon default by CCWA as specified in section V of this CESA MOU.

4. Each demand made upon the CREDIT shall be based upon a reasonable estimate of the costs necessary to cure the adverse effects of CCWA's default, including, but not limited to, administrative costs and costs for employment of third parties for the purpose of implementing the requirements and goals of this CESA MOU. Administrative costs shall be set at a rate of twenty-five (25) percent of the total of other non-administrative costs.

5. Within three (3) business days from any draw made by the Department on the CREDIT, the Department shall notify CCWA that such a draw has occurred. The Department shall thereafter allow CCWA fifteen (15) days to cure such default. If the default is cured within such time, the Department shall transfer to CCWA the funds drawn because of the default, less any administrative or other costs proximately caused by the default.

If the default is not cured, the Department shall use the funds for purposes of curing the default.

6. Upon timely request and upon presentation of documentary evidence of full compliance with the terms and the conditions of this CESA MOU, including Exhibit 1, the Department shall effectuate a cancellation of the CREDIT if such full compliance occurs prior to the natural expiration of the CREDIT.

V. DEFAULT

In the event of a default, the Department shall have all rights with respect to the security and all remedies available at law or equity including specific performance, injunction, and without limitation of all rights of a secured party pursuant to the California Uniform Commercial Code.

The following non-exclusive list of actions shall constitute an event of default under this CESA MOU:

1. CCWA has not acquired and conveyed real property interests, or entered into a binding agreement with the State Lands Commission acceptable to the Department as provided in this CESA MOU.

2. CCWA has not enhanced and protected the HM lands according to the terms of this CESA MOU.

3. CCWA has not complied with the terms and conditions of the California Endangered Species Act Management Authorization (Exhibit 1).

VI. DEPARTMENT COVENANTS, WARRANTIES, AND REPRESENTATIONS

The Department hereby covenants, warrants and represents as follows:

1. Except as the Burton Mesa Management Lands held by the State Lands Commission, the Department, its designee, or successor shall hold title to and protect all interests in real property conveyed under this CESA MOU solely for the purposes of conservation, protection, restoration, and enhancement of those species adversely impacted by the Project. This covenant shall run with the land and no use of such land shall be permitted by the Department or any subsequent titleholder or assignee which is in conflict with the stated conservation purposes of this CESA MOU. If at any time in the future the Department or any subsequent transferee uses or threatens to use such lands for purposes not in conformance with the stated conservation purposes contained herein, the California Attorney General, California

residents, or private entities shall have standing as interested beneficiaries to challenge such nonconforming uses of lands transferred herein; and

2. The Department, its designee, or successor shall record on each deed a statement that the interests in real property described in the deed of record have been conveyed to the Department or its successor for purposes of conservation, protection, restoration and enhancement of those species adversely impacted by the Project. Such statement shall be substantially as provided in Exhibit 3.

VII. MISCELLANEOUS PROVISIONS

A. NOTICES

All notices and other communications required or permitted to be given or delivered pursuant to this CESA MOU shall be in writing. Such writing shall be delivered personally, by courier, by telecopy, or sent by first-class or certified mail, return receipt requested. All default notices shall be sent certified mail, return receipt requested. All such notices or transmittals shall be deemed delivered upon the earlier of actual receipt or three days after posting by certified mail.

CCWA

Dan Masnada
Executive Director
Central Coast Water Authority
1933 Cliff Drive, Suite 12
Santa Barbara, CA 93109

DEPARTMENT

California Department of
Fish and Game
General Counsel
1416 Ninth Street
Post Office Box 944209
Sacramento, CA 94244-2090

and

REGION

Ken Wilson
Department of Fish and Game
Regional Representative
530 E. Montecito Street, Room 104
Santa Barbara, CA 93103

B. ASSIGNMENT

No sale or assignment of this CESA MOU or any of the rights or obligations thereunder shall be made by any party hereto unless there first shall have been obtained the written consent thereto of the party.

C. ENTIRE AGREEMENT

This CESA MOU, along with the Exhibits attached hereto, constitutes the entire agreement and understanding between the Department and CCWA for the Project. This CESA MOU supersedes all prior and contemporaneous agreements, representation or understandings, if any, whether oral or written.

D. GOVERNING LAW

This CESA MOU shall be governed by the laws of the state of California. Actual or threatened breach of this CESA MOU may be prohibited or restrained by a court of competent jurisdiction.

E. BENEFIT OF CESA MOU

This CESA MOU is solely for the benefit of the People of the State of California by and through the Department or its designated representative.

F. FURTHER ACTIONS

From time to time hereafter, CCWA and the Department shall execute such instruments and other documents and take such other actions, upon the request of the other, as may be reasonably necessary to carry out the terms of this CESA MOU. This CESA MOU cannot be amended or modified in any way except by a written instrument duly executed by CCWA and the Department. Any proposal for amendment or modification must be duly delivered for review and approval by the Director and the General Counsel of the Department of Fish and Game, 1416 9th Street, 12th Floor, Sacramento, California 95814.

G. TERMINATION

This CESA MOU shall terminate on December 31, 1999, or upon completion of the terms and conditions contained herein, whichever shall first occur. In the event the CESA MOU terminates by law or judicial action prior to the performance of acquisition and enhancement duties herein, title to the security shall be transferred to the Department by operation of law at the date of the CESA MOU expiration. The Department shall then complete the acquisition and enhancement duties to the degree security is available.

H. EFFECTIVE DATE


This CESA MOU shall be immediately effective upon execution by both CCWA and the Department.

This CESA MOU Includes and Incorporates the Following:


1. EXHIBIT 1, the CALIFORNIA ENDANGERED SPECIES ACT MANAGEMENT AUTHORIZATION.
 - a. Attachment A to EXHIBIT 1, CENTRAL COAST WATER AUTHORITY PROJECT PARTICIPANTS.
 - b. Attachment B to EXHIBIT 1, MAP OF PROJECT ALIGNMENT.
 - c. Attachment C to EXHIBIT 1, the PROPOSED LANDS FOR ACQUISITION FORM ("PLFAF").
2. EXHIBIT 2, SAMPLE IRREVOCABLE "STANDBY" LETTER OF CREDIT.
 - a. Attachment A to EXHIBIT 2, the CERTIFICATE FOR DRAWING.
 - b. Attachment B to EXHIBIT 2, the CERTIFICATE FOR CANCELLATION.
3. EXHIBIT 3, the CERTIFICATE OF PUBLIC PURPOSE.

IN WITNESS WHEREOF, THE PARTIES HERETO have executed this CESA MOU, Ref. No. 9322, to be in effect as of the date last signed below.

Date: 12/24/93

By: 
for Boyd Gibbons, Director
California Department of
Fish and Game
Sacramento, California

Date: 12/20/93

By: 
Dan Masnada
Executive Director
Central Coast Water Authority
Santa Barbara, California

Approved as to form:

Approved as to form:


Susan F. Petrovich
Hatch and Parent



Craig Manson
General Counsel

EXHIBIT 1

CALIFORNIA ENDANGERED SPECIES ACT MANAGEMENT AUTHORIZATION
FOR CONSTRUCTION AND OPERATION OF
THE POLONIO PASS WATER TREATMENT PLANT,
THE MISSION HILLS EXTENSION AND THE SANTA YNEZ EXTENSION
OF COASTAL BRANCH PHASE II OF
THE STATE WATER PROJECT

CENTRAL COAST WATER AUTHORITY

(Ref. No. 9322)

SUMMARY

The Central Coast Water Authority (CCWA) has requested Authorization for Management of Endangered Species pursuant to California Fish and Game Code Section 2081 for the proposed Polonio Pass Water Treatment Plant, located in San Luis Obispo County, and the Mission Hills Extension and Santa Ynez Extension of the Coastal Branch Phase II of the State Water Project, located in Santa Barbara County, California, commencing within Vandenberg Air Force Base and terminating at Lake Cachuma (the project).

The construction could potentially affect habitat for six (6) State-listed (four are Federally-listed) endangered species and for a number of State-listed Species of Special Concern. The six (6) State-listed endangered species are the unarmored threespine stickleback (Gasterosteus aculeatus williamsoni), the bald eagle (Haliaeetus leucocephalus), the southwestern willow flycatcher (Empidonax traillii), the least Bell's vireo (Vireo bellii pusillus), the seaside bird's-beak (Cordylanthus rigidus littoralis), and the San Joaquin kit fox (Vulpes macrotis mutica). The stickleback, bald eagle, vireo, and kit fox are also federally listed. The project will temporarily disturb three (3) acres and permanently impact 0.8 acre of habitat for the willow flycatcher and the least Bell's vireo. CCWA shall acquire (or designate in a Department of Fish and Game-approved agreement with the State Lands Commission providing for the protection and enhancement of lands in the Burton Mesa Management Area), enhance, protect, and provide for the long-term management of four (4) acres of suitable habitat for these species. Bald eagle foraging area in and along the shoreline of Lake Cachuma near Bradbury Dam would be disturbed (during summer when few if any eagles are present) during installation of a pipe and diffuser in the Lake. CCWA is investigating using the existing Improvement District No. 1 (ID#1) pipeline into the lake, thereby avoiding construction of a new pipeline and diffuser, but the feasibility of this alternative is uncertain. The modification

would involve elimination of a portion of the pipeline and the diffuser which presently are part of the project, plus some val changes on the ID#1 pipeline in the vicinity of the dam.

The project will either horizontally drill under, or bridge over, the habitat of the unarmored threespine stickleback in San Antonio Creek. With implementation of specific measures to prevent erosion that could increase turbidity in the creek, the project is not expected to disturb that habitat.

Approximately 35 acres of habitat for the seaside bird's beak will be disturbed, although no individuals of this species were viewed in the pipeline right-of-way during field surveys in the summer of 1993. The right-of-way will be resurveyed during the blooming period each year prior to construction and unavoidable loss of individual plants will be compensated by either establishing a new population of seaside bird's beak as part of the habitat restoration program on the Burton Mesa Management Area or as part of revegetation of the temporary construction corridor. The maritime chaparral plant community contains, in addition to the seaside bird's beak, several rare locally endemic plant species, including the sand mesa manzanita, a federal candidate species. The acreage and quality of maritime chaparral affected shall be determined by the Department after the right-of-way has been marked in the field and verified after construction activities are completed. As specified in this document, a combination of on-site and off-site restoration of maritime chaparral, conducted according to a restoration plan prepared by CCWA and approved by the Department prior to any construction in this habitat, will compensate for permanent and temporary loss of this vegetation type.

The Department of Water Resources will clear and grade the site of the Polonio Pass Water Treatment Plant and construct its own facilities on that site, which is located in San Joaquin kit fox habitat. DWR has a separate CESA MOU with the Department to provide for San Joaquin kit fox impacts. CCWA will conduct finish grading and construct CCWA water treatment facilities on a portion of the graded site. For that reason, this Management Authorization includes San Joaquin kit fox avoidance measures to be implemented by CCWA during the finish grading and construction of CCWA's treatment plant.

It is the determination of the California Department of Fish and Game that the acquisition, enhancement, and long-term management of habitat for the species identified will offset the project impacts and will result in preserving core areas for the species which will help achieve sustainable populations. It is also the Department's determination that the project, as mitigated, would not be likely to result in jeopardy to the continued

existence of the identified listed species. Timely and successful implementation of the Specific Conditions in this Management Permit and the mitigation measures set forth in the attached Biological Resources Mitigation Plan and Mitigation Program for the Mission Hills Extension and the Santa Ynez Extension are necessary conditions to the Department's determination.

ACTIVITY DESCRIPTION

This project is a water supply system consisting of a buried pipeline, water treatment and pumping facilities, turnouts to local distribution systems and a facility housing operation and maintenance personnel and equipment. The project is located in Santa Barbara County. Constructed and operated by CCWA, the project will deliver State Water Project water to member entities in the county. The CCWA members and their respective entitlement amounts are listed on Attachment "A" to Exhibit 1.

Route Description

The two extensions which comprise the project consist of a buried pipeline with pumping and service turnout facilities. The route for the two extensions are contiguous and follow a 43-mile long corridor which originates at the end of the proposed Coastal Branch facilities at Tank 5 on Vandenberg Air Force Base, Santa Barbara County, and extend south and east to terminate on the west side of Lake Cachuma near Bradbury Dam, on land owned and managed by the United States Bureau of Reclamation. A map of the project alignment is attached hereto as Attachment "B" to Exhibit 1 and incorporated by reference herein. The project will use an existing water pipeline between Santa Ynez Valley and Bradbury Dam, thereby eliminating construction of approximately five (5) miles of pipeline.

Permanent Facilities

Permanent facilities will include the buried pipeline; a water treatment facility; one pumping plant, dechloramination station and control/maintenance facility in Santa Ynez (mile 35.1); Tank 7 west of Buellton (mile 24.1); four (4) water supply turnouts located at Vandenberg Air Force Base (mile 4.2), Buellton (mile 27.7), Solvang (mile 33) and at Santa Ynez (mile 37.4); and the terminus facility at Lake Cachuma. A water treatment plant will be constructed at Polonio Pass in San Luis Obispo County on a site which the Department of Water Resources (DWR) will rough grade in preparation for construction of the treatment plant and certain DWR facilities. DWR is responsible for mitigation of habitat loss at the Polonio Pass Water Treatment Plant site. One short permanent road will be needed to serve Tank 7.

Temporary Construction Requirements

The temporary construction right of way (ROW) generally will be 100-120 feet wide. Some areas (e.g., steep hillsides, sandy streambeds) may require up to a 300-foot ROW width. In certain sensitive areas, the ROW width may be reduced to approximately 50 feet for short distances. In certain areas, minor modification of the ROW to enlarge it to allow construction equipment to operate around, to hopefully avoid, mature trees and other pockets of habitat may occur at the direction of the construction supervisor in consultation with the biological monitor. In such instances, the biological monitor shall mark the area where the ROW may be enlarged as well as the biological resources to be avoided and shall monitor activity in that area to accomplish the intended reduction in biological impacts. Locations where the construction ROW is reduced or may be modified by the construction supervisor in consultation with the biological monitor (to reduce habitat impacts) shall be clearly indicated on design drawings and described in construction contracts. Within the ROW, the pipe trench will be approximately 15-30 feet wide. The soil cover over the pipe will be approximately four to five (4-5) feet deep.

Within the construction ROW a permanent 50- to 60-foot ROW easement will be required for the pipeline alignment. A 20-foot wide area of the permanent ROW located directly over the pipeline will be kept cleared of large trees to allow access for maintenance, avoid root weight damage, and permit aerial surveillance to detect damage or leaks.

Equipment and Materials Storage Areas

Temporary staging areas will be required to store equipment and materials and shall be located to avoid sensitive resources. Generally, staging areas will be approximately four (4) acres in size, but a few may be as large as 5.5 acres in size. Excavation materials will be stored along the pipeline trench in the construction ROW. Other spoil stockpile areas may be required where the width of the ROW is reduced to avoid sensitive resources.

Construction materials will be obtained from existing commercial operations. If borrow areas become necessary, appropriate environmental review of the location and impacts shall be conducted and appropriate permits shall be obtained before the borrow area is used.

Stream Crossings

The pipeline will cross four major streams and many small drainages. An alignment which minimizes the disturbance of riparian vegetation has been selected for each crossing. The San

Antonio Creek and Hilton Creek crossings will be accomplished by placing the pipe either on a suspension bridge constructed to span the creek or in a tunnel drilled under the creek. The entry and exit ports of the tunnels shall be located away from the creek channel and shall minimize disturbance to the adjacent riparian and upland habitat. Existing bridges at Solvang and Buellton will be used for the two crossings of the Santa Ynez River. An alternative alignment, which crosses the Santa Ynez River west of Buellton by micro-tunnelling under the river and its riparian habitat from agricultural field to agricultural field is being investigated. This alternative route is depicted on Attachment "B" to Exhibit 1 and would eliminate the Buellton bridge crossing, except that this alternative would include construction of a smaller pipeline (approximately 6-8" in diameter) which would deliver water from the project pipeline to Buellton. This alternative route is preferred over the Buellton bridge crossing and will be used if the drilling technique is determined to be feasible.

Operation and Maintenance Activities

The pipeline will be routinely inspected by aerial (rather than ground) survey. Over its 50-100 year life, the pipeline will require minimal maintenance. Maintaining the 20-foot wide zone above the pipe free of large trees prevents root damage, allows for aerial survey, and minimizes impediments to access for maintenance. If large trees do begin to grow over the pipeline, a chain saw will be used for removal and the stump sealed to prevent sucker growth from the stump. The resulting cut brush will be left nearby to provide habitat.

Air release valves placed at high points will be checked periodically via existing roads and on foot. When equipment or materials are needed for maintenance or repairs, 4-wheel drive vehicles may have to leave the nearest road and travel cross-country to reach a valve.

Sections of the pipe will be drained only when necessary to repair damage to the pipe. Repairs requiring draining are expected to occur infrequently, and appropriate environmental review of the location and impacts shall be conducted and appropriate permits shall be obtained before the draining occurs.

POTENTIALLY AFFECTED SPECIES

Unarmored Threespine Stickleback

The unarmored threespine stickleback (Gasterosteus aculeatus williamsoni), a state and federally-listed endangered species occurs in San Antonio Creek on Vandenberg Air Force Base. The fish require slow flow with aquatic vegetation for cover and nest

material. They are specialized feeders whose diet consists primarily of benthic organisms or organisms living on aquatic plants. As sight feeders, they are intolerant of high turbidity. Most sticklebacks complete their life cycle in one year; a few individuals in a population apparently live two or three years. Sticklebacks spawn in the spring or early summer as water warms and the duration of daylight increases. Major threats to the unarmored threespine stickleback include stream channelization, urbanization, agricultural development water diversions, groundwater pumping, introduction of predators and competitors, impacts to the habitat caused by off-road vehicles, and chemical spills.

The fish appear to be relatively abundant where found, but are continuously threatened by continuing stream degradation. The species is currently being managed by a recovery team which meets regularly. The recovery plan for the species was revised in 1985. The agencies cooperating in the recovery effort have undertaken several actions to conserve the unarmored threespine stickleback. These activities include: (1) surveys to discover additional populations, (2) transplants to establish the fish in other waters, (3) surveys to discover exotic organisms, (4) eradication programs to remove or control exotic species, (5) a contingency plan to establish response procedures in case of oil or toxic chemical spills, and (6) genetic studies to ascertain taxonomic relationships.

These conservation efforts resulted in the discovery of a remnant population of stickleback in Shay Creek, San Bernardino County, establishment of additional stickleback populations, and potential change in the taxonomic status of one or more of the recognized extant populations. U.S. Fish and Wildlife Service policy with respect to proposed taxonomic revisions is to await acceptance and publication in a reputable scientific journal before initiating changes in the management of listed species.

Bald Eagle

The bald eagle (Haliaeetus leucocephalus), a state- and federally-listed endangered species, is a large brown bird of prey which, as an adult, has a white head and tail. The bald eagle occurs widely in North America and winters throughout most of California at lakes, reservoirs, river systems, interior and coastal wetlands, and some rangelands. The breeding range is mainly in mountainous habitat near reservoirs, lakes and rivers in the northern quarter of the State; some pairs also breed in southern California on Santa Catalina Island and mainland Santa Barbara County. The winter population appears to be stable, and the breeding population is increasing in numbers and range. The size of the winter population varies from year to year and may exceed 1,000 birds some winters (as in 1987-88). Eighty-three

breeding pairs occupied breeding sites in 1989. The Pacific Bald Eagle Recovery Plan (1986) establishes geographical goals for population recovery. The multi-agency California Bald Eagle Working Team provides guidance to agencies and groups in management and research matters, and the team is preparing a management plan for bald eagles in California to assist in implementing the recovery plan. Many breeding territories are being maintained and protected under local management plans. Key winter habitats are receiving increasing attention in terms of population monitoring, site protection, and public viewing and education. Several entities, including Pacific Gas and Electric Company and U.S. Forest Service, are currently sponsoring intensive ecological studies. Other research efforts are under way on contaminants, human disturbance, and other issues that affect this species. Several bald eagles studies, including population restoration efforts on the Channel Islands, have been supported with Tax Check-off funding assistance.

Bald eagles are winter residents at Lake Cachuma (approximately 2 to 15 birds each year), usually arriving at the lake in November and departing the following March. Bald eagles nested successfully at Lake Cachuma in 1989 and 1990. The bald eagle is predominantly a fish-eating bird, however, other prey items may include birds, amphibians, and reptiles. They forage over the lake and hunt from perches in trees along the shoreline, particularly where the banks are steep. The area on the west side of the Tecolote Tunnel intake tower is used regularly for perching, while aerial foraging may occur anywhere over the lake.

Southwestern Willow Flycatcher

The willow flycatcher (Empidonax traillii), a state-listed endangered and federal candidate 1 species, was formerly a common summer resident throughout California. The breeding range of the willow flycatcher extended wherever extensive willow thickets occurred. The species has now been eliminated as a breeding bird from most of its former range in California. Only five populations of significance remain in isolated meadows of the Sierra Nevada and along the Kern, Santa Margarita, San Luis Rey and Santa Ynez rivers in southern California. The smallest of these consists of about six pairs and the largest about 44 pairs. The total population estimate for California is about 200 pairs of willow flycatchers. A survey conducted in late summer 1991 on Department-owned willow riparian habitat at Red Lake, Alpine County indicated that a significant breeding population exists there. Further study is planned.

The loss of riparian habitat is the principal reason for the decline of California's willow flycatcher population and contraction of the species range. Impacts to habitat and breeding

birds associated with livestock grazing have also been implicated in the decline of the species. Nest parasitism by brown-headed cowbirds (Molothrus) may have contributed significantly to population reductions.

More than a decade ago the California Department of Fish and Game designated the willow flycatcher a "Bird Species of Special Concern" of highest priority. This finding prompted several years of Department studies to further assess the status of willow flycatchers in California. Reports from the Pacific Coast and Southwest resulted in addition of the willow flycatcher to the National Audubon Society's Blue List of declined bird species in 1980 and 1986. In 1984 the willow flycatcher was added to the U.S. Forest Service, Region 5 (mostly comprised of the State of California) Sensitive Species list. The U.S. Fish and Wildlife Service has also designated the willow flycatcher as a sensitive species for Region 1 (Washington, Idaho, Oregon, California, and Nevada) based on significant declines in this region. The South-western willow flycatcher (E.t. extimus), with small populations in southern California, was proposed for listing as endangered by the U.S. Fish and Wildlife Service on July 21, 1993.

Least Bell's Vireo

Least Bell's vireo (Vireo bellii pusillus), a state- and federally-listed endangered species, is a small bird which is drab-gray above and whitish below, with sides faintly washed with grayish olive-yellow, and has indistinct white spectacles and faint wing bars with the lower bar being more prominent. The vireo is insectivorous. The vireo is a summer resident of the following riparian habitats: willow (Salix sp.), cottonwood (Populus fremontii) forest, oak (usually Quercus agrifolia) woodland, shrubby thickets (often composed solely of willow species, usually narrowleaf willow or black willow), and dry washes (with willow thickets at the edges to provide vireo foraging habitat and nest sites). The willow-cottonwood habitat is the more commonly used habitat by the vireo. The vireo was known as a breeder in the Central Valley and the Sierra Nevada foothills, in the coast ranges from Santa Clara County south to Baja California, in the Owens Valley, Death Valley, and at scattered locations in the Mojave desert. Habitat loss and degradation and nest parasitism by the brown-headed cowbird have resulted in the decline of this species in California. Now the known breeding range of the vireo is restricted, but includes small populations from Southern California (primarily Santa Barbara, Riverside, Ventura, and San Diego counties) into northwest Baja California.

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Seaside Bird's-Beak

The seaside bird's beak (Cordylanthus rigidus littoralis) is a State-listed endangered species. This plant occurs in the Burton Mesa chaparral, a form of maritime chaparral characterized by numerous locally endemic plant species, including sand mesa (shagbark) manzanita, Purisima manzanita, varieties of coast and Santa Barbara ceanothus, in addition to common chaparral species. Seaside bird's beak is a bushy annual herb in the figwort family. Its branches and leaves are covered with fine hairs and its flowers are pale yellow and clustered at the end of its branches. The preferred habitat of the plant is sandy soils of stabilized dunes covered by closed-cone pine forest or maritime chaparral; plants thrive in areas of recent surface soil disturbance. Seaside bird's beak is a hemiparasite. In Santa Barbara County about 10 sites are presently known on private land or on Vandenberg Air Force Base. Populations in Santa Barbara County are threatened by residential and energy development, off-road vehicle use, and military operations at Vandenberg AFB. Management of existing preserve lands and actions by the County to protect remaining Burton Mesa chaparral may result in protection for some populations of Seaside bird's beak. This plant was not found within the pipeline corridor between Tank 5 on Vandenberg Air Force Base and Burton Mesa Boulevard north of Lompoc during field surveys the summer of 1993.

San Joaquin Kit Fox

The San Joaquin kit fox (Vulpes macrotis mutica), a state-listed threatened and federally-listed endangered species, is one of the eight recognized subspecies of kit fox. The kit fox resembles a small lanky dog in appearance, with disproportionately large ears with an abundance of large white inner guard hairs. Total length is about 32 inches, including a 12-inch black-tipped tail. Coloration ranges from light buff to grayish along the back and tail; gray, rust, or yellowish along the sides; and white along the belly.

San Joaquin kit foxes hunt for rodents, rabbits, and other prey by night from dens that are typically excavated in loose soil. Individual animals may use from 3 to 24 separate dens. Individual den entrances may range from 1 to 36, and may extend into several individual tunnels and chambers reaching depths of up to 10-feet. Man-made structures such as culverts and pipes may also be used as dens. Den entrances are characteristically higher than wide and are sufficiently small to prevent access by large carnivores such as coyotes. Den entrance hole dimensions are generally about 8-10 inches in height and less than 8 inches in width, but may be as small as 4 inches in width. Burrows of other animals, particularly California ground squirrels (Spermophilus beecheyi), may also be opportunistically enlarged and used as den sites by San Joaquin kit

foxes. Although occupied dens may show freshly excavated soil, scats, and prey remains, such obvious signs also may be inconspicuous or absent.

San Joaquin kit foxes forage and live in an area of 1-2 square miles. Mating occurs in December-January. Pups are born in February-March, and begin to disperse at around five months of age. Survival rates of kit fox pups are low; about 75 percent of such animals die before the age of eight months.

Mortality for this species has been documented from attacks by coyotes, road kills, conversion of habitat, shooting, drowning, entombment, pneumonia, and starvation. Additionally, widespread use of rodenticides may result in mortality, since kit fox are extremely vulnerable to secondary poisoning through consumption of poisoned ground squirrels or other scavenged rodents.

The San Joaquin kit fox historically was distributed over a large portion of central California, extending roughly from southeastern Contra Costa County south along the eastern edge of the Interior Coast Range to the southern San Joaquin Valley, including major portions of western Kern County and Tulare County. San Joaquin kit fox were also distributed through adjacent valleys, foothills, and plains, including portions of San Luis Obispo County, Monterey County, and the Santa Clara Valley on the western side of the Interior Coast Range.

Habitat conversion is the principal reason for both State and Federal listing of the San Joaquin kit fox. Agricultural development is the principal contributing factor to the decline of available kit fox habitat. By 1983, approximately 42 percent of "suitable" kit fox habitat was lost as a result of such impacts.

OTHER SENSITIVE SPECIES

Lompoc Yerba Santa

The Lompoc Yerba Santa (Eriodictyon capitatum) occurs in closed cone pine forest, chaparral, and ravines in the Santa Ynez Mountains and north of Lompoc. Known localities include three colonies on Vandenberg Air Force Base, La Graciosa Ridge in the Orcutt Hills, and Hollister Ranch. The locations on Vandenberg Air Force Base are: (1) near the intersection of 35th Street and California Avenue (near the Cantonment area); and, (2) two sites in Pine Canyon (west of Vandenberg Village). None of these sites is within the project route.

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Sand Mesa (Shagbark) Manzanita

The sand mesa manzanita (Arctostaphylos rudis) occurs in sandy places of coastal sage scrub and chaparral from Oceano (San Luis Obispo County) south to Santa Barbara County. It is endemic to California with distribution limited to several populations. It is a characteristic species in Burton Mesa chaparral, but its distribution is patchy within this plant community. This species sprouts from burls. Individuals are present within the proposed corridor.

Presently unlisted sensitive species of reptiles, amphibians, birds and mammals (either under status review for federal listing or are California Species of Special Concern) or species habitat also occur in the project area. These include southwestern pond turtle, California tiger salamander, red-legged frog, arroyo toad, California horned lizard, yellow warbler, yellow-breasted chat, burrowing owl, long-eared owl, tricolored blackbird, Cooper's hawk, and American badger. The project has been planned to avoid or minimize to the extent feasible any adverse impacts to these species and their habitats.

Southwestern Pond Turtle

The southwestern pond turtle (Clemmys marmorata pallida) inhabits perennial waters such as rivers, streams, reservoirs, ponds and marshes. It prefers quiet water, particularly deeper pools lined with aquatic vegetation. Eggs are laid in late spring (May and June) in sunny upland areas adjacent to permanent water. Populations in Santa Barbara County are widespread but declining due to habitat alteration. Pond turtles are known to inhabit San Antonio Creek, the Santa Ynez River, and the Campbell vernal pools. Other habitat locations along or immediately adjacent to the pipeline corridor include the impoundment on Zanja de Cota Creek and an irrigation pond about three (3) miles west of Campbell Road. This species is a state Species of Special Concern and a candidate (Category 1) for federal listing.

California Red-legged Frog

The California red-legged frog (Rana aurora draytoni) inhabits ponds and moderately deep pools within streams that have dense growths of emergent aquatic or phreatophytic vegetation. Populations are known to occur in the Santa Ynez River about three (3) miles west of Buellton and in the Campbell vernal pools. Habitat within the project area includes San Antonio Creek and the impoundment on Zanja de Cota Creek. Degradation and loss of habitat along with predation by introduced fish and competition from introduced bullfrogs appear to be the cause of their population decline in Southern California. The red-legged frog is

a state Species of Special Concern and a candidate (Category 1) for federal listing.

California Tiger Salamander

The California tiger salamander (Ambystoma tigrinum californiense) reaches the southern extent of its range in northwestern Santa Barbara County. It breeds in temporary ponds and pools during the winter rainy season, and adults spend the remainder of the year in burrows (generally of ground squirrels) located in upland areas such as oak woodlands. Most of the burrows are found within about 1,000 feet of the pools, but some may be as far away as 1 mile. The juvenile salamanders stay in moist vegetation in the vicinity of the pools throughout the summer, even after they dry up. Habitat degradation and loss coupled with predation and competition from introduced species are believed to be the principal factors responsible for population declines within the state. The salamander is known to inhabit the Campbell vernal pools. This species is a state Species of Special Concern and a candidate (Category 2, but petition for listing) for federal listing.

Arroyo Southwestern Toad

The arroyo toad (Bufo microscaphus californicus) prefers sandy, intermittent streams that are bordered by riparian trees. The toads are usually nocturnal. Breeding is from March through June. This species has not been recorded west of Lake Cachuma the Santa Ynez River drainage, although suitable habitat occurs at several locations along the river in the project area. It is a state Species of Special Concern and proposed for federal listing as endangered on August 3, 1993.

California Horned Lizard

The California horned lizard (Phrynosoma coronatum frontale) is found in grassland and shrub habitats with sandy soils. It is known to occur at several locations along or near the pipeline route from Tank 5 on Vandenberg AFB to Purisima Road (north of Lompoc). The horned lizard is a state Species of Special Concern.

Yellow Warbler

The yellow warbler (Dendroica petechia brewsteri) is fairly common locally as a migrant and occasional breeder. It breeds in riparian habitats during spring (primarily May and June) and forages in nearby riparian and scrub habitats. This species is known to breed along San Antonio Creek, the Santa Ynez River, and Zanja de Cota Creek. Another habitat location for breeding in the project area includes the unnamed creek (Drainage A) east of

Vandenberg Village. This species is a state Species of Special Concern.

Yellow-breasted Chat

The yellow breasted chat (Icteria virens) is a migratory species that nests in riparian habitats. Breeding is generally in May and June. It is known to occur at the Santa Ynez River about three miles west of Buellton, and along the tributary to San Antonio Creek. Suitable habitat is present at Zanja de Cota Creek and at the unnamed stream (Drainage A) east of Vandenberg Village. It is a state Species of Special Concern.

Burrowing Owl

Burrowing owls (Athene cunicularia) are winter visitors to grassland areas in northern Santa Barbara County. No nesting is known to occur in the project area, and few if any burrowing owls are expected along the pipeline route. This species is a state Species of Special Concern.

Long-eared Owl

The long-eared owl (Asio ofus) is a resident in northern Santa Barbara County. No known nesting sites are located within or immediately adjacent to the pipeline corridor, although nesting has occurred in the area. Breeding begins in late March and may extend through June. The owl is a state Species of Special Concern.

Cooper's Hawk

The Cooper's hawk (Accipiter cooperi) is a local resident that nests and forages in riparian habitats. Breeding begins in late April and the young are fledged in July or August. It has been known to nest in Zanja de Cota Creek north of the pipeline corridor and suitable habitat is present along the tributary north of San Antonio Creek, at the Santa Ynez River west of Buellton, and in oak woodlands near the pipeline corridor between Highway 101 and Alisal Road. This species is a state Species of Special Concern.

American Badger

The American badger (Taxidea taxus) occurs throughout the project area, primarily in open habitats (e.g., grasslands and scrub areas). It lives in burrows and is a state Species of Special Concern.

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Tricolored Blackbird

The tricolored blackbird (Agelaius tricolor) lives in large colonies and nests in dense stands of emergent vegetation, such as tules and cattails. Breeding generally occurs from May through July. It forages over open grassy areas and agricultural fields. A breeding colony was present at a pond adjacent to the pipeline corridor in 1992. Little other suitable nesting habitat is present along the corridor. This species is a candidate (category 2) for federal listing.

POTENTIAL EFFECTS ON LISTED SPECIES

Unarmored Threespine Stickleback

Unarmored threespine stickleback occur in San Antonio Creek. At the pipeline crossing of San Antonio Creek the stream is deeply incised (about 25 feet) with nearly vertical banks. The pipe will be placed on a bridge constructed over the creek to avoid disturbing stickleback habitat, or the pipeline will be installed by deep horizontal drilling beneath the stream-side habitat and the creek, starting and ending a sufficient distance from the riparian habitat to avoid disturbance to soil and vegetation. Just north of the proposed micro-tunnelling or bridged crossing, the pipeline crosses an unnamed tributary to San Antonio Creek at three locations. Sticklebacks may be subject to direct and indirect effects of increased turbidity from sediments carried in storm runoff from the construction area upslope from the bridge crossing, including from the tributary crossing sites. Increased turbidity could result in impaired feeding behavior, adverse effects on food supply, and reduced reproductive success. Rupture of the pipeline, if suspension rather than micro-tunnelling is used, could result in the spill of chloraminated water into the creek, causing physical damage to the habitat or mortality of sticklebacks or their food organisms from the toxicity of the chloramine.

Bald Eagle

Construction of the pipeline terminus near the south abutment of Bradbury Dam temporarily will affect approximately five (5) acres of foraging area along the Lake Cachuma shoreline, including an area of the lake near the barge which will lay the pipe and diffuser 1900 feet into the Lake. Disturbance associated with construction near Bradbury Dam temporarily will discourage bald eagle foraging at the Lake in the vicinity of the construction activity. This limited temporary disturbance is not expected to disrupt the bald eagles' use of perch sites or interfere with foraging. Construction is planned for summer when it is expected that few if any bald eagles will be present. If the existing ID#1

pipeline terminus is used, it will require some retrofitting of the existing facility and no new construction.

The pipeline either will use the existing ID#1 pipeline to enter the Lake or will enter the Lake in the vicinity of the dam, as shown on Attachment "B" to Exhibit 1, and will end approximately one-half mile northeast of the entry point, in the vicinity of the Santa Ynez River Water Conservation District inlet structure.

Willow Flycatcher and Least Bell's Vireo

The southwestern willow flycatcher occurs in only a few locations, including a small breeding population using willow riparian habitat along the Santa Ynez River about three miles west of Buellton. No vireos were viewed in or adjacent to the right-of-way during spring 1993 field surveys. The least Bell's vireo has not been observed during recent surveys in the vicinity of the project, but some suitable habitat does exist along and near portions of the project route.

Willow flycatchers historically have nested in cottonwood-willow riparian and riparian scrub habitat along creeks and rivers in the project area. Willow flycatchers breed in dense riparian habitat along the Santa Ynez River about three miles west of Buellton and potential flycatcher habitat exists at the San Antonio Creek crossing. The willow flycatcher was observed in both the migratory and breeding seasons during preliminary biological resource surveys conducted in the late 1980s along the Santa Ynez River west of Buellton. No vireos were viewed during surveys conducted during the summer of 1992 and 1993. The pipeline has been relocated to avoid direct loss of willow habitat along the Santa Ynez River at Buellton; this is true either with the presently proposed route or with the preferred alternative route being studied. During the breeding season, construction activities near occupied habitat could disturb breeding flycatchers (and vireos if present) and adversely affect their reproductive success. The removal of willow riparian habitat at Zanja de Cota Creek will result in temporary loss of potential foraging and nesting habitat for these species, but there is no documented sighting of a willow flycatcher or least Bell's vireo at or near the Zanja de Cota Creek crossing.

Seaside Bird's Beak

Individual seaside bird's beak plants were reported for the corridor in surveys conducted by DWR. The pipeline route has been relocated through much of the Burton Mesa area in order to reduce impacts to the seaside bird's beak and its habitat. Field surveys during the 1993 flowering period for the bird's beak were conducted to determine whether any plants are present. The more common

subspecies of bird's beak, but not the listed subspecies, was found during the surveys of the final route. The identification is verified by Dr. Tsan Iang Chuang, of Illinois State University, a foremost expert on this species. Annual variation in conditions will affect the distribution of the species within suitable habitat.

Clearing the construction ROW and facilities sites will result in the temporary disturbance of 35 acres of seaside bird's beak habitat in Burton Mesa chaparral, plus 12 acres loss from the Coastal Branch Phase II construction by DWR. No permanent loss of seaside bird's beak habitat will occur due to the revegetation plan described in more detail below. Seaside bird's beak apparently grows well in disturbed surface soils and is expected to be responsive to species specific restoration plans proposed by CCWA.

San Joaquin Kit Fox

Construction at the Polonio Pass Water Treatment Plant site will result in temporary and permanent habitat losses for San Joaquin kit fox. (The Department of Water Resources is responsible for mitigating these losses and for removing or sealing dens in the vicinity of construction activity.) During CCWA's construction activity at the site, individual animals could be injured or killed as a result of crushing or striking by vehicles and equipment, if they venture into the construction area. Direct mortality may occur from operation and parking of vehicles and equipment, and vehicle traffic to and from the project site by construction personnel and other visitors to the site.

POTENTIAL EFFECTS ON OTHER SENSITIVE SPECIES

Lompoc Yerba Santa

Although this species is located on Vandenberg Air Force Base, biological surveys of the proposed project route conducted to date (including the 1993 survey) indicate that the species does not occur within or adjacent to the proposed construction right-of-way. Therefore, it is not expected to be impacted by the project construction. Pre-construction surveys will include this species and appropriate management measures, meeting the Department's specifications, will be implemented should individuals of the species be discovered to occur in an area where they cannot be avoided.

Sand Mesa (Shagbark) Manzanita

Pre-construction surveys will identify the individual members of the species which occur within the construction right-of-way and which cannot be avoided. As set forth in more detail in the

Biological Resources Mitigation Plan, sensitive plant species such as the sand mesa manzanita will be avoided to the extent feasible and the contractor will be provided financial incentives to avoid the plants rather than remove them. Where feasible, the pipeline corridor will be narrowed to avoid sensitive plant species. Individual plants which cannot be avoided either will be transplanted or the seed, young plants, or cuttings will be collected and preserved to be replanted following construction in order to re-establish the plants removed. Individuals outside the trench, but in the construction easement, will be cut above the burl to allow resprouting after construction is complete. Off-site restoration of maritime chaparral will include sand mesa manzanita.

Southwestern Pond Turtle

Construction of the pipeline could affect pond turtle habitat in San Antonio Creek, the Santa Ynez River, Zanja de Cota Creek, and at the Campbell vernal pools. Direct effects at San Antonio Creek and the Santa Ynez River are unlikely since the pipeline will either be placed on a bridge or bored under the streambed. Rupture of the pipeline over San Antonio Creek or the Santa Ynez River (low probability of occurrence) with release of chloraminated water could cause physical damage of the habitat but would not cause any mortality of pond turtles from toxicity of the chloramines since this species breathes air. Potential habitat will be disturbed at Zanja de Cota creek, however no pond turtles have been observed there. The pond turtle population in the Campbell vernal pools could be affected by construction (primarily through noise and human presence) for the short duration of this activity during the dry season. Any damage to the vernal pools or alteration of the local hydrology could affect the carrying capacity of this habitat. CCWA is negotiating with CalTrans to try to obtain permission to construct the pipeline within the CalTrans right-of-way south of Highway 246, thereby avoiding potential impacts to the Campbell vernal pools. The outcome of these negotiations is uncertain at this time.

California Red-legged Frog

Red-legged frogs in the Santa Ynez River 3 miles west of Buellton would not be affected by construction since the river would be crossed by boring beneath the streambed if this crossing site is used. Construction activities adjacent to the Campbell vernal pools could result in impacts similar to those described above for the pond turtle. Rerouting the pipeline to the CalTrans right-of-way would avoid these potential impacts.

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California Tiger Salamander

Construction of the pipeline immediately adjacent to the Campbell vernal pools during the dry season could interfere with the movement of the adults between the pools and the upland burrows they use during the summer. Most movement, however, should be completed prior to initiation of construction. In addition, adult salamanders in burrows within the construction corridor would likely be lost during trench excavation or crushed in their burrows by heavy equipment moving beside the trench. Juvenile tiger salamanders remain in moist vegetation around the pools as they dry up, and mortality through crushing by equipment traffic or stockpiling of excavated materials adjacent to the trench could occur. Alteration of the local hydrology could have long-term effects on the habitat size and quality. Rerouting the pipeline to the CalTrans right-of-way would avoid these potential impacts.

Arroyo Southwestern Toad

This species is not expected to occur within the pipeline corridor and may not be affected by construction activities. The Santa Ynez River will be crossed by suspension on the Alisal Road bridge and by boring or use of an existing bridge west of Buellton.

California Horned Lizard

Habitat for the horned lizard from Tank 5 to Purisima Road would be temporarily disturbed during construction. Any horned lizards within the construction corridor would be lost during brush clearing and trenching activities. Individuals entering the corridor during construction activities could be run over by equipment or fall into the open trench and be trapped.

Yellow Warbler and Yellow-breasted Chat

Construction within or adjacent to breeding habitat for the yellow warbler and yellow-breasted chat could disrupt nesting activities of those individuals for one year. Pruning of willows within the construction corridor along the tributary to San Antonio Creek would reduce habitat until the willows grow back. Clearing of riparian trees at the Zanja de Cota Creek crossing would reduce habitat for the yellow warbler and habitat for the chat. A permanent loss would occur in the area (about 20 feet wide) maintained clear of large trees for maintenance access.

Burrowing Owl

This species is not expected to nest in the project area. Any burrowing owls present would be winter visitors. Any individuals present in the construction corridor that do not leave their burrows would be lost.

Long-eared Owl

Construction activities are not expected to have any adverse impacts on this species. No long-eared owl nesting is known to occur along the pipeline route.

Cooper's Hawk

No nesting sites are known to occur within the construction corridor, but noise and human presence associated with construction could adversely affect any Cooper's hawks that are nesting immediately adjacent to the corridor. Disturbance could result in abandonment of the nest.

American Badger

Construction activities could trap or crush any badgers remaining in burrows within the pipeline corridor. Badgers have relatively large home ranges and may enter the corridor at night, digging new burrows in the cleared area or the stockpiled excavated materials. They also could fall into the trench and be trapped while foraging in the area at night.

Tricolored Blackbird

Construction activities could disrupt breeding at the pond adjacent to the pipeline corridor along Highway 246 where blackbirds were observed in 1992.

SPECIFIC CONDITIONS REQUIRED BY THE MANAGEMENT PERMIT

Off-site Habitat Management Lands Requirement

To offset the temporary and permanent impacts to willow flycatcher habitat and least Bell's vireo, CCWA shall enter into a binding agreement with the State Lands Commission, which shall be approved by the Department, to preserve and enhance the required acreage of HM lands as habitat within the Burton Mesa Management Area, also known as the Unocal Preserve Area. If CCWA does not enter into a binding agreement with the State Lands Commission, CCWA covenants and agrees to acquire and to transfer to the Department or to a conservation organization approved by the Department fee title or a permanent conservation easement to 4.0 acres of suitable riparian/wetland (0.8 acres of permanently lost riparian/wetland habitat replaced at a 5:1 ratio) at a location acceptable to the Department. If additional impacts to listed species are determined from the post-construction field surveys, CCWA covenants and agrees to acquire, preserve, and enhance an appropriate number of additional HM lands. If less impacts to listed species are determined from the post-construction field

surveys, CCWA shall receive appropriate credits. Acquisition (or, in the case of the BMMA, execution of the Department-approved contract with the State Lands Commission) shall be completed prior to December 31, 1995. CCWA shall enhance the acquired or designated BMMA habitat as specified by the Department and establish a permanent capital endowment for the protection and management of the habitat by depositing \$3,200.00 (\$800/acre) in a Department special trust account. CCWA shall ensure that any acquired or designated BMMA lands have sufficient water to sustain the riparian habitat in good condition.

To compensate for temporary and permanent loss of maritime chaparral on Burton Mesa, including the identified species described above, CCWA shall carry out the habitat restoration and enhancement activities within the BMMA. The number of acres to be preserved and enhanced shall be calculated from a Department determination of the amount of habitat lost from each of three categories: prime, moderately degraded, and highly degraded maritime chaparral. CCWA shall preserve, restore, and enhance three acres of habitat for each acre of prime chaparral that is disturbed by the project (3:1). For disturbance of moderately degraded and highly degraded maritime chaparral, CCWA shall restore chaparral habitat at 2:1 and 1:1 ratios, respectively. Once the right-of-way has been staked and flagged, the Department will inspect the alignment and determine the number of acres in each category that will be disturbed. Prior to any construction of mile 5 through mile 11 of the pipeline, CCWA shall complete a detailed maritime chaparral restoration plan, for Department and State Lands Commission approval, that includes the plant species characteristic of this vegetation type. CCWA shall begin implementation of an approved restoration plan within 90 days after execution of a binding agreement with the State Lands Commission designating lands in the BMMA to be restored by CCWA. CCWA shall deposit with the Department (or the State Lands Commission if the Department so directs) the sum of \$1000 per acre of restored chaparral habitat to establish a permanent capital endowment principal for the long-term protection and management of this habitat. These funds shall be placed in a special deposit account and the interest on this account shall be made available annually to the agency or agencies designated by the Department as responsible for the management of the chaparral habitat.

Prior to December 31, 1995, CCWA also shall provide cash or a standby letter of credit for \$648,000.00 (108 total acres to be restored and enhanced off-site) to secure the acquisition, enhancement, and long-term management of the habitat management lands to offset riparian/wetland and Burton Mesa chaparral habitat losses from the project. For the purpose of determining the acreage of Habitat Management Land and, thus, the dollar amount of this security, it is assumed that all maritime chaparral affected

by the project falls into the prime category and the 3:1 ratio has been applied. The actual acreage of Burton Mesa chaparral to be restored will be calculated as described above and may be less than 108 acres.

The Department may release portions of said cash or letter of credit upon timely request and documentation of the following:

a. Upon execution of the described Department-approved binding agreement with the State Lands Commission or (if non-BMMA lands are used) upon recordation of fee title or a conservation easement, the sum of \$324,000.00 (\$3,000.00 per 108 acres).

b. Upon Department-approved completion of restoration and enhancement, the sum of \$216,000.00 (\$2,000.00 per 108 acres). (The remaining \$108,000 represents the \$1,000.00 per 108 acres endowment for on-going habitat management as described above.)

Following completion of construction, CCWA shall submit a written report to the Department, setting forth the precise amount of acreage of riparian habitat and maritime chaparral habitat disturbed by the project. The amount of off-site habitat management lands (and the appropriate letter of credit or cash deposit and endowment amounts) required will be adjusted as necessary to account for any difference between the estimated and actual amount of habitat loss.

On-site Management Conditions to Avoid and Minimize Take

The management conditions presented below shall be specified in all drawings and specifications that are part of the contract documents for pipelines and other related facilities. The requirements that can be depicted in a linear reference, i.e., ROW width, grading width allowed, etc., shall be shown on aerial photo or topographic alignment sheets or construction drawings. Other requirements shall become part of the construction specifications in narrative or line list format. All conditions shall apply to construction and operation of both the pipeline and the ancillary facilities.

A. Pre-Construction Phase

1. For the portions of the project route where endangered species or Species of Special Concern and their habitat have been identified, CCWA shall hire qualified biologists acceptable to the Department to conduct a pre-construction survey to re-inventory the construction ROW and all proposed access roads for the occurrence of the listed species and Species of Special Concern enumerated above. The inventory of seaside bird's beak shall be conducted during the species' flowering period; the surveys for southwestern

willow flycatcher, least Bell's vireo, other riparian bird Species of Special Concern, bald eagles and other raptors Species of Special Concern shall be conducted within sixty (60) days prior to commencement of construction in the vicinity of known or potential habitat. Riparian corridors at San Antonio Creek, the Santa Ynez River and Zanja de Cota Creek shall be surveyed for listed and sensitive bird species at least one half mile upstream and downstream from the crossings where riparian habitat is present. Surveys shall be conducted in April and May in the year of construction. Each inventory shall be conducted by a qualified biologist with prior inventory experience for the species inventoried. This is necessary to implement protection measures described below.

2. Fenced exclusion zones shall be established as deemed appropriate by the biologist to effectively protect sensitive habitat from inadvertent damage from construction activities. Exclusion zone fencing shall consist of either large flagged stakes connected by rope or cord; survey laths or wooden stakes prominently flagged with survey ribbon, plastic mesh or chain link fencing, as appropriate. Exclusion zones shall be maintained until all construction activities in the vicinity of the zones have been completed, and then shall be removed. If specified exclusion zones cannot be observed for any reason, the Department shall be contacted for guidance prior to ground disturbing activities on or near the affected habitat.

3. As close to the beginning of construction as possible but not more than 14 days prior to the onset of construction, a qualified biologist shall conduct a final pre-construction survey of suitable habitat for the southwestern willow flycatcher, least Bell's vireo, or other riparian bird Species of Special Concern within one half mile to determine whether individuals of these species are present. If nesting birds are found, CCWA shall contact the Department for an assessment of the site-specific conditions and a determination of the potential impact of beginning construction. If the Department determines that construction activities would likely disturb nesting bird species which are state-listed or Species of Special Concern, construction at the site shall be prohibited until young birds have fledged.

4. Existing vegetation characteristics of habitat suitable for the listed species or Species of Special Concern described above shall be characterized by a combination of photographic documentation and other standard vegetation survey techniques. This survey shall be conducted by qualified plant ecologists approved by the Department.

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known or likely to occur in the project area. Potential penalties for take of a listed wildlife species shall be described.

General measures to be followed that will reduce impacts to biological resources of the area, such as restricting disturbance to a clearly delineated construction zone and the prohibition of cross-country travel in vehicles.

Distribution and expected occurrence of sensitive species within the project vicinity.

Brief life history description and an explanation of the abundance trend, limited range or other facts about the species status that explains the need for the implementation of special measures.

Descriptions of special measures designed to minimize impacts to sensitive species, such as enforcement of speed limits, prohibition of collecting, harassing, or harming individuals of sensitive species, prohibition of firearms at the site, etc.

Additional general measures that workers can follow to assist in protecting these species.

Protocol to follow if sensitive species are encountered including appropriate contact points, such as construction supervisors, construction inspectors, and environmental monitors.

In addition:

Pamphlets and pocket-size fact sheets or cards shall be produced and distributed to all workers, including pipeline employees and inspectors, as well as employees and supervisors of contracting and subcontracting companies, to reinforce information presented in the briefings. The pamphlets shall highlight important points regarding each sensitive species, including sensitive and legal status, need for protection, protective measures, and contact points to report encounters.

Prior to being allowed on the job site in areas of potential impact to species which are listed or of special concern, construction workers shall sign a statement that they have read and understand the environmental requirements and shall follow those procedures. Badges, hard hat decal or similar easily recognizable designating method shall be issued which designate that training has been successfully completed, and shall be worn at all times on the construction site.

Agency monitors and all visitors to the construction site in areas of potential impact to species which are listed or of special concern shall read the compliance training materials and certify that they understand and will follow these requirements. Agency monitors and all visitors shall be issued identification badges which shall be worn on the construction site.

In lieu of providing the Environmental Training to persons entering project areas of potential impact to species which are listed or of special concern infrequently and for brief periods (e.g. to deliver construction material or supplies to a storage area or work site) these persons shall be advised of environmental requirements relevant to the immediate vicinity and be escorted during the entire visit by a designated construction worker or environmental monitor who has completed the Environmental Training. The escort shall be responsible for the actions of the visitor and for the consequences of any violations.

Worker education materials shall be submitted to the Department for review and approval 60 days prior to the start of construction. Department responses shall be provided within 30 days of receipt.

Until the Environmental Training Program is completed and approved, CCWA shall provide sensitive species briefings for personnel who will be on-site prior to construction, such as surveyors, geologists, and construction engineers.

8. CCWA shall designate a specific individual as a contact representative between CCWA and the Department to oversee compliance with protection measures detailed in this document and in the Mitigation Program and Biological Resources Mitigation Plan. CCWA shall provide written notification of the contact representative to the Department within 30 days of execution of the CESA MOU. Written notification also shall be provided by CCWA to the Department during any future times that the designee is changed due to position transfer or other reasons.

B. Construction Phase

1. To minimize permanent and temporary construction disturbances, project-related vehicle traffic, construction activities, and equipment storage shall be restricted to established roads, designated access roads, the construction ROW, storage areas, staging and parking areas, and other designated project areas including the placement of portable restroom facilities. Off-road traffic outside of designated areas shall be prohibited. Parking, storage, and other areas shall be designated

by flagged lath stakes at least 24 inches above ground height placed in line of sight with a maximum spacing of 200 ft. Parking storage, and other areas shall be examined during pre-construction surveys for state and/or federally listed species, and shall be established in locations disturbed by previous activities, to the extent possible. The construction ROW shall also be clearly marked at the outside boundaries. The outside boundaries of the ROW shall be staked with at least 24 inch-tall flagged lath at a maximum interval of 200 ft. prior to construction. If construction activities are repeatedly documented outside of these flagged areas, the outer boundaries of the ROW must be delineated by a continuously taped boundary.

2. CCWA or its construction contractor shall use signs and other means to establish traffic restrictions to minimize temporary disturbances and shall enforce these restrictions. All project-related vehicle traffic shall be restricted to established roads, construction areas, storage areas, and staging and parking areas. Off-road traffic outside of designated project areas shall be prohibited.

3. Unauthorized vehicle use of the ROW, staging areas, and access roads by the construction crews or the public shall be prohibited. CCWA or its construction contractor shall post signs at the construction site to restrict access of vehicles and equipment unrelated to site operations...

4. Only authorized vehicles which have been inspected insure fire safety requirements shall be permitted on the ROW. Each vehicle on the ROW shall be equipped with a minimum 2 lb. fire extinguisher. All welding rigs shall be equipped with a minimum 20 lb (or 2 - 10 lb) fire extinguisher and a five gallon water bladder bag full of water.

5. All equipment storage and parking during site development and operation shall be confined to the ROW or the identified staging areas or to other areas that are approved and marked by biological monitors.

6. Biological monitors shall be present at all times within a reasonable distance of grading and clearing operations through or adjacent to habitat areas for listed species or Species of Special Concern. Field notes shall be submitted weekly for routine monitoring; a monthly compliance report will be provided to the Department representative in Santa Barbara County and to the Environmental Services Division office in Sacramento. Biological monitors shall check for compliance with all of the management avoidance measures contained in this plan and in the Biological Resources Mitigation Plan for the Mission Hills Extension and Santa Ynez Extension. Exclusion zones shall be checked to ensure that

the signs, stakes, and fencing are still intact and that human activities have been restricted in these protective zones.

7. To prevent entrapment of endangered species or other animals during the construction phase of the project, all excavated holes or trenches with sides steeper than 0.5 to 1 which are not filled by day's end shall have escape ramps for wildlife, installed at distances no greater than 0.25 mile apart, except where construction of such ramps could result in increased habitat disturbance. Trenches shall be inspected by biological monitors for entrapped wildlife each morning prior to onset of construction for the day. Before such holes or trenches are filled, they shall be thoroughly inspected for entrapped animals. Any animals discovered during these inspections shall be allowed to escape voluntarily, without harassment, before construction activities resume, or shall be removed from the trench or hole by a qualified biologist and allowed to escape.

8. All construction pipes, culverts, or similar structures with a diameter of four inches or greater that are stored at a construction site for one or more overnight periods shall be thoroughly inspected for small animals before the subject pipe is subsequently buried, capped, or otherwise used or moved in any way. Pipes laid in trenches overnight shall be capped.

9. All food-related trash items such as wrappers, cans, bottles, and food scraps generated both during construction and during subsequent facility operation shall be disposed of in closed containers only and regularly removed from the site. No deliberate feeding of wildlife shall be allowed.

10. To prevent harassment, mortality, or destruction of dens or burrows of American badger or other wildlife species by domestic dogs and cats, no pets shall be permitted on the ROW, staging areas, access roads, or any other construction sites.

11. Use of rodenticides and herbicides on the site shall be permitted only if it is part of a Department-approved management plan or unless such use is otherwise approved on a case-by-case basis. This is necessary to prevent primary or secondary poisoning of endangered species using adjacent habitats, and the depletion of prey upon which wildlife (including birds of prey) depend.

12. Any employee who inadvertently kills or injures a listed species or finds same either dead, injured, or entrapped shall report the incident immediately to the on-site CCWA representative. In the case of entrapped animals, escape ramps or structures shall be installed immediately if possible to allow the subject animal(s) to escape unimpeded. In the event that such observations are of dead animals, CCWA shall notify the Department in writing within

three working days of the finding of any such animal(s). In the event that such observations are of injured animals, CCWA shall notify the Department immediately by telephone or FAX. Notification shall include the date, time, location and circumstances of the incident. The Department contact shall be Mr. Ken Wilson at (805) 964-8849, 530 East Montecito Street, Room 104, Santa Barbara, CA 93103.

C. Post-Construction Phase

1. After construction is completed, unauthorized vehicle use of the project ROW shall, to the maximum extent practicable, be prevented by physical barriers and signs.

2. Steep slopes are present in or near some portions of the alignment, including the San Antonio Creek and Zanja de Cota Creek crossings. In areas with steep slopes, erosion shall be controlled and revegetation enhanced by mulching with clean cereal grain straw or native or naturalized grass hay (e.g. red brome, wild oats, or wild barley). The mulch shall be held in place by punching, crimping, or fiber netting. Approximately two tons per acre of hay or straw shall be used. Seeded areas on steep slopes shall be mulched within 24 hours of seeding. On severe slopes or windy sites, netting, a wood fiber slurry (500 lbs/acre), or a tackifier such as J-tac (40-80 lbs/acre) shall be evaluated for use by the on-site biological monitoring staff prior to initiating revegetation efforts. Riparian areas shall be subject to specific procedures including planting of riparian species and erosion control. No ground disturbing activities shall occur in these areas prior to Department approval of reclamation/revegetation plans prepared by CCWA.

3. Following revegetation, procedures shall be implemented to limit authorized and unauthorized access on the permanent ROWs, to limit additional intrusion into wildlife habitat and allow recovery of vegetation on the ROW. Approved means of access shall be a component of environmental training for operational personnel.

4. Routine inspections of the ROW shall be conducted by air to detect encroachment by unauthorized vehicles or machinery, damage to equipment that may not be detected by instrumentation, and success of erosion control and revegetation.

5. The permanent ROW may be used to access the pipeline in emergency situations as specified in the approved Operation and Maintenance Plan. Damage to vegetation on the ROW shall be fixed and the ROW restored as soon as possible following the emergency.

6. Signs shall be posted indicating the ROW is closed to vehicles. The signs shall state "Pipeline Right-of-Way Closed to

All Vehicles to Protect Plants and Wildlife." Intersection of existing roads with the permanent ROW shall be clearly marked with signs identifying the presence of the pipeline. Earthen berms shall be placed at all intersections with access to the ROW where authorized by landowners.

7. Post-construction environmental monitoring shall meet two basic objectives: 1) assess actual impacts that occur during construction, and 2) monitor effectiveness of revegetation and other management conditions. A post-construction inspection of the project area shall be conducted by the environmental monitoring team immediately after completion of clean up, surface restoration, and revegetation. This inspection shall determine the actual acreage extent of ground disturbance, compared to the pre-construction estimates. The pipeline project area shall be photographed or videotaped from the air to assist in this evaluation and to allow comparison with pre-construction aerial photographs. The actual acreage extent of construction impacts will be used to refine off-site mitigation requirements.

8. A final construction monitoring report shall be prepared and submitted to the Department no later than 120 days after initial water delivery to a CCWA member. If this report is prepared by the biological monitoring consulting firm, all drafts submitted to CCWA shall be concurrently submitted to the Department. This report shall provide an evaluation of the overall success of the management and monitoring program, deviations from the mitigation plan, and outline follow-up surveys and future monitoring needs. It shall be based on all the reports prepared during the monitoring program and shall include specific sections describing the effectiveness of the management measures and the level of take for state listed species.

9. A ROW rehabilitation report shall be completed and submitted to the Department within 5 years of initial water delivery. Any disturbance of the construction ROW in listed species habitat that is not restored to the satisfaction of the Department shall be subject to compensation by CCWA through acquisition of off-site lands for enhancement and long-term management as specified above (Off-site Habitat Management Lands Requirement).

10. CCWA shall prepare an Operations and Maintenance Plan, and submit the Plan for Department approval of aspects that may affect listed species and Species of Special Concern, and the habitat of same. Once approved, the Plan will become part of this Management Authorization and the CESA MOU.

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Species-Specific Management

Unarmored Threespine Stickleback

To minimize the potential for runoff of sediments from the construction corridor adjacent to San Antonio Creek, including the crossings of the unnamed tributary to the Creek, which could increase turbidity in the Creek during runoff events, the following measures shall be implemented (unless the horizontal drilling technique is used, in which case the following measures will be unnecessary provided that drilling begins and ends outside the riparian corridor): (1) avoid disturbance to the creek banks during construction of the bridge and installation of the pipe; (2) use erosion control measures such as berms and straw bales to prevent runoff of sediments and construction materials to the creek; (3) monitor and maintain erosion control devices during construction to ensure their effectiveness; (4) complete construction over and near the creek during the dry season; (5) stabilize disturbed soils prior to the rainy season by revegetation if possible and with erosion control devices as necessary until soils are permanently stabilized; (6) monitor the effectiveness of erosion control measures during the rainy season until all potential for erosion is eliminated by successful revegetation after construction is completed. Turbidity shall be measured in San Antonio Creek immediately upstream and downstream of the project area during runoff events. Remedial measures shall be implemented to control the sediment input to the Creek if the project is causing any perceptible increase in turbidity in the Creek. Turbidity monitoring shall continue during major storm events until this criteria is met during two successive events of greater than three (3) inches of precipitation in 24 hours.

To minimize the risk to sticklebacks in San Antonio Creek from the accidental discharge of chloraminated water into the Creek, the pipeline design shall include pressure sensitive valves in the pipe both north and south of the Creek to limit the volume of water released to the Creek during a pipe failure. CCWA has prepared a Spill Contingency Plan for the project which, once approved by the Department, becomes a part of this document and implementation of the Plan shall be a condition of the project.

Seaside Bird's-Beak

CCWA shall conduct pre-construction surveys of the corridor for seaside bird's-beak during the appropriate season to identify locations and numbers of this species in the corridor. If any are found in the corridor, the following measures shall be implemented: (1) avoidance if feasible by minor realignment; (2) collection of seeds during the summer prior to construction; (3) collection of whole plants for use in reseeded the disturbed areas; (4)

replacement of other herbs and shrubs found associated with the species to provide hosts; (5) salvage and replacement of topsoil to enhance revegetation and to preserve seeds in the topsoil; and (6) monitoring of the revegetation efforts, with remedial work as necessary until all restoration criteria have been met. The habitat area affected, if any, shall be determined during the pre-construction and post-construction surveys. All mitigation shall be conducted within the pipeline corridor after construction is completed or on the Burton Mesa Project Area lands in conjunction with maritime chaparral restoration, so that an area equal to that lost is replaced with a population of the same size.

Bald Eagle

Management measures involve scheduling construction activities to coincide with the period of minimum use of the Lake by bald eagles. Construction adjacent to Bradbury Dam and in a limited area of Lake Cachuma within one quarter mile of the dam, if the same becomes necessary, would be scheduled for the summer, following the fledging of young, when few or no eagles are present. If bald eagles have nested at Lake Cachuma in the summer when construction at the Lake will occur, eagle activity will be monitored by CCWA for evidence that use of the Lake by eagles is being affected by construction activities on or near the Lake. If construction-related interference with use of the Lake by bald eagle prior to fledging of the young becomes apparent, CCWA shall discontinue construction activities at Lake Cachuma and immediately contact the Department for a determination of the conditions under which construction can be resumed. No loss of bald eagle habitat will occur from project construction at Lake Cachuma.

Willow Flycatcher and Least Bell's Vireo

Pre-construction surveys shall be conducted for these species in April or May in the year of construction at the following locations to determine if flycatchers or vireos are present: the San Antonio Creek crossing, Zanja de Cota Creek crossing, the Santa Ynez River adjacent to the Avenue of the Flags bridge, and the Santa Rosa Road crossing of the Santa Ynez River three miles west of Buellton. No survey is required at the Santa Rosa Road location if this alternative route across the Santa Ynez River is not used. If any flycatchers or vireos are found, CCWA shall contact the Department to determine if construction in the vicinity may either 1) proceed without adverse effect or 2) shall not begin until the young have fledged to avoid disturbance during nesting. Determinations will be made on a case by case basis.

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San Joaquin Kit Fox

Pre-construction surveys shall be conducted by DWR within 14 days where possible but no earlier than 45 days prior to ground disturbing activities to identify all kit fox dens within the ROW or 150 ft. on either side of the ROW. A 50 foot radius exclusion zone will be established around all known or probable kit fox dens and a 150 foot radius exclusion zone will be established around natal dens. This shall be accomplished by (1) modification of the pipeline alignment around known kit fox dens, (2) localized reductions in the width of the construction ROW, and (3) minimization of construction impacts to the least possible area within the corridor. CCWA construction activities at the Polonio Pass water treatment plant site shall be carried out in accordance with the exclusion zones and other take avoidance measures applicable to DWR activities at the site.

Following grading of the site by DWR and in the event that DWR construction and monitoring activities at the site have been discontinued for more than 45 days, surveys as described above for kit fox shall be repeated prior to the start of construction at the site by CCWA to determine if kit foxes have reoccupied the area. If kit fox are found, CCWA shall notify the Department for a determination of the conditions under which construction at the Polonio Pass site may begin.

All pipes and culverts within San Joaquin kit fox habitat that will be installed, removed or disturbed shall be thoroughly inspected for kit foxes before the pipes or culverts are moved or disturbed. If any pipe or culvert contains a kit fox, the fox shall be allowed to escape unharmed or shall be removed in a manner approved by the Department.

OTHER SPECIES MANAGEMENT MEASURES

Southwestern Pond Turtle

All stream crossings and wetlands with suitable habitat for the species shall be surveyed the spring/early summer prior to the construction of the pipeline crossing to determine if southwestern pond turtles are present. The survey shall be conducted by visual searches while walking the crossing area, including the area within the construction right-of-way 400 feet on either side of the stream or wetland, and areas within suitable habitat up to 400 feet from the construction right-of-way, at least twice each day for four days. If southwestern pond turtles are detected, CCWA shall prepare and implement a protection plan acceptable to the Department. In addition if southwestern pond turtles are detected, CCWA shall acquire and transfer to the Department or to a land conservation organization approved by the Department (or in the

case of BMMA lands, execute a Department-approved binding agreement with the State Lands Commission for the use of such lands), three (3) acres for each acre of southwestern pond turtle habitat permanently lost and one acre for each acre of such habitat temporarily disturbed (based on a site-specific determination by the Department of the extent of pond turtle habitat disturbance, including both aquatic habitat and associated upland habitat) of suitable habitat at a location acceptable to the Department. The acquired habitat shall be within 30 miles of the project facilities. CCWA shall enhance the acquired habitat as specified by the Department and establish a permanent capital endowment for the protection and management by depositing \$800/acre in the Department special deposit trust account. Acquired or designated lands shall have appropriate riparian or appropriative water rights to sustain pond turtle habitat in good condition. Acreage acquired (or BMMA lands designated) to satisfy riparian/wetland habitat compensation requirements for listed species (willow flycatcher, least Bell's vireo) may also offset impacts to pond turtles if such lands also provide suitable pond turtle habitat.

California Red-Legged Frog

All stream crossings and wetlands with suitable habitat for the species shall be surveyed the spring/early summer prior to the construction of the pipeline crossing to determine if California red-legged frogs are present. The survey shall be conducted by visual searches while walking the crossing area, including the area within the construction right-of-way 400 feet on either side of the stream or wetland, and areas within suitable habitat up to 400 feet from the construction right-of-way, at least twice each day and by evening auditory surveys for four days. If California red-legged frogs are detected, CCWA shall prepare and implement a protection plan acceptable to the Department. In addition if California red-legged frogs are detected, CCWA shall acquire and transfer to the Department or to a land conservation organization approved by the Department (or in the case of BMMA lands, execute a Department-approved binding with the State Lands Commission for the use of such lands), three (3) acres for each acre of California red-legged frog habitat permanently lost and one acre for each acre of such habitat temporarily disturbed (based on a site-specific determination by the Department of the extent of red-legged frog habitat disturbance) of suitable habitat at a location acceptable to the Department. The acquired habitat shall be within 30 miles of the project facilities. CCWA shall enhance the acquired habitat as specified by the Department and establish a permanent capital endowment for the protection and management by depositing \$800/acre in the Department special deposit trust account. Acquired or designated lands shall have appropriate riparian or appropriative water rights to sustain red-legged frog habitat in good condition. Acreage acquired (or BMMA lands designated) to satisfy

riparian/wetland habitat compensation requirements for listed species (willow flycatcher, least Bell's vireo) may also offset impacts to red-legged frogs if such lands also provide suitable red-legged frog habitat, as approved by the Department.

California Tiger Salamander

All potential tiger salamander habitat shall be surveyed the spring prior to the construction of the pipeline crossing to determine if California tiger salamanders are present. The survey shall be conducted by visual searches and seining water bodies for salamander larvae. Potential habitat shall be sampled at least twice during the sampling season. If tiger salamanders are detected, a protection plan shall be submitted to Department for review and approval. In addition if California tiger salamanders are detected, CCWA shall acquire and transfer to the Department or to a land conservation organization approved by the Department (or in the case of BMMA lands, execute a Department-approved binding agreement with the State Lands Commission for the use of such lands), three (3) acres for each acre of California tiger salamander habitat permanently lost and one acre for each acre of such habitat temporarily disturbed (based on a site-specific determination by the Department of the extent of tiger salamander habitat disturbance) of suitable habitat at a location acceptable to the Department. The acquired habitat shall be within 30 miles of the project facilities. CCWA shall enhance the acquired habitat as specified by the Department and establish a permanent capital endowment for the protection and management by depositing \$800/acre in the Department special deposit trust account. Acquired or designated lands shall have appropriate riparian or appropriative water rights to sustain tiger salamander habitat in good condition. Acreage acquired (or BMMA lands designated) to satisfy riparian/wetland habitat compensation requirements for listed species (willow flycatcher, least Bell's vireo) may also offset impacts to tiger salamanders if such lands also provide suitable tiger salamander habitat, as approved by the Department.

DISCLAIMERS

If any requirements of this Management Authorization are in conflict with provisions of the Biological Resources Mitigation Plan and Mitigation Program adopted by CCWA, the requirements of this Management Authorization shall prevail.

Upon timely satisfaction of the conditions of this California Endangered Species Act Management Authorization, CCWA will have satisfied the State's endangered species requirements, and understands and recognizes that this document does not constitute or imply compliance or entitlement to proceed with the project, with regard to laws and regulations beyond the authority and

jurisdiction of the Department. CCWA has sole responsibility for compliance with any and all applicable laws and regulations.

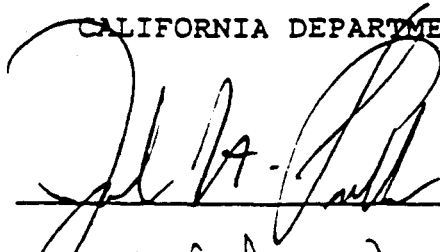
Following execution of the CESA MOU and issuance by the Department of this California Endangered Species Act Management Authorization, CCWA's decision whether to proceed with said project shall be voluntary, and subject to all other pertinent law and regulations. As such, CCWA shall hold the State of California and the Department of Fish and Game harmless, in any violation of the law, lien, suit, or claim of injury or damage which may result from any aspect of the project, including fulfillment of the obligations under this MA and the CESA MOU.

DEPARTMENT OF FISH AND GAME FINDINGS:

If the above-written conditions of this Management Authorization and the CESA MOU are implemented in a timely manner, as provided herein, the Department finds that the Central Coast Water Authority's Mission Hills Extension and Santa Ynez Extension Project will not result in jeopardy to the continued existence of the identified species and may, through the acquisition, restoration, and enhancement of habitat lands, protect the species from further degradation.

CALIFORNIA DEPARTMENT OF FISH AND GAME:

BY:



TITLE:

Chief Asst. Director

DATED:

12/24/93

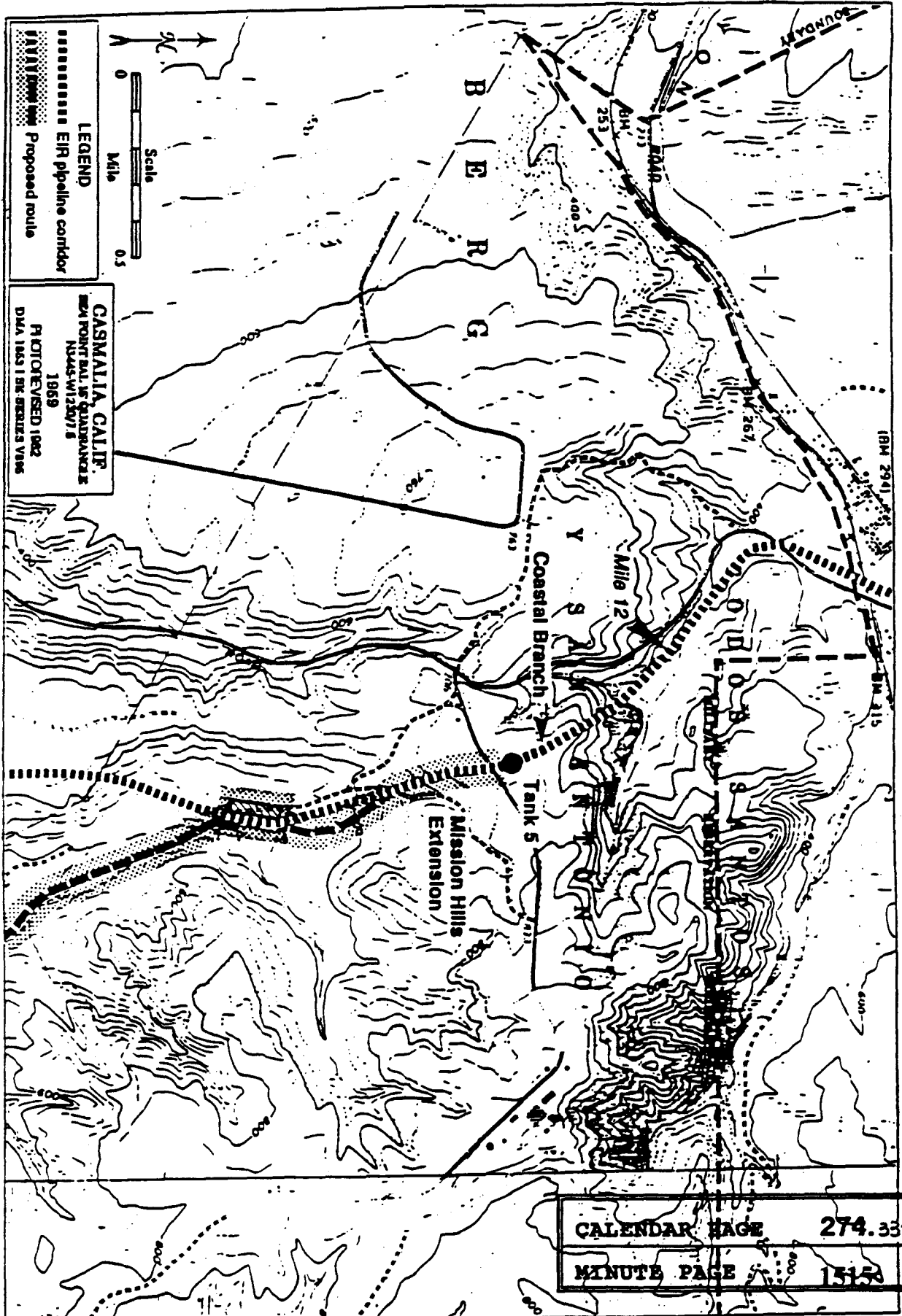
ATTACHMENT "A"

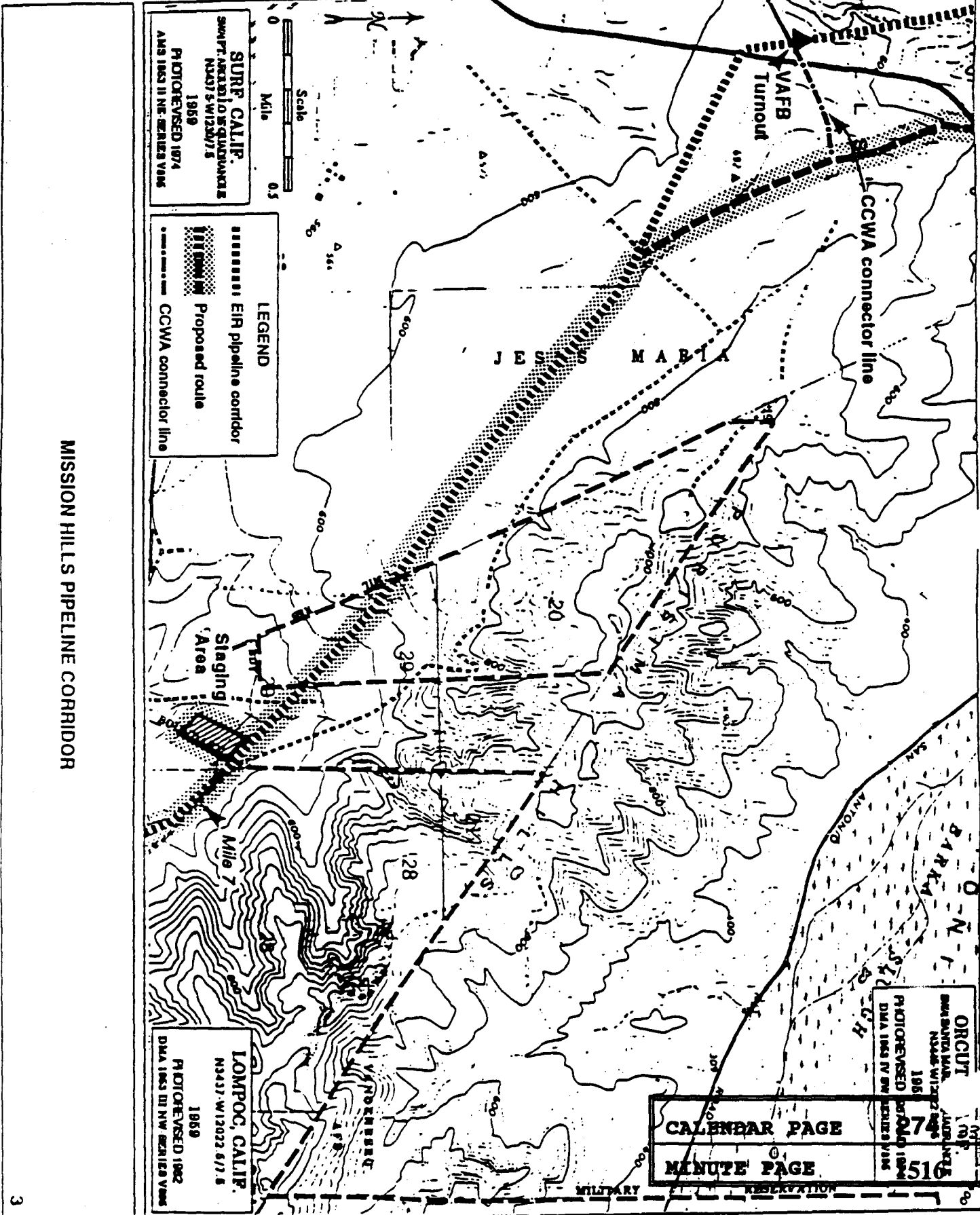
CENTRAL COAST WATER AUTHORITY
PROJECT PARTICIPANTS

| <u>Entity</u> | <u>Allocation</u> | <u>(AFY)</u> |
|---|-------------------|--------------|
| City of Guadalupe | | 550 |
| City of Santa Maria | | 16,200 |
| Vandenberg Air Force Base | | 5,500 |
| City of Buellton | | 578 |
| Santa Ynez River WCD ID #1 | | 2,000 |
| Goleta Water District | | 4,500 |
| Morehart Land Co. | | 200 |
| Santa Barbara Research Center | | 50 |
| La Cumbre MWD | | 1,000 |
| City of Santa Barbara | | 3,000 |
| Montecito Water District | | 2,700 |
| Summerland County Water District | | 300 |
| Carpinteria County Water District | | <u>2,000</u> |
| | | 38,578 |
| DROUGHT BUFFER TO FIRM UP DELIVERY OF ABOVE CONTRACTUAL ENTITLEMENTS | | 3,908 * |

* THIS WATER IS NOT ALLOCATED TO ANY CONTRACTOR. BECAUSE OF DELTA PUMPING RESTRICTIONS, PROJECT WATER DELIVERIES HAVE NOT MET CONTRACTORS' ENTITLEMENTS. THIS BUFFER IS INTENDED TO FIRM UP ACTUAL DELIVERIES SO THAT THEY MORE CLOSELY APPROACH ENTITLEMENTS.

COASTAL BRANCH AND MISSION HILLS PIPELINE CORRIDOR





SURF CALIF.
 SURVEYED TO EQUIVALENCE
 NAD 83 - W 1222 8/7 8
 PHOTO REVEALED 1974
 DIA 1853 III NE SERIES VIMS

LEGEND

- EIR pipeline corridor
- Proposed route
- CCWA connector line

LOMPOC, CALIF.
 NAD 83 - W 12022 8/7 8
 PHOTO REVEALED 1982
 DIA 1853 III NW SERIES VIMS

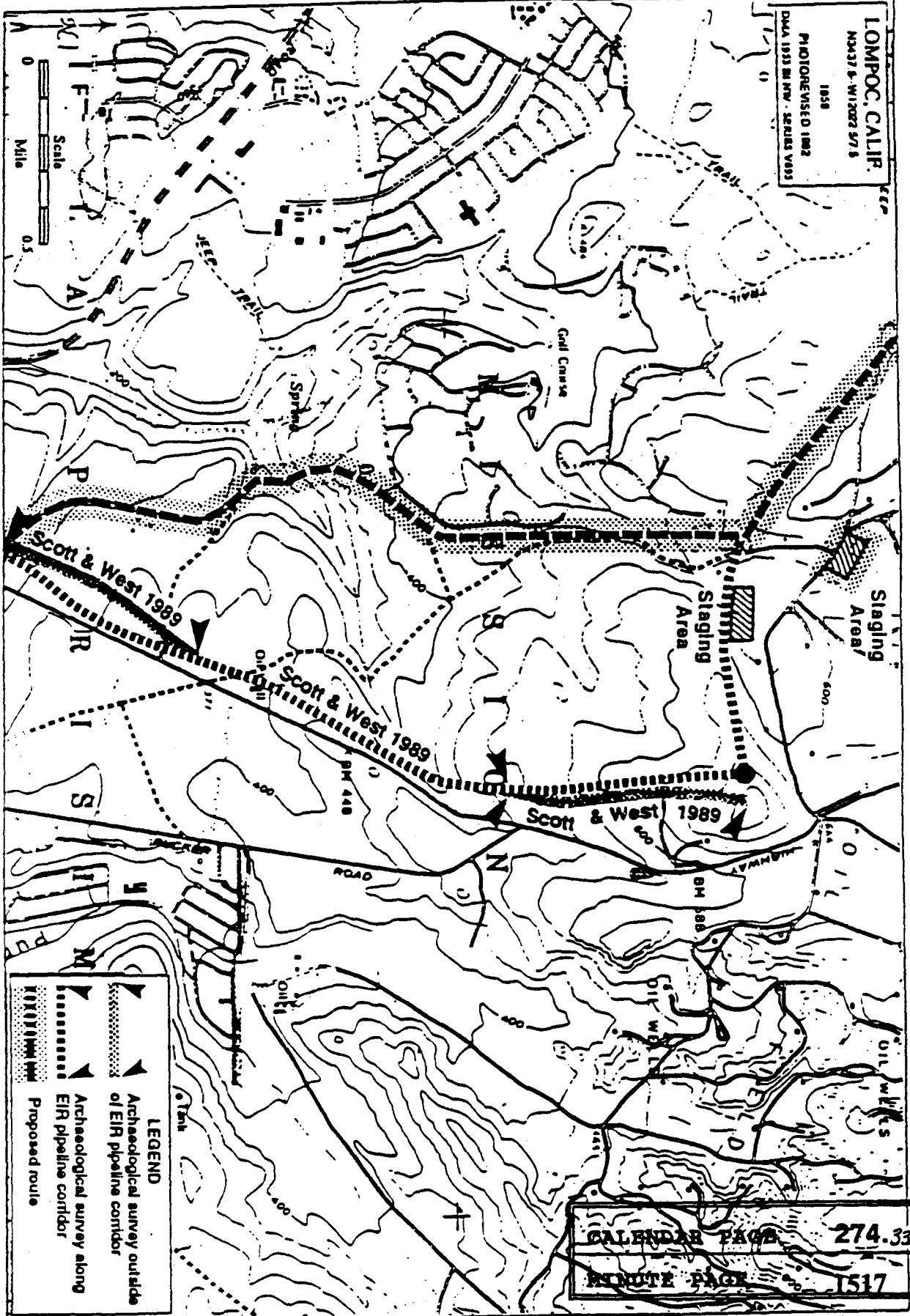
ORCUT
 SURVEYED TO EQUIVALENCE
 NAD 83 - W 1222 8/7 8
 PHOTO REVEALED 1982
 DIA 1853 III NW SERIES VIMS

CALENDAR PAGE
MINUTE PAGE

MISSION HILLS PIPELINE CORRIDOR

LOMPOC, CALIF.
NAD 83 - NAD 2011 571.8

1958
PHOTOREVISED 1982
DMA 1953 IN NW - SERIES 1983

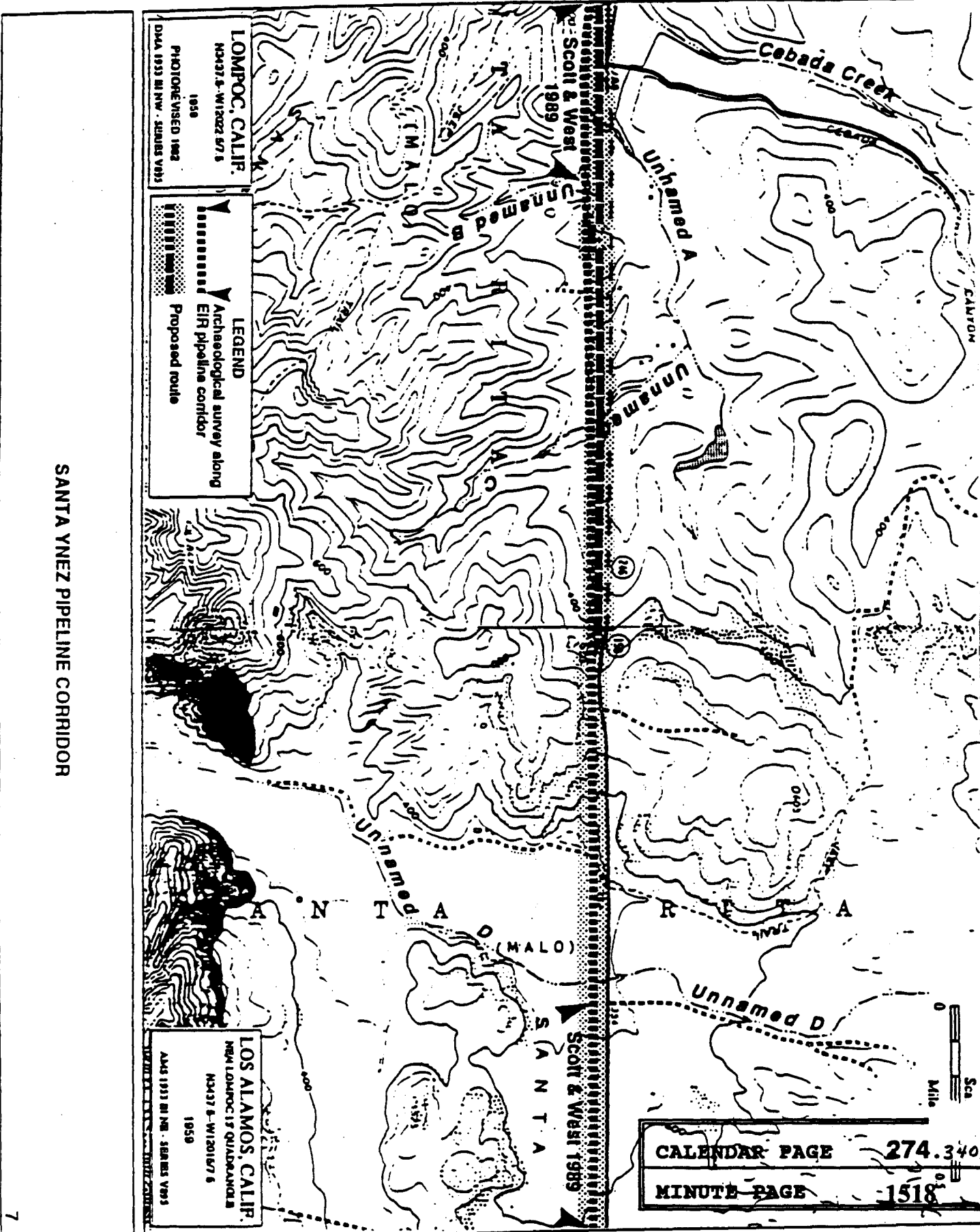


MISSION HILLS AND SANTA YNEZ PIPELINE CORRIDOR

LEGEND

- ▲ Archaeological survey outside of EIR pipeline corridor
- ▬ Archaeological survey along EIR pipeline corridor
- ▬ Proposed route

CALENDAR PAGE 274.339
MINUTE PAGE 1517



LOMPOC, CALIF.
 NMA 10437 B - W12022 87 S
 1958
 PHOTOGRAPHIC VISUAL 1982
 DMA 1933 IN NW - SERIES V081

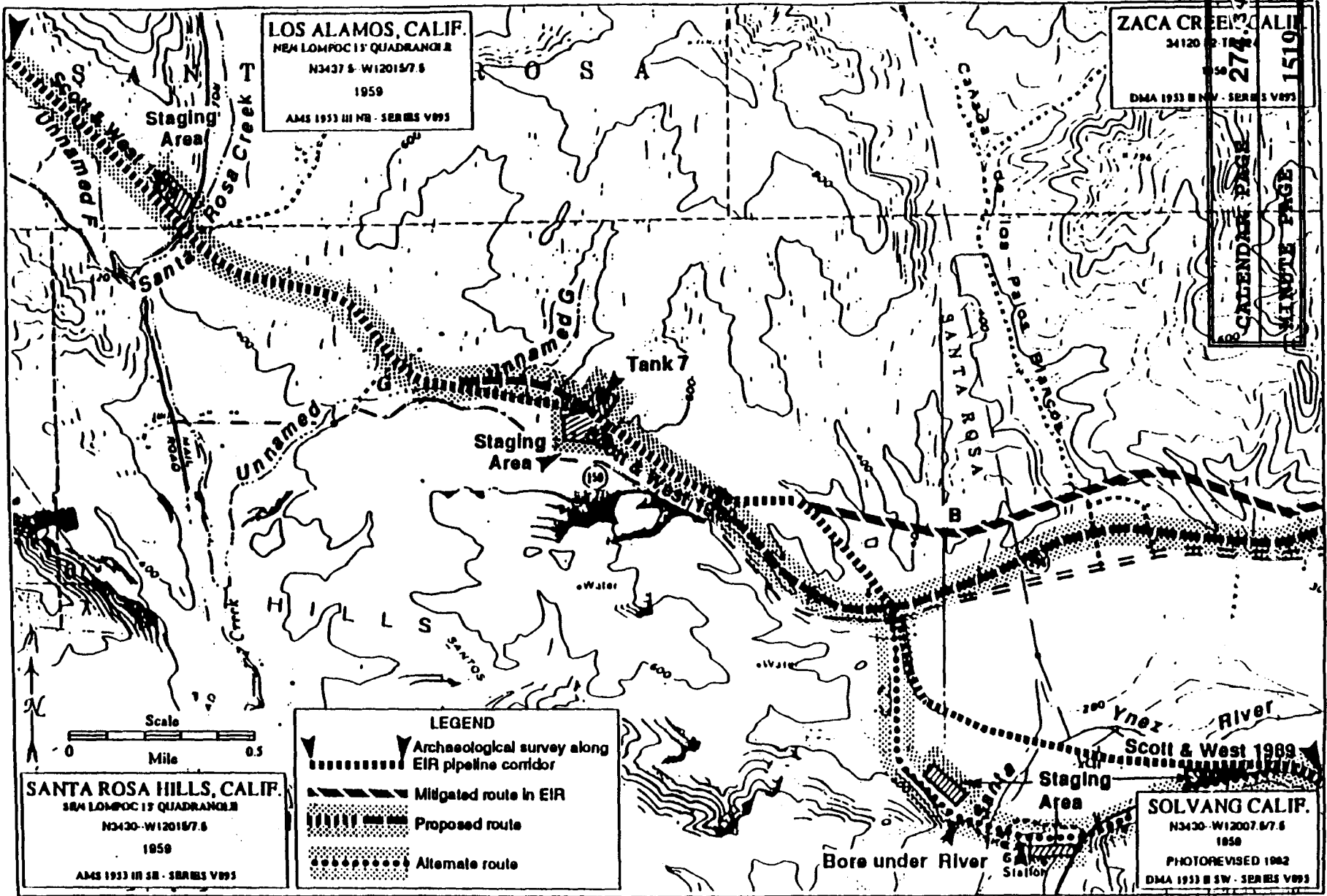
LEGEND

- ▲ Archaeological survey along
- EIR pipeline corridor
- Proposed route

LOS ALAMOS, CALIF.
 NMA 10437 B - W120167 S
 1958
 DMA 1933 IN NW - SERIES V081

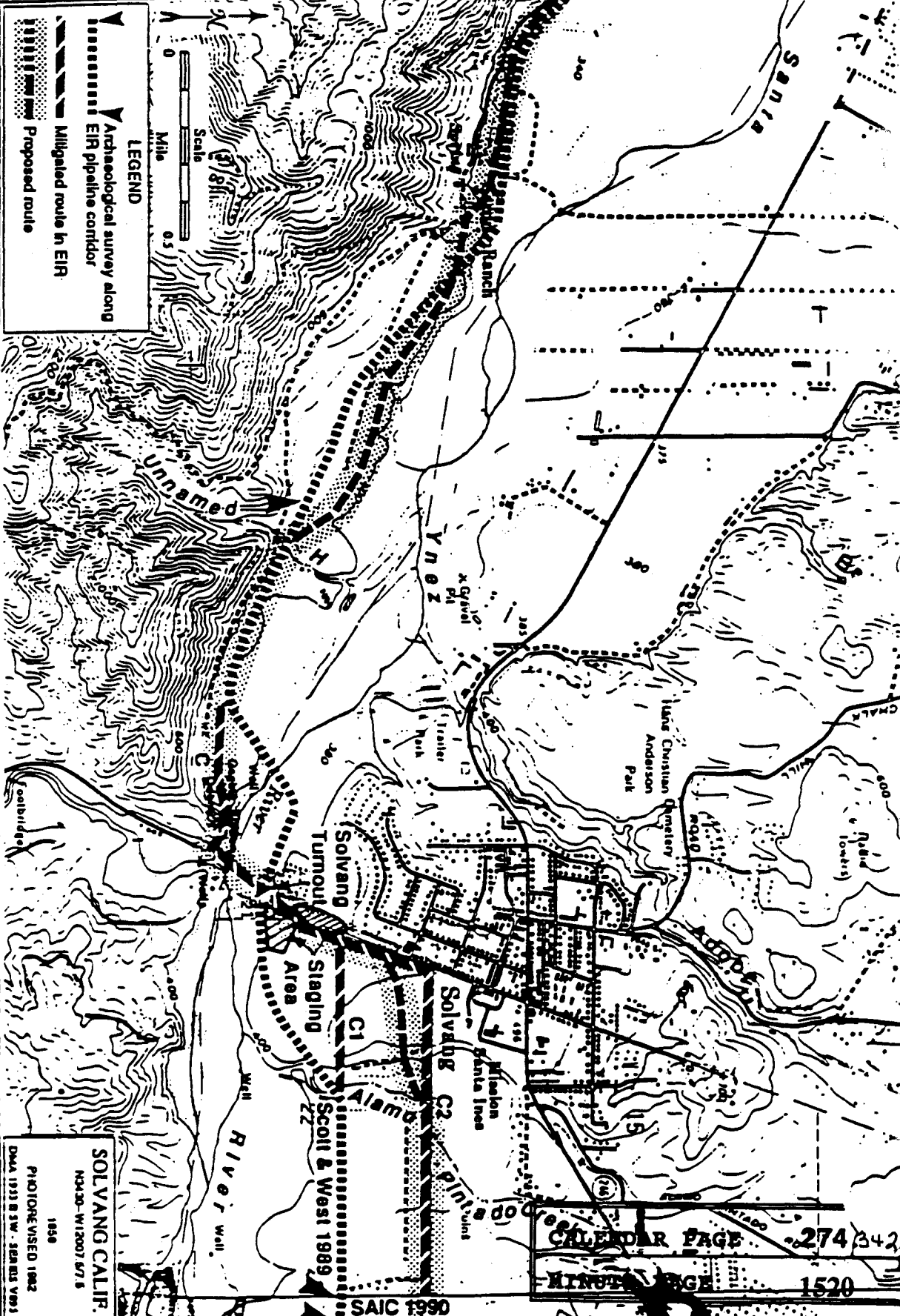
CALENDAR PAGE 274.340
MINUTE PAGE 1518

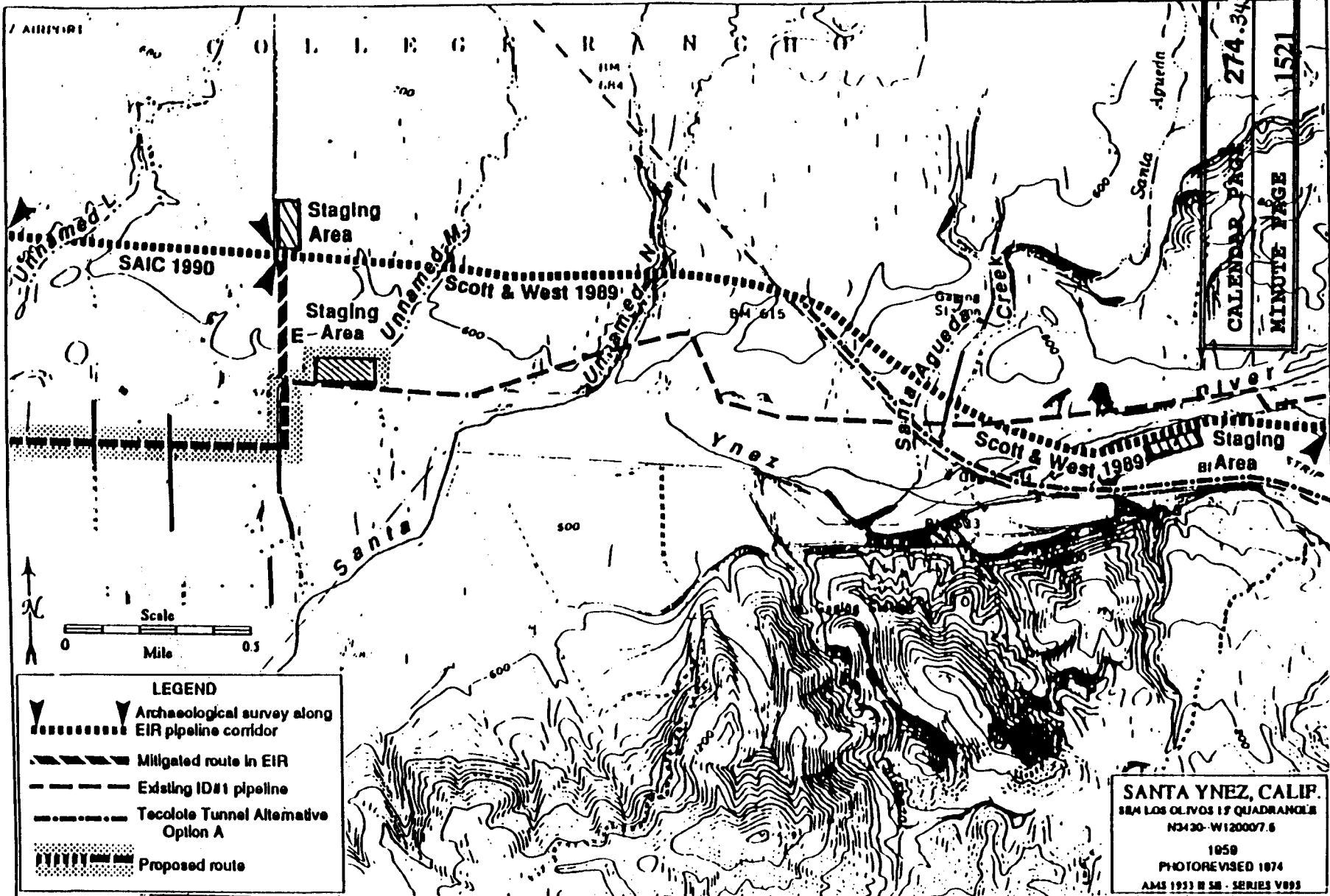
SANTA YNEZ PIPELINE CORRIDOR



SANTA YNEZ PIPELINE CORRIDOR

SANTA YNEZ PIPELINE CORRIDOR





SANTA YNEZ PIPELINE CORRIDOR

ATTACHMENT "C"

PROPOSED LANDS FOR ACQUISITION FORM ("PLFAF")

Date: _____

TO: **Regional Representative**

Facsimile:

FROM:

CCWA proposes that the following parcel of land be considered for approval by the Department as suitable for purposes of mitigation of the adverse environmental impacts of the Project:

Section Township Range Number of Acres

Current Legal Owners(s)

Please check one:

This parcel is located within the _____

This parcel is not located within the _____

Explanation: _____

APPROVED _____

By: _____

REJECTED _____

Date: _____

Region _____

Explanation: _____

EXHIBIT 2

IRREVOCABLE "STANDBY" LETTER OF CREDIT

ISSUER:

ACCOUNT PARTY/C

IRREVOCABLE LETTER OF CREDIT NO.: _____

Dated:

TO BENEFICIARY:

California Department of Fish and Game
1416 9th Street, 12th Floor
Sacramento, California 95814
Attention: Director

Dear Sirs:

1. At the request and on the instructions of our _____ ("Applicant"), we establish in favor of the BENEFICIARY, the California Department of Fish and Game (the "Department"), this Irrevocable Letter of Credit ("CREDIT") in the Principal Sum of \$ _____

2. This CREDIT is and has been established for the benefit of the Department pursuant to the terms of the Memorandum of Understanding ("the CESA MOU") entered into between _____ and the Department _____, 1993.

3. This CREDIT is intended by the parties to the MOU to serve as a security device for the performance by Applicant of its obligations under the CESA MOU.

4. Upon the occurrence of any default by Applicant as determined by the Department in its sole discretion under the CESA MOU, the Department shall be entitled to draw upon the CREDIT by presentation of a duly executed CERTIFICATE in substantially the same form as Attachment A, attached hereto, at our office located at _____

5. The CERTIFICATE shall be completed and signed by an "Authorized Representative" as defined in paragraph 12 of the CESA MOU. Presentation by the Department of a completed CERTIFICATE shall be made in person or by registered mail, return receipt requested.

6. Upon presentation of a duly executed CERTIFICATE in the form above provided, payment shall³ be made to the Department.

| | |
|---------------|---------|
| CALENDAR PAGE | 274.345 |
| MINUTE PAGE | 1523 |

Attachment A to EXHIBIT 2

CERTIFICATE FOR DRAWING

ISSUER:

ACCOUNT PARTY/CUSTOMER:

IRREVOCABLE LETTER OF CREDIT NO.: _____

BENEFICIARY:

California Department of Fish and Game
1416 9th Street, 12th Floor
Sacramento, California 95814

The undersigned, a duly Authorized Representative of the California Department of Fish and Game (the Department) (as defined in the above-referenced CREDIT), hereby certifies to the ISSUER that:

1. In the opinion of the Department, an Event of Default has occurred as defined in section V of the CESA MOU.
2. The undersigned is authorized under the terms of the above-referenced CREDIT to present this CERTIFICATE as the sole means of demanding payment on the CREDIT.
3. The Department is therefore making a drawing under the above-referenced CREDIT in the amount of \$ _____.
4. The amount demanded does not exceed the Principal Sum.
5. Sums received shall be used by the Department in accordance with the terms of the CESA MOU.

THEREFORE, the Department has executed and delivered this CERTIFICATE as of the _____ day of _____, 19____.

DEPARTMENT OF FISH AND GAME
OF THE STATE OF CALIFORNIA

By: _____
Title: _____
Authorized Representative

| | |
|---------------|---------|
| CALENDAR PAGE | 274.346 |
| MINUTE PAGE | 1524 |

Attachment B to EXHIBIT 2

CERTIFICATE FOR CANCELLATION

ISSUER:

ACCOUNT PARTY/CUSTOMER:

IRREVOCABLE LETTER OF CREDIT NO.: _____

BENEFICIARY:

California Department of Fish and Game
1416 9th Street, 12th Floor
Sacramento, California 95814

The undersigned, a duly Authorized Representative of the California Department of Fish and Game (the Department) (as defined in the above-referenced CREDIT), hereby certifies to the ISSUER that:

1. Pursuant to the CESA MOU entered into between _____ ("Applicant") and the Department, Applicant has presented documentary evidence of full compliance with the terms and conditions of the CESA MOU, or, the natural expiration of the CREDIT has occurred.

2. The Department therefore requests the cancellation of the above-referenced CREDIT.

THEREFORE, the Department of the State of California has executed and delivered this CANCELLATION as of the _____ day of _____, 19____.

DEPARTMENT OF FISH AND GAME
OF THE STATE OF CALIFORNIA

By: _____
Title: _____
Authorized Representative

| | |
|---------------|---------|
| CALENDAR PAGE | 274.347 |
| MINUTE PAGE | 1525 |

EXHIBIT 3
CERTIFICATE OF PUBLIC PURPOSE

This is to certify that the interest in real property conveyed by the deed or grant of the following property

_____, dated _____, from _____, to the California Department of Fish and Game (the "Department"), grantee, a governmental agency (under section 27281 of the Government Code), is hereby accepted by the undersigned officer on behalf of the Department, pursuant to authority conferred upon him by resolution of the _____ on _____.

The public purpose of this real property conveyance and the recordation hereof is being accomplished pursuant to the terms and conditions of the Memorandum of Understanding (the "CESA MOU") entered into on _____, by and between _____ and the Department.

The CESA MOU, among other terms and conditions not relevant here, provides at section VI paragraph (1):

"The Department, its designee, or successor shall hold title to and protect all interests in real property conveyed under this CESA MOU solely for the purposes of conservation, protection, restoration, and enhancement of those species adversely impacted by the Project. This covenant shall run with the land and no use of such land shall be permitted by the Department or any subsequent titleholder or assignee which is in conflict with the stated conservation purposes of this CESA MOU. If at any time in the future the Department or any subsequent transferee uses or threatens to use such lands for purposes not in conformance with the stated conservation purposes contained herein, the California Attorney General, California residents, or private entities shall have standing as interested beneficiaries to challenge such nonconforming uses of lands transferred herein."

A copy of this CESA MOU may be obtained by interested parties by sending a request to the Director of the Department at this address:

DEPARTMENT OF FISH AND GAME
OF THE STATE OF CALIFORNIA
1416 Ninth Street
Sacramento, California 95814

By: _____
Title: _____
Authorized Representative
Date: _____

CALENDAR PAGE 274.348

INCLUDE PAGE East W. A. 1026

12-15-93 / 10:10:10 PM / EXTENSION

SANTA YNEZ EXTENSION AND MISSION HILLS EXTENSION

MITIGATION MONITORING PROGRAM
(page 1 of 16)

| Impact | Mitigation | Monitoring Action | Responsibility | Timing |
|---|--|---|----------------|---|
| Geology | | | | |
| Potential soil disruption, modification to topography and drainage due to grading and construction. | Perform grading and construction using standard construction techniques and pursuant to project-specific erosion control plan. Restore soil horizon upon completion. | Prepare erosion control/drainage plan. On-site supervisor monitor to ensure compliance. Include compliance requirement in construction controls. | CCWA* | Prior to final design approval and during construction. |
| Potential for fault-related pipe rupture and resulting water caused erosion along the Santa Ynez River Fault and unmapped faults along the pipeline corridor. | Avoid known faults where possible. At fault crossings use special engineering design such as: emergency shutoff valves; steel pipe; above-ground pipeline construction; using cohesionless backfill around the pipe; and other best available pipeline technology. | Include in final design fault avoidance routes and special design features to reduce risk of rupture. | CCWA | Prior to final design approval. |
| Potential for moderate to strong seismic shaking causing structural damage to structures. | Design structures for seismic zone 4 of UBC. | Include UBC requirements in final design. | CCWA | Prior to final design approval. |
| Potential for seismically induced liquefaction. | Perform site-specific studies to determine if soil conditions along the corridor are conducive to liquefaction. Where soils are potentially liquefiable, avoid or use best-available pipeline technology (e.g., densifying soils, or removing and recompacting soils) to eliminate the hazard. | Perform studies. Based upon results, include in final design avoidance routes around high-risk areas to extent feasible and state-of-the-art technology for reducing risks from liquefaction where high-risk areas cannot be avoided. | CCWA | Prior to final design approval. |
| Potential for landslides. | Perform site-specific studies to determine if soil conditions along the pipeline corridor are conducive to landslides. If unstable slopes are present, avoid unstable areas where possible; where avoidance not possible, use standard engineering practices (e.g., construction of earth buttresses to stabilize slope or removal of the potential slide mass) to eliminate the hazard. | Perform studies. Based upon results, include in final design avoidance routes around high-risk areas to extent feasible and state-of-the-art technology for reducing risks from landslides where high-risk areas cannot be avoided. | CCWA | Prior to final design approval. |

EXHIBIT "I"

CALENDAR PAGE 274.349
MINUTE PAGE 1527

SANTA YNEZ EXTENSION AND MISSION HILLS EXTENSION

MITIGATION MONITORING PROGRAM

(page 2 of 16)

| <i>Impact</i> | <i>Mitigation</i> | <i>Monitoring Action</i> | <i>Responsibility</i> | <i>Timing</i> |
|--|--|---|-----------------------|-----------------------------------|
| Potential for soil contamination due to fuel spills and vehicle maintenance. | Maintenance and refueling of construction vehicles should comply with the project-specific spill response and maintenance plan. | Prepare and implement measure to avoid spills and ensure vehicle maintenance. Prepare and implement spill response plan that assures immediate clean-up of spills. Include compliance requirement in construction contracts. On-site field supervisor monitor to ensure compliance. | CCWA | Prior to and during construction. |
| Water Resources | | | | |
| Potential degradation of water resources by accidental spills. | Prohibit vehicle/equipment refueling, maintenance, and oil changing activities near streams. Oil and fuel stored away from streams. | Include in spill avoidance measures described above. On-site field supervisor monitor to ensure compliance. | CCWA | Prior to and during construction. |
| Potential degradation of water resources during construction across streams. | Prepare plan for disposing of cleaning water in accordance with CRWQCB requirements. Construct stream crossings during periods of low or no flow. Divers flow in year round streams and direct flow and scrape pumped from trench into sedimentation basin. Restore surface to pre-construction condition. Suspend pipe over San Antonio Creek crossing. Adjust alignment to avoid standing pools of water, control erosion and dust strictly to minimize turbidity potential. | On-site field supervisor monitor to ensure compliance. Construction contracts to include compliance requirement. | CCWA | Prior to and during construction. |
| Potential degradation of streams due to erosion of disturbed areas near streams. | Restore pipeline corridor to pre-construction conditions as soon as possible after completion of construction. | Include compliance requirement in construction contracts. On-site field supervisor monitor to ensure compliance. | CCWA | During construction. |

MINUTE PAGE 1528
 CALENDAR PAGE 274.350

SANTA YNEZ EXTENSION AND MISSION HILLS EXTENSION

MITIGATION MONITORING PROGRAM

(page 3 of 16)

| <i>Impact</i> | <i>Mitigation</i> | <i>Monitoring Action</i> | <i>Responsibility</i> | <i>Timing</i> |
|---|--|---|-----------------------|-----------------------------------|
| Air Quality | | | | |
| NO ₂ emissions during construction will potentially cause temporarily significant impacts. | An air quality monitoring program will be established at site-specific locations. | Monitor results and implement additional feasible utilization measures as appropriate under APCD guidelines, based upon monitoring results. | APCD | During construction. |
| | Construction equipment operating on-site will be equipped with low NO _x -emitting engines (engine timing retard, precombustion chambers, or gasoline or propane-fueled equipment). Where feasible, combustion control techniques (e.g., engine timing retard) shall be used on construction vehicles and equipment. | Submit proof of low NO _x -emitting engines to CCWA. Construction contracts to include requirement. On-site field supervisor to verify. | CCWA | Prior to and during construction. |
| | The engine size of construction equipment will be the minimum size feasible. | Engine size will be specified in the bid for the job and verification of size checked by on-site field supervisor. | CCWA | Prior to and during construction. |
| | The number of pieces of construction equipment operating simultaneously will be minimized through efficient management practices to ensure that the smallest practical number are operating at any one time. Limit idling time when feasible. | Construction contracts to include requirement and on-site field supervisor check daily to ensure compliance. | CCWA | During construction. |
| | Construction equipment will be electric when feasible. | Construction contracts to include requirement. Specify in bid and field supervisor to verify. | CCWA | During construction. |
| | Construction equipment will be maintained in tune per manufacturer's specifications and will be equipped with approved air pollution control devices. | Construction contracts to include requirement of compliance. Contractors to submit tune up records for equipment to on-site field supervisor. | CCWA | Prior to and during construction. |

SANTA YNEZ EXTENSION AND MISSION HILLS EXTENSION

MITIGATION MONITORING PROGRAM

(page 4 of 16)

| <i>Impact</i> | <i>Mitigation</i> | <i>Monitoring Action</i> | <i>Responsibility</i> | <i>Timing</i> |
|--|--|---|-----------------------|----------------------|
| Particulate (PM ₁₀) emissions during construction. | Implement ride-sharing, carpooling, and vanpooling for construction workers. | Include compliance requirement in construction contracts. On-site field supervisor to monitor compliance. | CCWA | During construction. |
| | Grading activities will cease when wind speeds are such that the application of water and other particulate regulation techniques are ineffective to control dust generation. | Construction contracts to include requirement of compliance. On-site field supervisor to check. | CCWA | During construction. |
| | Haul roads and construction site roads will be watered regularly. Haul trucks will be covered. Stockpiles will be covered. Fabric filters will be placed on potentially friable materials. | Construction contracts to include requirement of compliance. On-site field supervisor to check. | CCWA | During construction. |
| | Vehicle speeds in construction corridor will be enforced at no greater than 15 miles per hour, except in areas where water and other particulate regulation techniques are used to control dust generation. | Construction contracts to include requirement of compliance. On-site field supervisor to check. | CCWA | During construction. |
| | After clearing, grading, earth moving or excavation is completed, the entire area of disturbed soil will be treated immediately by watering, revegetating, or spreading soil binders to prevent wind pick-up of the soil until the area is paved or otherwise developed so that dust generation will not occur. Organic mulches or other soil stabilizers will be applied to exposed ground areas that would be left in a disturbed state for a period of more than one month. | Construction contracts to include requirement of compliance. On-site field supervisor to verify compliance. | CCWA | During construction. |
| | Dip troughs will be used to wash dirt off truck tires before leaving the construction site. | Construction contracts to include requirement of compliance. On-site field supervisor to verify compliance. | CCWA | During construction. |

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SANTA YNEZ EXTENSION AND MISSION HILLS EXTENSION

MITIGATION MONITORING PROGRAM

(page 5 of 16)

| <i>Impact</i> | <i>Mitigation</i> | <i>Monitoring Action</i> | <i>Responsibility</i> | <i>Timing</i> |
|--------------------------------|--|--|-----------------------|---|
| Biological Resources | | | | |
| Loss of Burton Mesa chaparral. | Narrow construction corridor to less than 120 feet in Burton Mesa chaparral, mark edge of corridor with survey stakes. | Include in final design plans. Include penalties for going outside staked corridor in construction contracts. On-site field supervisor and biologist verify that stakes properly located and maintained prior to and during construction and to ensure that staked corridor limits are respected by contractors. | CCWA | Prior to and during construction. |
| | Reroute pipeline to avoid sensitive plant species to extent feasible. | Include in final design plans. On-site field supervisor and biologist monitor to ensure compliance. | CCWA | Prior to final design and approval and during construction. |
| | Comply with revegetation and oak tree preservation requirements attached. | Biologist monitor to ensure compliance. | CCWA | During construction and upon completion of construction. |
| | Vegetation clearing for construction corridor shall avoid disturbance to roots of shrub species. | Biologist monitor to ensure compliance. | CCWA | During construction. |
| | Narrow width of permanent corridor to approximately 40 feet and maintain vegetation clear zone within it of 20 feet or less through Burton Mesa chaparral. | Include in final design plans. | CCWA | During and upon completion of construction. |
| | Smoking shall be limited to designated areas to reduce potential for wildfires. | Include in construction contracts. On-site field supervisor monitor to ensure compliance. | CCWA | During construction. |
| | All construction equipment and workers' vehicles shall be equipped with appropriate spark arrestors. | Include in construction contracts. On-site field supervisor monitor to ensure compliance. | CCWA | During construction. |

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SANTA YNEZ EXTENSION AND MISSION HILLS EXTENSION

MITIGATION MONITORING PROGRAM

(page 6 of 16)

| Impact | Mitigation | Monitoring Action | Responsibility | Timing |
|--|--|--|----------------|---|
| | Replace on at least an acre-for-acre basis (1:1) all Burton Mesa chaparral that is not restored. | CCWA acquire existing areas of undisturbed Burton Mesa chaparral and act aside for preservation into perpetuity, or CCWA contribute funds adequate to restore disturbed Burton Mesa chaparral and to ensure that, once restored, said lands will be preserved into perpetuity. If funds are contributed, CCWA shall ensure that said restoration and preservation actually occurs. A combination of these mitigation measures may be used, so long as at least a 1:1 ratio of restoration to project loss results. | CCWA | During and upon completion of construction. |
| | Routine inspections of the pipeline shall be by airplane to minimize disturbance of soils and vegetation recolonizing the corridor. Vehicles shall be used only when closer inspection is appropriate. | Include in contract with inspectors. | CCWA | After construction. |
| | If repair and maintenance activities necessitate vegetation to be disturbed or removed, all of the above mitigation requirements shall be implemented as to the disturbed and removed vegetation upon completion of the maintenance and repair activity. | Include in contract with maintenance/repair contractors. Hire biologist to monitor compliance at time repairs and maintenance occur. | CCWA | Future. |
| | The biological monitor shall have authority to halt and reroute construction, subject to override or modification by CCWA on-site field supervisor. | Include in construction contracts and in biologist's contract. | CCWA | Prior to and during construction. |
| Loss of riparian and wetland vegetation. | Vegetation clearing for the construction corridor shall avoid disturbance to roots of shrub species. | Biologist monitor ensure compliance. | CCWA | During construction. |

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SANTA YNEZ EXTENSION AND MISSION HILLS EXTENSION

MITIGATION MONITORING PROGRAM

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| <i>Impact</i> | <i>Mitigation</i> | <i>Monitoring Action</i> | <i>Responsibility</i> | <i>Timing</i> |
|---------------|---|--|-----------------------|---|
| | Narrow construction corridor as much as possible through riparian and wetland areas. | Include corridor width for each area in final design plans. On-site field supervisor and biologist monitor to ensure compliance. | CCWA | Prior to final design approval and during construction. |
| | Reroute pipeline wherever possible to minimize or avoid impacts to riparian and wetland vegetation. | Include in final design plans. On-site field supervisor and biologist monitor to ensure compliance. | CCWA | Prior to final design and approval and during construction. |
| | Comply with oak tree preservation requirements attached. | Biologist monitor to ensure compliance. | CCWA | During construction. |
| | Revegetate per attached revegetation requirements. | Biologist monitor to ensure compliance. | CCWA | During and after construction. |
| | Narrow width of permanent corridor through riparian and wetland habitats to approximately 40 feet and maintain vegetation clear zone within it of 20 feet or less. | Included in final plans. Biologist monitor to ensure compliance. | CCWA | Prior to final design approval and after construction. |
| | Trees cut inside the construction corridor shall be left intact at the edge of the construction corridor as deadfall after cutting, except where this would create a fire hazard, or mulched for use in root protection and revegetation. Cut trees shall not be placed in a pile but left individually. Stumps lying outside permanent corridor shall not be killed with herbicides, but allowed to sprout and grow. | Biologist monitor to ensure compliance. | CCWA | During construction. |
| | Construction adjacent to the Campbell vernal pools shall be completed and soils stabilized prior to the rainy season. Construction across creeks and Santa Ynez River shall occur during periods of low or no flow whenever feasible. | Include in final design plans and construction contracts. Biologist monitor to ensure compliance. | CCWA | Prior to final design approval and during construction. |

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SANTA YNEZ EXTENSION AND MISSION HILLS EXTENSION

MITIGATION MONITORING PROGRAM

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| Impact | Mitigation | Monitoring Action | Responsibility | Timing |
|--------|--|---|----------------|---|
| | Streambeds and banks shall be restored to pre-project contours. | Include in final design plans and construction contracts. Biologist monitor to ensure compliance. | CCWA | Prior to final design approval and during construction. |
| | Adjacent to vernal pools, all disturbed areas (from construction) shall be restored to pre-construction contours so that runoff to the pools is not diverted or impeded. | Include in final design plans and construction contracts. Biologist monitor to ensure compliance. | CCWA | Prior to final design approval and during construction. |
| | Adopt mitigated Route B and D. In areas where listed or candidate bird species are present, construction shall not occur during the nesting season for those species. | Include in final design. | CCWA | Prior to final design approval. |
| | Groundwater encountered during trenching across streams shall be tested for hydrogen sulfide. If hydrogen sulfide is found, water shall be aerated before discharge into stream bed. | Include in construction contracts. On-site field supervisor monitor to ensure compliance. | CCWA | During construction. |
| | During construction in and near the Santa Ynez River and Campbell vernal pools, southwestern pond turtles shall be monitored and protected. | Prior to commencement of construction in these areas, a Biologist shall conduct a survey of the existing population. The biologist shall monitor the turtles throughout construction and habitat restoration activity in these areas. If the biologist deems it appropriate, a program shall be implemented to capture and hold pond turtles until they can be safely released. | CCWA | Prior to and during construction. |
| | During construction in Santa Ynez River, monitor and protect breeding habitat of willow flycatcher to extent feasible; use Mitigated Route B to affect previously disturbed area. | Prior to commencement of construction in these areas, biologist shall conduct a survey of the existing population and shall monitor the birds throughout construction and habitat restoration activity. | CCWA | Prior to and during construction; during revegetation. |

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Fr: Susan Petrovich
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SANTA YNEZ EXTENSION AND MISSION HILLS EXTENSION

MITIGATION MONITORING PROGRAM

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| Impact | Mitigation | Monitoring Action | Responsibility | Timing |
|--------|--|---|----------------|---|
| | During construction in Santa Ynez River near Buckton, monitor and protect red-legged frog. Use same mitigation measures as recommended for southwestern pond turtle. | Same as for southwestern pond turtle. | CCWA | Prior to and during construction; during revegetation. |
| | Replace on at least an acre-for-acre basis (1:1) all riparian and wetland vegetation that is not restored. | CCWA enhance and preserve existing degraded or disturbed riparian or wetland (or both) areas on a ratio of at least 1:1 restoration or replacement to project loss. | CCWA | During and after construction. |
| | Washing of concrete and of equipment shall be closely regulated to avoid polluting streams, wetlands, and related habitat areas. | Require contractor to submit to CCWA a plan for containing polluted wash water and for preventing discharge into streams and wetland areas. On-site field supervisor to monitor compliance. | CCWA | Prior to and during construction. |
| | If repair and maintenance activities necessitate vegetation to be disturbed or removed, all of the above mitigation requirements shall be implemented as to the disturbed and removed vegetation upon completion of the maintenance and repair activity. | Include in contract with maintenance repair contractors. Hire biologist to monitor compliance at time repairs and maintenance occur. | CCWA | Future. |
| | Biological monitors shall have authority to halt and reroute construction, subject to override or modification by CCWA on-site field supervisor. | Include in construction contracts and in biologist's contract. | CCWA | Prior to and during construction. |
| | Narrow construction corridor to less than 120 feet, wherever feasible, in oak woodlands. | Include in final design plans. On-site field supervisor and biologist monitor to ensure compliance. | CCWA | Prior to and during construction. |
| | Reroute pipeline to minimize and avoid oak tree removal and damage. | Include in final design plans. On-site supervisor and biologist monitor to ensure compliance. | CCWA | Prior to final design approval and during construction. |

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SANTA YNEZ EXTENSION AND MISSION HILLS EXTENSION

MITIGATION MONITORING PROGRAM

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| Impact | Mitigation | Monitoring Action | Responsibility | Timing |
|--------|---|--|----------------|----------------------|
| | Comply with oak tree preservation requirements attached. | Biologist monitor to ensure compliance. | CCWA | During construction. |
| | Revegetate per revegetation requirements attached. | Biologist monitor to ensure compliance. | CCWA | After construction. |
| | Narrow width of permanent corridor through oak woodlands to approximately 40 feet or less. | In accordance with final design plans. Biologist monitor to ensure compliance. | CCWA | After construction. |
| | Trees cut inside the construction corridor shall be left intact at the edge of the construction corridor as long as they are not in a pile where this would create fire hazard, or mulched for use in root protection and revegetation. Cut trees shall not be placed in a pile but left individually. The stumps of trees outside the permanent corridor shall not be killed with herbicides but allowed to sprout and grow. | Biologist monitor to ensure compliance. | CCWA | During construction. |
| | Replant or at least an acre-foot acre banks (iii) all oak woodlands that are not restored (including but not limited to the permanent corridor over the pipeline). | Plant new oak trees outside the permanent corridor and restore and preserve oak woodlands that have been degraded and disturbed, or contribute funds adequate to restore oak woodlands in existing permanent corridors. If funds are contributed, CCWA shall ensure that said restoration and preservation actually occurs. A combination of these mitigation measures may be used so long as at least a 1:1 ratio of restoration or replacement to project loss occurs. | CCWA | After construction. |

SANTA YNEZ EXTENSION AND MISSION HILLS EXTENSION

MITIGATION MONITORING PROGRAM
(page 11 of 16)

| Impact | Mitigation | Monitoring Action | Responsibility | Timing |
|---|---|---|----------------|---|
| | If repair and maintenance activities necessitate vegetation to be disturbed or removed, the above mitigation requirements, as applicable, shall be implemented as to the disturbed and removed vegetation upon completion of the maintenance and repair activity. | Included in contract with maintenance repair contractors. Hire biologist to monitor compliance at time repairs and maintenance occur. | CCWA | Future. |
| | Biological monitors shall have authority to halt and reroute construction, subject to override or modification by on-site field supervisor. | Include in construction contracts and in biologist's contract. | CCWA | Prior to and during construction. |
| Temporary loss of non-native grassland, crops, and landscape trees. | Revegetate corridor. | Final design plans to include revegetation. Biologist monitor to verify that revegetation occurs after completion of construction. | CCWA | Prior to final design approval. Implementation upon completion of construction. |
| Loss of wildlife habitat from vegetation clearing. | Habitat restoration/compensation same as for vegetation restoration described above. | Final design plans to include revegetation. Biologist monitor to verify that revegetation occurs after completion of construction. | CCWA | Prior to final design approval. Implementation upon completion of construction. |
| Loss of sensitive plants. | Site pipeline to avoid and replace any losses through revegetation as described above. | Final design plans to include avoidance routes to extent feasible. Biologist monitor to verify replacement of lost vegetation as described above. | CCWA | Prior to final design approval. Implementation upon completion of construction. |
| Disturbance to native species. | Construction through riparian woodlands to occur other than during nesting season for candidate and listed species found to be present; use mitigated routes B and D. | Include mitigated routes B and D in final design plans. Include timing of construction in construction contracts. Biologist monitor to ensure compliance. | CCWA | Prior to final design approval. Implementation upon completion of construction. |
| Disturbance of aquatic habitats. | Construct across drainages at times of low and no flow whenever feasible; restore stream bed and banks. | Include mitigated routes B and D in final design plans. Include timing of construction in construction contracts. Biologist monitor to ensure compliance. | CCWA | Prior to final design approval. Implementation upon completion of construction. |

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SANTA YNEZ EXTENSION AND MISSION HILLS EXTENSION

MITIGATION MONITORING PROGRAM

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| <i>Impact</i> | <i>Mitigation</i> | <i>Monitoring Action</i> | <i>Responsibility</i> | <i>Timing</i> |
|---|---|---|-----------------------|---|
| Effects of accidents. | Refuel vehicles away from streams and sensitive species. | Adopt and implement spill avoidance and cleanup plan described above. Include in construction contracts. On-site field supervisor monitor to ensure compliance. | CCWA | Prior to and during construction. |
| Wood dispersal. | Rapid revegetation with native species after completion of construction. Biological inspections and manual weed control annually until native vegetation is well established. | Biologist monitor timely implementation of revegetation plan and annual inspection and manual weed control program. | CCWA | After completion of construction. |
| Archaeological Resources | | | | |
| Construction impacts to archaeological sites. | Perform a cultural resource reconnaissance on all areas of the corridor and all routes not previously inspected. Clear areas of poor visibility and resurvey. | Qualified archaeologist and Native American representatives to monitor all construction near known cultural resources. Final design to include avoidance of identified sites to extent feasible. If sites cannot be avoided, designed route shall minimize impacts to extent feasible. If complete avoidance and minimization are not feasible, recovery and preservation measures shall be implemented consistent with state guidelines. | CCWA | Prior to final design approval. Implementation upon completion of construction. |
| | If previously unknown cultural resources are encountered during construction, all work in area of discovery shall halt and a qualified archaeologist consulted to assess significance of the discovery. Construction shall commence only on orders of on-site supervisor. | None required if no sites present. On-site field supervisor monitor to ensure that work halted and archaeologist called. Include compliance requirement in construction contracts. | CCWA | During construction. |
| | Stake sites near construction corridor. | On-site field supervisor and archaeologist ensure stakes located and maintained. Include compliance requirement in construction contracts. | CCWA | Prior to and during construction. |

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SANTA YNEZ EXTENSION AND MISSION HILLS EXTENSION

MITIGATION MONITORING PROGRAM

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| Aspect | Mitigation | Monitoring Action | Responsibility | Timing |
|---|--|--|----------------|---|
| Increased public access may lead to violations of site during construction. | Infringement of construction perimeter. Posting signs to public during construction corridor. Security during excavation of trench berms. | On-site field supervisor and archeologist monitor to ensure compliance. | CCWA | Prior to and during construction. |
| Land Use | | | | |
| Walrus trees along Santa Rosa Road removed. | Use Mitigated Route B. | Final design to include re-routing. | CCWA | Prior to final design approval. |
| Two homes on Santa Rosa Road adjacent to trench excavation. | Use Mitigated Route B. | Final design to include re-routing. | CCWA | Prior to final design approval. |
| Vineyard on Highway Road affected by pipeline. | Reroute pipeline parallel to Highway Road. | Final design to include re-routing. | CCWA | Prior to final design approval. |
| Santa Ynez Indian Reservation crossed by pipeline. | Use Mitigated Route D. | Final design to include re-routing. | CCWA | Prior to final design approval. |
| Agricultural activities disrupted by construction. | Restoration of topsoil and re-planting of most agricultural activities after construction. Locate pipelines along fences, roads, and edges of fields, orchards, and vineyards, where possible. Where possible, schedule construction through cultivated agricultural areas for a time when they are not in production or being harvested. Where feasible, adjust pipeline alignment to avoid producing agricultural fields, orchards, and vineyards. | Include compliance requirements in construction contracts. On-site field supervisor ensure compliance. | CCWA | During and upon completion of construction. |
| Homeowners and occupants relocated due to house demolition. | Provide relocation assistance, compensation to owners, moving expenses to occupants. | CCWA implements mitigation measures. | CCWA | Prior to construction. |
| Homeowners and occupants disturbed by construction. | Implement air quality, noise and other mitigation measures. | As listed for each such mitigation measure. | CCWA | During construction. |

SANTA YNEZ EXTENSION AND MISSION HILLS EXTENSION

MITIGATION MONITORING PROGRAM

(page 14 of 16)

| Impact | Mitigation | Monitoring Action | Responsibility | Timing |
|--|--|--|----------------|--|
| <p>Construction noise effects on noise-sensitive receptors.</p> | <p>Require contractors to use equipment that generates least noise possible. Require that equipment be kept tuned to minimize noise and that equipment be placed as far as possible from noise-sensitive receptors. Limit construction and parking activities to weekdays 7 A.M. to 6 P.M. in areas near noise-sensitive receptors. Route materials transport trucks to avoid noise-sensitive receptors.</p> | <p>Include compliance requirements in construction contracts. Specify low noise-generating equipment in bids. On-site field supervisor monitor to ensure compliance.</p> | <p>CCWA</p> | <p>Prior to and during construction.</p> |
| <p>Transportation</p> <p>Increased traffic during construction.</p> | <p>Carpooling and van pools, where feasible.</p> | <p>Include compliance requirements in construction contracts. On-site field supervisor monitor to ensure compliance.</p> | <p>CCWA</p> | <p>During construction.</p> |
| <p>Safety hazard due to increased heavy truck traffic.</p> | <p>Deliveries of pipe will be spread over a 9-month period.</p> | <p>On-site field supervisor monitor to ensure compliance.</p> | <p>CCWA</p> | <p>Prior to final design approval and during construction.</p> |
| <p>Transportation</p> <p>Increased traffic due to construction activities.</p> | <p>Provide detours around trench crossings and use jacked crossings under major roads.</p> | <p>Include in final design and require compliance in construction contracts. On-site field supervisor monitor to ensure compliance.</p> | <p>CCWA</p> | <p>Prior to final design approval and during construction.</p> |
| <p>Transportation</p> <p>Increased traffic due to construction activities.</p> | <p>Restore all roads and driveways to preconstruction specifications.</p> | <p>Include in final design and require compliance in construction contracts. On-site field supervisor monitor to ensure compliance.</p> | <p>CCWA</p> | <p>Prior to final design approval and during construction.</p> |

SANTA YNEZ EXTENSION AND MISSION HILLS EXTENSION

MITIGATION MONITORING PROGRAM
(page 15 of 16)

| Aspect | Mitigation | Monitoring Action | Responsibility | Timing |
|--|--|---|----------------------|--|
| <p>Aesthetics</p> <p>Potential aesthetic impacts from construction where the pipeline would pass through riparian woodlands, oak woodland, and chaparral and where steep slopes would require substantial grading.</p> | <p>After construction, revegetate exposed areas by planting vegetation that is consistent with the pre-project community type, monitor health and survival of replacement native vegetation for 3 years; narrow corridor at stream crossings where trees are present.</p> | <p>Include in final design plans non narrow corridor feasible for species replacement or revegetation and 3-year evaluation. Replace vegetation that does not survive during 3-year period and continue to monitor until replaced vegetation established.</p> | CCWA | Prior to final design approval and during construction. |
| <p>Potential aesthetic impacts during operations where facilities would be located within scenic views of other areas of high scenic value (e.g., proposed cleared recreational trails near the proposed viewing points and near the Buellford turnout; existing recreational trail along Highway 245 near Tank 7; the proposed reconstruction plan for the San Ynez Dam on Lake 245).</p> | <p>Design plans to include mitigated routes G and D.</p> <p>Design grading plan to minimize erosion.</p> <p>Shield new structures behind trees and other vegetation that are compatible with surrounding land use and vegetation.</p> <p>Construction use exterior lighting that is low-beamed, hooded, and shielded forward to minimize glare; use neutral colors compatible with surrounding terrain in building exteriors; avoid disturbance to woodlands; locate dispatch facility at south end of Strawberry Dam where new development would be least noticeable.</p> | <p>Include reveget in final design plans.</p> <p>Include erosion control plan in final design.</p> <p>Include mitigation measures in final design plans. On-site field supervisor monitor to ensure compliance.</p> | CCWA CCWA CCWA | Prior to final design approval. Prior to final design approval. Prior to final approval and during construction. |
| <p>Construction equipment use and consumption during construction.</p> | <p>Carpooling and van pools, where feasible. Efficient use of well-maintained construction equipment.</p> | <p>Include compliance requirements in construction contracts. On-site field supervisor monitor to ensure compliance.</p> | CCWA | During construction. |

SANTA YNEZ EXTENSION AND MISSION HILLS EXTENSION

MITIGATION MONITORING PROGRAM

(page 16 of 16)

| Impact | Mitigation | Monitoring Action | Responsibility | Timing |
|--|---|--|----------------|------------------------|
| <p>Growth Inducement Potential for growth inducement if Cond. #3 is disregarded by a Contractor without appropriate environmental review.</p> | <p>Contractors to keep records of supply, demand, and groundwater extractions and submit copies on request.</p> | <p>Annually review Contractor records pertaining to supply and demand and groundwater extractions.</p> | <p>CCWA</p> | <p>After delivery.</p> |

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EXHIBIT "J"

SECTION 00010 - TITLE PAGE

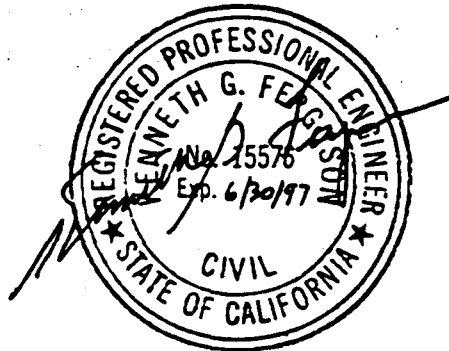
CENTRAL COAST WATER AUTHORITY

MISSION HILLS AND SANTA YNEZ AQUEDUCT EXTENSIONS

BID PACKAGE 1: PIPELINE SCHEDULES A and B
BID PACKAGE 2: TANK 7

CONTRACT DOCUMENTS
VOLUME I - BIDDING REQUIREMENTS, CONTRACT FORMS,
CONDITIONS OF THE CONTRACT, AND
TECHNICAL SPECIFICATIONS

Montgomery Watson America, Inc.
301 North Lake Avenue, Suite 600
Pasadena, California 91101-7009



Bids will be received at the office of the Central Coast Water Authority located at 1933 Cliff Drive, Suite 12, Santa Barbara, California 93109 until 2:00 PM on February 28, 1994.

MW-051093
3256.2300 - CCWA AQUEDUCT EXTENSION

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ARTICLE 1 -- DEFINITIONS

Wherever used in these General Conditions or in the other Contract Documents the following terms have the meanings indicated which are applicable to both the singular and plural thereof. Where an entire word is in upper case in the definitions and is found in lower case in the Contract Documents it has the ordinary dictionary definition.

Addenda - Written or graphic instruments issued prior to the opening of Bids which make additions, deletions, or revisions to the Contract Documents.

Agreement - The written contract between the OWNER and the CONTRACTOR covering the WORK to be performed; other documents are attached to the Agreement and made a part thereof as provided therein.

Application for Payment - The form furnished by the ENGINEER which is to be used by the CONTRACTOR to request progress or final payment and which is to be accompanied by such supporting documentation as is required by the Contract Documents.

Asbestos - Any material that contains more than one percent asbestos and is friable or is releasing asbestos fibers into the air above current action levels established by the United States Occupational Safety and Health Administration.

Bid - The offer or proposal of the Bidder submitted on the prescribed form setting forth the price or prices for the WORK.

Bonds - Bid, Performance, and Payment Bonds and other instruments which protect against loss due to inability or refusal of the CONTRACTOR to perform its Contract.

Change Order - A document recommended by the ENGINEER, which is signed by the CONTRACTOR and the OWNER, and authorizes an addition, deletion, or revision in the WORK, or an adjustment in the Contract Price or the Contract Times, issued on or after the Effective Date of the Agreement.

Clarification - A document issued by the ENGINEER to the CONTRACTOR that interprets the requirement(s) and/or design intent of the Contract Documents, may not represent an addition, deletion, or revision in the Work or an adjustment in the Contract Price or the Contract Times.

Contract Documents - The Notice Inviting Bids, Instructions to Bidders, Bid Forms (including the Bid, Bid Schedule(s), Information Required of Bidder, Bid Bond, and all required certificates and affidavits), Agreement, Performance Bond, Payment Bond, General Conditions, Supplementary General Conditions, Technical Specifications, Drawings, all addenda, and change orders executed pursuant to the provisions of the Contract Documents.

Contract Price - The total monies payable by the OWNER to the CONTRACTOR under the terms and conditions of the Contract Documents.

Contract Times - The number or numbers of successive calendar days or dates stated in the Contract Documents for the completion of the WORK.

CONTRACTOR - The individual, partnership, corporation, joint-venture, or other legal entity with whom the OWNER has executed the Agreement.

Day - A calendar day of 24 hours measured from midnight to the next midnight.

MW-070693
3256.2300 - CCWA AQUEDUCT EXTENSION

Defective Work - Work that is unsatisfactory, faulty, or deficient; or that does not conform to the Contract Documents; or that does not meet the requirements of any inspection, reference standard, test, or approval referred to in the Contract Documents; or work that has been damaged prior to the ENGINEER's recommendation of final payment.

Design Consultant - The legal entity responsible for the design of the project, named as such by the OWNER as set forth in the Supplementary General Conditions.

Drawings - The drawings, plans, maps, profiles, diagrams, and other graphic representations which indicate the character, location, nature, extent, and scope of the WORK and which have been prepared by the ENGINEER and are referred to in the Contract Documents. Shop Drawings are not Drawings as so defined.

Effective Date of the Agreement - The date indicated in the Agreement on which it becomes effective, but if no such date is indicated it means the date on which the Agreement is signed and delivered by the last of the two parties to sign and deliver.

ENGINEER - The individual, partnership, corporation, joint-venture, or other legal entity named as such by the OWNER as set forth in the Supplementary General Conditions.

Field Order - A written order issued by the ENGINEER which may or may not involve a change in the WORK.

General Requirements - Division 1 of the Technical Specifications.

Hazardous Waste - The term Hazardous Waste shall have the meaning provided in Section 1004 of the Solid Waste Disposal Act (42 USC Section 690) as amended from time to time.

Laws and Regulations; Laws or Regulations - Any and all applicable laws, rules, regulations, ordinances, codes, and/or orders of any and all governmental bodies, agencies, authorities and courts having jurisdiction.

Mechanic's Lien - A form of security, an interest in real property, which is held to secure the payment of an obligation. When related to public works construction, "Mechanic's Lien" or "lien" means "Stop Notice".

Milestone - A principal event specified in the Contract Documents relating to an intermediate completion date of a separately identifiable part of the WORK or a period of time within which the separately identifiable part of the WORK should be performed prior to Substantial Completion of all the WORK.

Notice of Award - The written notice by the OWNER to the apparent successful bidder stating that upon compliance by the apparent successful bidder with the conditions precedent enumerated therein within the time specified, the OWNER will enter into an Agreement.

Notice of Completion - A form signed by the ENGINEER and the CONTRACTOR recommending to the OWNER that the WORK is Substantially Complete and fixing the date of Substantial Completion. After acceptance of the WORK by the OWNER's governing body, the form is signed by the OWNER and filed with the County Recorder. This filing starts the 30 day lien filing period on the WORK.

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Notice to Proceed - The written notice issued by the OWNER to the CONTRACTOR authorizing the CONTRACTOR to proceed with the WORK and establishing the date of commencement of the Contract Times.

OWNER - The public body or authority, corporation, association, firm, or person with whom the CONTRACTOR has entered into the agreement and for whom the WORK is to be provided.

Partial Utilization - Use by the OWNER of a substantially completed part of the WORK for the purpose for which it is intended prior to Substantial Completion of all the WORK.

PCBs - Polychlorinated biphenyls.

Petroleum - Petroleum, including crude oil or any fraction thereof which is liquid at standard conditions of temperature and pressure (60 degrees Fahrenheit and 14.7 pounds per square inch absolute), such as oil, petroleum, fuel oil, oil sludge, oil refuse, gasoline, kerosene, and oil mixed with other non-Hazardous Wastes and crude oils.

Project - The total construction of which the WORK to be provided under the Contract Documents may be the whole, or a part as indicated elsewhere in the Contract Documents.

Radioactive Material - Source, special nuclear, or byproduct material as defined by the Atomic Energy Act of 1954 (42 USC Section 2011 et seq.) as amended from time to time.

Resident Project Representative - The authorized representative of the ENGINEER who is assigned to the site or any part thereof.

Shop Drawings - All drawings, diagrams, illustrations, schedules, and other data which are specifically prepared by or for the CONTRACTOR and submitted by the CONTRACTOR to illustrate some portion of WORK and all illustrations, brochures, schedules, performance charts, instructions, and diagrams to illustrate material or equipment for some portion of the WORK.

Specifications - (Same definition as for Technical Specifications hereinafter).

Stop Notice - A legal remedy for subcontractors and suppliers who contribute to public works, but who are not paid for their work, which secures payment from construction funds possessed by the OWNER. For public property, the Stop Notice remedy is designed to substitute for mechanic's lien rights.

Subcontractor - An individual, partnership, corporation, joint-venture, or other legal entity having a direct contract with the CONTRACTOR or with any other Subcontractor for the performance of a part of the WORK at the site.

Substantial Completion - Refers to when the WORK (or specified part) has progressed to the point where, in the opinion of the ENGINEER as evidenced by Notice of Completion as applicable, it is sufficiently complete, in accordance with the Contract Documents, so that the WORK (or specified part) can be utilized for the purposes for which it is intended; or if no such notice is issued, when final payment is due in accordance with Paragraph 14.8. The terms "substantially complete" and "substantially completed" as applied to any work refer to substantial completion thereof.

Supplementary General Conditions - The part of the Contract Documents which make additions, deletions, or revisions to these General Conditions.

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Supplier - A manufacturer, fabricator, supplier, distributor, materialman, or vendor.

Technical Specifications - Divisions 1 through 17 of the Contract Documents consisting of the General Requirements and written technical descriptions of products and execution of the WORK.

Utilities - All pipelines, conduits, ducts, cables, wires, tracks, manholes, vaults, tanks, tunnels, or other such facilities or attachments, and any encasements containing such facilities which have been installed underground or above the ground to furnish any of the following services or materials: water, sewage, sludge, drainage, fluids, electricity, gases, steam, liquid petroleum products, telephone or other communications, cable television, traffic control, or other control systems.

WORK - The entire completed construction or the various separately identifiable parts thereof required to be furnished under the Contract Documents. WORK is the result of performing or furnishing labor and furnishing and incorporating materials and equipment into the construction, and performing or furnishing services and furnishing documents, all as required by the Contract Documents.

ARTICLE 2 – PRELIMINARY MATTERS

2.1 DELIVERY OF BONDS AND INSURANCE CERTIFICATES

- A. When the CONTRACTOR delivers the signed Agreement to the OWNER, the CONTRACTOR shall also deliver to the OWNER such Bonds and Insurance Policies and Certificates as the CONTRACTOR may be required to furnish in accordance with the Contract Documents.

2.2 COPIES OF DOCUMENTS

- A. The OWNER will furnish to the CONTRACTOR the required number of copies of the Contract Documents specified in the Supplementary General Conditions.

2.3 COMMENCEMENT OF CONTRACT TIMES; NOTICE TO PROCEED

- A. The Contract Times will start to run on the commencement date stated in the Notice to Proceed.

2.4 STARTING THE WORK

- A. The CONTRACTOR shall begin to perform the WORK on the commencement date stated in the Notice to Proceed, but no work shall be done at the site prior to said commencement date.
- B. Before undertaking each part of the WORK, the CONTRACTOR shall carefully study and compare the Contract Documents and check and verify pertinent figures shown thereon and all applicable field measurements. The CONTRACTOR shall promptly report in writing to the ENGINEER any conflict, error, or discrepancy which the CONTRACTOR may discover and shall obtain a written interpretation or clarification from the ENGINEER before proceeding with any work affected thereby.

SECTION 00800 - SUPPLEMENTARY GENERAL CONDITIONS

GENERAL

These Supplementary General Conditions make additions, deletions, or revisions to the General Conditions as indicated herein. All provisions which are not so added, deleted, or revised remain in full force and effect. Terms used in these Supplementary General Conditions which are defined in the General Conditions have the meanings assigned to them in the General Conditions.

SGC-1 DEFINITIONS

Add the following definitions to Article 1:

Certificate of Substantial Completion - A form signed by the ENGINEER and the CONTRACTOR recommending to the OWNER that the WORK is Substantially Complete and fixing the date of Substantial Completion.

DESIGN CONSULTANT - The DESIGN CONSULTANT is further defined as the firm of Montgomery Watson Americas, Inc., located at 301 North Lake Avenue, Suite 600, Pasadena, California 91101.

ENGINEER - The ENGINEER is further defined as the firm of CH₂M Hill, located at 2510 Red Hill Avenue, Suite A, Santa Ana, California 92705.

OWNER - The OWNER is further defined as the Central Coast Water Authority, located at 1933 Cliff Drive, Suite 12, Santa Barbara, California 93109.

In the definition of Notice of Completion, delete the first sentence.

In the definition of Substantial Completion, change "Notice of Completion" to "Certificate of Substantial Completion," and change "notice" to "certificate."

SGC-2.2 COPIES OF DOCUMENTS

The OWNER shall furnish to the CONTRACTOR 5 copies of the Contract Documents which will include bound reduced drawings. Additional quantities of the Contract Documents will be furnished at reproduction cost.

SGC-4.1 AVAILABILITY OF LANDS

Add the following to Paragraph 4.1A of the General Conditions:

In order to assure compliance with environmental mitigation requirements, any additional lands proposed for the CONTRACTOR's use relative to this Contract shall be reviewed and approved by the ENGINEER prior to their use.

SGC-4.2 REPORTS OF PHYSICAL CONDITIONS

In the preparation of the Contract Documents, the DESIGN CONSULTANT has relied upon:

- A. The following reports of explorations and tests of subsurface WORK:

conditions at the site of the
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SECTION 01030 - ENVIRONMENTAL MITIGATION

PART 1 – GENERAL

1.1 GENERAL

- A. This Section 01030 identifies the environmental mitigation measures to be performed by the CONTRACTOR for compliance with the OWNER'S project Mitigation Program, Biological Resources Mitigation Plan, Cultural Resources Mitigation Plan, Paleontological Resources Mitigation Plan, Memorandum of Agreement and Management Agreement with the California Department of Fish and Game (CDFG), Programmatic Agreement with the State Historic Preservation Office, Biological Opinion issued by the U.S. Fish and Wildlife Service, Corps of Engineers 404 permit, and Streambed Alteration Agreements with CDFG. The CONTRACTOR shall obtain these documents from the OWNER and shall conduct construction activities so as not to conflict with requirements in these plans.
- B. In the event of conflict or inconsistency between this Section 01030 and any provisions of the project drawings, plans, and specifications, this Section 01030 shall prevail.
- C. The CONTRACTOR shall be generally responsible for conducting all operations in such a way as to minimize environmental impacts and comply with all laws, regulations, permits, plans, and agreements applicable to the project. One of the primary goals of this Section 01030 and the documents referenced in subparagraph A above is to minimize the removal and disturbance of natural vegetation, particularly oak trees and large shrubs that are difficult and costly to replace. For animal or plant species that are listed or are candidates for listing as threatened or endangered under state and federal laws, the mitigation goal will be no net loss of habitat or species viability. Specific protection measures are described below in subsections 1.14 and 1.15.
- D. Many of the specifications contained in this section are based on conditions attached to environmental permits and agreements obtained by the OWNER. Violation of these conditions can result in monetary fines, requirements for restoration of or compensation for damage, or stoppage of work. The CONTRACTOR shall be responsible to confine activity within the pipeline construction and staging areas (hereinafter called the ROW) as shown on the Drawings, access roads, and established facility sites. Approval shall be obtained from the OWNER before any work can be conducted outside these designated areas. The CONTRACTOR shall be held fully responsible for any damage, resulting from CONTRACTOR operations, to natural vegetation, wildlife, cultural resources, and any other environmental resources located either (a) outside the work areas permitted in the Contract Documents or (b) inside the work areas but clearly marked by the OWNER to indicate that avoidance of that resource is required (referred to as Exclusion Areas). The CONTRACTOR shall assume full responsibility for all costs associated with restoration, revegetation, mitigation and monitoring to ensure successful restoration, and for all other measures necessary to repair or compensate for any such damage incurred. The OWNER shall deduct from payments to the CONTRACTOR an amount equal to twice the compensation values presented below in subsection 1.15 for oak trees and chaparral areas outside the ROW or inside areas marked for avoidance that are disturbed or degraded by the CONTRACTOR. Damages for other unallowed disturbances to natural vegetation, wildlife, or cultural resources shall be determined based on the OWNER'S actual costs to mitigate, monitor and administer such mitigation. Administration costs will be approximately 25 percent of mitigation cost.

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The OWNER, working through the ENGINEER, may require that the CONTRACTOR remove construction personnel that cause flagrant and/or repeated (for example, more than once in a week or four times in any 4-week period) violations of the mitigation specifications. The OWNER will monitor CONTRACTOR compliance with the environmental mitigation specifications and record compliance, or non-compliance, on Environmental Quality Control Report (EQCR) forms. Copies of these forms will be given to the CONTRACTOR on a regular basis as appropriate for the work being performed (e.g., weekly during peak pipeline construction activity). For serious non-compliance incidents, the OWNER shall give immediate notification (within 24 hours) of the incident to the CONTRACTOR. The OWNER may require remedial actions of the CONTRACTOR including, but not limited to, additional training of CONTRACTOR personnel (see subsection 1.4C below).

The CONTRACTOR shall not sell the wood from trees cut or pruned during construction. Limbs cut from trees shall not be further cut into pieces less than 10 feet in length nor shall small branches be removed from the limbs unless otherwise directed by the OWNER. The cut wood shall be stored within the edge of the ROW with minimal stacking to provide wildlife habitat or to be used by the revegetation contractor as protection for oak seedlings.

- E. Private landowners may request the CONTRACTOR to perform maintenance work as compensation for access. Such work may require federal, state, or local permits and could have environmental impacts that the CONTRACTOR may be responsible for. No work shall be permitted outside the designated project boundaries without prior approval of the OWNER and all appropriate regulatory agencies. This includes disposal of excess spoils material.
- F. The CONTRACTOR shall designate an environmental coordinator. This individual(s) shall have knowledge of environmental issues, biology, cultural resources, soil erosion, dust control, topsoil preservation, topsoil restoration, and biological and cultural sensitivity training. This individual(s) shall coordinate the CONTRACTOR'S work related to compliance with environmental mitigation measures. This person shall work closely with the OWNER and its representatives to ensure that the CONTRACTOR thoroughly understands the mitigation requirements and implements them.
- G. The CONTRACTOR shall be aware that some environmental mitigations result in construction windows (periods during which construction is permitted), restricted start-up of work pending removal of sensitive animals, move-arounds, and other actions. Construction windows are shown on the Drawings. The beginning and end dates for these windows are dependent on factors such as rainfall and bird nesting that can vary from year to year. Thus, the dates for commencement of construction windows may be adjusted by the OWNER according to specific conditions at the time of construction and could allow for larger windows. In no event shall the construction window be shorter than shown on the Drawings. If actual conditions permit longer construction windows than those indicated on the Drawings, the additional days during which the CONTRACTOR is able to work shall serve to offset any days on the critical path lost due to differing site conditions, unforeseeable environmental constraints, OWNER-caused delays, or other compensable delays.

1.2 CONTRACTOR SUBMITTALS

A. The CONTRACTOR shall submit the following plans for approval by the OWNER in accordance with Section 01300 - Contractor Submittals within 30 days of award of contract:

1. Dust Control Plan (1.5 D)
2. Stormwater Pollution Prevention Plan, including Erosion Control Plan (1.6), and Wastewater Disposal Plan (1.12 D)
3. Hazardous Materials Spill Response Plan (1.12 A)
4. NO_x Control Plan (1.12 E)
5. Fire Prevention Plan (1.13)

All of these plans must be approved by the OWNER and appropriate regulatory agencies prior to the beginning of any construction activity.

Each plan shall describe the methods proposed for compliance with the environmental mitigations as well as alternative methods, where feasible. Required components of the plans, as appropriate, include:

1. Schedule for implementing plan
2. Types of equipment to be used
3. Installation and maintenance methods
4. Decommissioning (for temporary measures)
5. Enforcement/verification methods (self monitoring)
6. Format and schedule for reporting to the OWNER
7. Problem solving methods
8. Feasibility studies
9. Individuals responsible for coordination and implementation of plan

1.3 QUALITY CONTROL

A. The CONTRACTOR shall submit to the OWNER documentation of compliance with environmental mitigation measures as required and specified in the plans listed in subsection 1.2A above.

The plans shall contain specific means for enforcement of mitigation requirements and for verification that the requirements have been met. At a minimum, verification shall include written reports to the OWNER at intervals appropriate for each requirement. For example, dust control reporting shall occur every 2 to 4 weeks if no problems or violations are reported by either the CONTRACTOR or the OWNER, and every week if such problems

occur. Reporting for hazardous materials spills shall occur immediately after every spill. For the NO_x Reduction Plan, most reporting will be associated with selection of equipment and shall occur prior to construction activities. Reporting shall also occur within 1 week of occurrence to document reductions in construction activity during Stage 2 air pollution alerts, if any occur. CONTRACTOR reports shall specify the environmental mitigation addressed, how compliance was met, what problems were encountered, and any remedial actions taken or planned to prevent further occurrences.

1.4 NOISE, TRAFFIC, AND ACCESS CONTROLS

A. NOISE

The CONTRACTOR shall use the following measures at the locations marked for noise control on the Drawings as appropriate and applicable for that location:

1. All equipment and vehicles shall be properly equipped with mufflers and silencers in accordance with OSHA requirements.
2. All equipment and vehicles shall receive the necessary preventative maintenance to assure minimum noise levels in accordance with manufacturer specifications. When the OWNER informs CONTRACTOR that OWNER has reason to suspect that a piece of equipment does not comply with these specifications, the CONTRACTOR must provide OWNER with a copy of the appropriate test results or certification from an approved licensed mechanic.
3. Construction activities shall be limited to between 7 a.m. and 6 p.m. during weekdays at noise control locations shown on the Drawings. No construction shall occur during weekends at these locations. Exceptions may be approved by the OWNER.
4. Use blast mats as determined by the OWNER.
5. Locate noise-generating stationary equipment outside of the noise control areas shown on the Drawings, where feasible. When such equipment cannot be so located, noise shall be controlled, to the extent feasible, using measures such as noise deflector barriers (straw bales or other materials that are effective in reducing noise) around the equipment as approved by the ENGINEER.
6. Reroute materials transport trucks to avoid noise control areas shown on the Drawings, where feasible.
7. Speed up construction through noise control areas shown on the Drawings, where feasible.

B. TRAFFIC

The CONTRACTOR shall meet all applicable safety requirements, reduce traffic to the extent feasible, and obtain any required permits or approvals. The measures to be considered include:

1. Use carpooling and van pools for construction workers.
2. Disperse deliveries of pipe along the ROW.

3. Schedule pipe delivery for non-peak traffic hours.
4. Have escort vehicles in front and behind pipe delivery trucks.
5. Use flagmen wearing orange vests.
6. Post signs before access points.
7. Coordinate with California Highway Patrol, Caltrans, County Department of Transportation, and local police or sheriff.

Section 01550 - Site Access and Storage, contains additional traffic control requirements.

C. ACCESS

1. Training

The CONTRACTOR shall designate a training coordinator. The coordinator shall ensure that all workers requiring training are identified to the OWNER and scheduled for training and that a facility for such training is provided at the construction yard. The coordinator shall participate in training meetings, identify workers that need escort, and provide contractor information that needs to be presented at these meetings, including, but not limited to, environmental mitigation measures, fire suppression, hazardous materials, safety requirements, etc. All construction personnel working on the site shall attend an Environmental Training Program course provided by the OWNER to become familiar with the sensitive environmental resources and regulations for their protection. This training program will take approximately 1 hour and must be completed within 5 days of reporting to the job site. Persons taking the training course shall sign a statement verifying that they have read and understand the environmental requirements and shall follow the procedures. Hard hat decals shall be issued to each person completing the course and shall be worn at all times on the site. The OWNER shall keep a log of all persons completing the course. The OWNER may elect to conduct additional mandatory training and tailgate sessions for CONTRACTOR'S workers as necessary.

All CONTRACTOR management personnel shall attend a one-day or less training meeting with key OWNER management personnel and environmental staff. The purpose of the meeting will be to provide additional training and coordinate implementation of the Environmental Mitigation Program with the CONTRACTOR'S staff.

Persons entering sensitive resource areas infrequently or for brief periods, such as to deliver materials or supplies, shall be advised of environmental requirements and be escorted during their visit by someone who has completed the training. The escort shall be responsible for the actions of the visitor and for the consequences of any violations by the visitor of environmental requirements.

2. Vehicle Access

Project-related vehicle traffic, construction activities, and equipment storage shall be restricted to established roads (as approved by the OWNER), project access roads, the construction ROW, and staging areas for material and equipment storage and

vehicle parking. No other access routes shall be used without prior approval of the OWNER.

3. Staging Areas

All staging areas shown on the Drawings shall be marked with flagging by the OWNER and shall be fenced (using orange plastic construction fencing or other materials as approved by OWNER) and maintained by the CONTRACTOR.

1.5 CLEARING, GRUBBING, GRADING, AND DUST CONTROL

A. GENERAL

Existing trees, shrubbery, and other vegetation are generally shown on the Drawings. The CONTRACTOR shall not disturb trees and other vegetation (including root systems) that are specifically noted on the Drawings to be preserved. This vegetation will be flagged in red by the OWNER prior to commencement of construction in an area. The CONTRACTOR shall place a different color of flagging on those trees that he deems can be saved in exchange for compensation. All OWNER flagging (see subsection 1.15) shall be left in place. No work shall occur within the dripline of vegetation to be preserved, as described below under Clearing and Grubbing, unless approved by the OWNER.

B. CLEARING AND GRUBBING

The CONTRACTOR shall conduct clearing and grubbing operations only within the marked limits of the ROW, access roads, and facility sites. No filling, excavating, trenching, or stockpiling of materials shall be permitted in Exclusion Areas or within the dripline of the protected vegetation within the work area (including a 5-foot buffer around the dripline of oak trees), except as approved by the OWNER. The drip line is defined as a circle drawn by extending a line vertically to the ground from the outermost branches of the vegetation. To prevent soil compaction within the drip line area, no equipment or materials storage shall occur within this area, except as approved by the OWNER.

When trees to be protected are close together, entry to the area within the drip line shall be restricted by fencing placed by the CONTRACTOR under the direction of the OWNER. In areas where no fence is erected, the CONTRACTOR shall protect the trunks of trees to be protected 2 inches or greater in diameter by encircling the trunk entirely with straw bales, tires, or other materials (as approved by the OWNER) held securely by 6-foot 101 T-posts and 12 gauge wire or other appropriate material. This protection shall extend from ground level to a height of 6 feet. Specific measures for protection of oak trees are given in 1.15 A below.

Special clearing methods shall be used by the CONTRACTOR where indicated on the Drawings. These include:

1. Do not disturb trees, large shrubs, and other sensitive resources that have been red flagged by the OWNER within the ROW and at the staging areas, Tank 7 site, and the pump station.
2. Cut brush and trees at or above soil surface level to preserve root systems, except in areas to be trenched for the pipeline or where permanent structures (vaults, tanks, and buildings) will be located. All trees to be removed shall be felled into the ROW.

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and away from any drainages or sensitive areas. See subsection 1.15 B below for clearing in Burton Mesa chaparral.

3. Pruning of vegetation, where necessary to complete construction activities, shall occur only after prior consultation with the OWNER.
4. Mulch and save woody vegetation (trees and shrubs) cleared from the ROW; spread over ROW after site restoration but prior to application of permanent erosion control measures that do not require grading. Limbs and trees too large to mulch as well as all mulch and slash shall be stored within the ROW as described above in subsection 1.1D.

Within the limits of clearing for the pipeline trench and permanent facilities, the areas below the natural ground surface shall be grubbed to a depth necessary to remove all stumps, roots, buried logs, and all other objectionable material. Any other underground structures, debris, or waste shall be totally removed if they are found in areas to be excavated. All objectionable material from the clearing and grubbing process shall be removed from the site and wasted in approved safe locations.

The CONTRACTOR shall remove trees, snags, stumps, shrubs, brush, limbs, and other vegetative growth to the minimum extent necessary to allow construction of the pipeline and permanent facilities. All trash piles, rubbish, and fencing shall be removed from all construction areas to locations approved by the OWNER; they cannot be stored outside the ROW. Fencing removed from the designated work area because it interferes with construction of new facilities, unless shown on the Drawings to be removed, shall be reconstructed in kind using new materials. If the fencing is not to be replaced, the removed materials shall be disposed of off site. All items within the work area shall be protected from damage where so designated on the Drawings.

Any trees, shrubs, fences, or other improvements outside of the ROW deemed necessary to be removed by the CONTRACTOR may be removed and replaced by the CONTRACTOR at its expense, only with permission from the landowner and only after approval by the OWNER.

C. GRADING

1. Grading shall be limited to the area necessary to permit movement and operation of equipment within the flagged ROW.
2. Topsoil salvage and handling shall occur prior to grading according to subsection 1.7 below.

D. DUST CONTROL

The CONTRACTOR shall prepare a Dust Control Plan to be approved by the OWNER. This plan shall be designed to prevent dust in visible amounts from leaving the work site, including dust from mud deposited on paved roads by project vehicles. The CONTRACTOR shall be financially responsible for dust cleanup and repair of and/or compensation for any damage resulting from any dust originating from its operations. The dust abatement measures described in the approved plan shall be continued until the CONTRACTOR is relieved of further responsibility by the OWNER.

The following measures will be required in the plan:

1. Haul roads, construction site roads, staging areas, and the ROW shall be kept damp enough to prevent visible dust from leaving the site.
2. Haul trucks traveling off the site shall be covered. Haul trucks traveling on the site shall be covered as necessary to prevent visible dust from leaving the site.
3. Grading activities shall cease when the ENGINEER determines that wind speeds are such that the application of water and other dust regulation techniques are ineffective in controlling dust.
4. Dust control techniques, such as soil binders, shall be used to minimize dust generation from stockpiles.
5. Vehicle speeds in the ROW and on all unpaved access roads shall be no greater than 25 mph, except where approved by the OWNER.
6. After clearing, grading, earth moving, or excavation is completed, the entire area of disturbed soil shall be treated immediately by watering, spreading of soil binders, or use of other dust and erosion control measures to prevent wind pick-up of dust until the area is restored or otherwise developed so that dust generation will not occur. Organic mulches or other soil stabilizers shall be applied to exposed ground areas that will be left in a disturbed state for a period of more than one month.
7. Water shall not be taken from local aquatic habitats or drainages, but water from existing water supply systems or treated (reclaimed) wastewater is acceptable when appropriate arrangements are made.
8. Mud deposited on paved roads as a result of CONTRACTOR vehicles or equipment traffic shall be cleaned up immediately.

The CONTRACTOR shall designate a person or persons to monitor the dust control program and to work with OWNER to order increased watering as necessary to prevent transport of dust off site and to implement methods for mud control on pavement. Their duties shall include holiday and weekend periods when work may not be in progress. The name and telephone number of such persons shall be provided to the OWNER.

1.6 EROSION CONTROL

- A. Erosion and sediment controls shall be provided in accordance with Section 02250 - Temporary Erosion Control.

1.7 TOPSOIL SALVAGE AND HANDLING

- A. The pipeline CONTRACTOR shall remove, store, and replace topsoil from all graded or excavated areas that support or could support vegetation. Several topsoil handling methods are available and shall be applied to the ROW as called out on the Drawings. The pump station and Tank 7 CONTRACTORS shall also remove, store, and replace topsoil from all areas to be graded that will not be covered with permanent facilities such as roadways, vaults, tanks, or buildings.

The CONTRACTOR shall submit shop drawings to the OWNER showing the methods for trenching and soil handling within 30 days of contract award. Both plan and cross section diagrams showing equipment work areas, stock piles, and pipe laydown shall be included in the shop drawings. Submittals shall include shop drawings for each area where construction methods, including topsoil handling, change. For example, construction methods may differ for locations where the construction corridor is a 120-foot wide grassland area, is a 120-foot wide agricultural area, has a 60-foot permanent easement with 30-foot construction easement on each side, has a 60-foot permanent easement with 60-foot construction easement on one side, contains a constrained Burton Mesa chaparral area, is on steep hillside areas, has a constrained road right-of-way, or contains a creek/drainage crossing. The type of construction method shall be submitted for each portion of the pipeline. Applicable station numbers for each method shall be provided on the shop drawings.

- B. Salvaged topsoil shall always be segregated and stored separately in such a manner that the topsoil is not damaged or mixed with subsoil. All spoil must be stored in the staked limits of the ROW unless otherwise approved by the OWNER. Topsoil storage areas shall be protected from loss through wind and/or water erosion, especially during the rainy season.
- C. All areas shall be restored to within 6 inches of the original contours except where specified otherwise on the Drawings or where directed otherwise by the OWNER. Excess backfill material from below the topsoil layer shall not be spread over any areas of existing topsoil in the ROW. This material shall be placed within the area where the topsoil has been removed and then covered with the topsoil, or it can be disposed of off site in accordance with all local regulations and by approval of the OWNER to minimize environmental damage.
- D. Topsoil shall not be compacted during or after replacement over the trench and any graded areas, except where necessary to prevent erosion.
- E. Locations where the following specific topsoil salvage and handling methods shall be used are shown on the Drawings.

Method 1 – Disturbed with no Vegetation

In areas that are identified as disturbed (D) and are covered with pavement or gravel, no special topsoil handling is required.

Method 2 – Deep Soils with No Seed Bank Salvage

In areas identified on the Drawings, generally shown as disturbed (D) or grassland (G) but also including other categories that have some vegetation present, the available topsoil up to 18 inches of soil, or as otherwise directed by the OWNER, shall be excavated first and saved separately from the remainder of the excavated materials. In some areas, the topsoil layer will be less than 18 inches thick. When bedrock is present within this layer, only the soil above bedrock needs to be saved. The topsoil shall be replaced on top of the trench fill after compaction so that a layer the same thickness as that removed covers the fill and the grade is substantially the same as before construction. Compaction of topsoil shall be to the minimum level that will prevent wind or water erosion. This is particularly important on slopes of greater than 10 percent. Any over-compacted areas shall be loosened with a harrow.

Method 3 – Agricultural Fields

In areas of cultivated fields (shown as A on the Drawings), the topsoil depth to be excavated and saved separately from the remainder of the excavated materials shall be as specified by the OWNER and shown on the Drawings. This topsoil shall be placed on top of the compacted trench fill to approximately the same depth as prior to construction. Rocks greater than 4 inches in diameter shall be removed from the top 18 inches of backfill.

Method 4 – Natural Vegetation with Deep Soil

In specific sensitive areas identified on the Drawings, the following steps shall be taken in topsoil removal, storage, and replacement:

Step 1. Scrape the top 2 to 6 inches of soil (seed bank layer) from the area to be graded or trenched during site preparation and store separately from all of the excavated materials. This layer shall be kept dry if storage occurs during the rainy season (about 1 November through 1 April) to preserve the seeds.

Step 2. Excavate the next 12 to 18 inches of topsoil (where present or as directed by the OWNER) from the trench and store separately from the seed bank layer and subsoils. In some areas, the topsoil layer will be less than 12 to 18 inches thick. When bedrock is present within this layer, only the soil above bedrock needs to be saved.

Step 3. Excavate the remainder of the material (subsoils and rock) from the trench and store so that no mixing with the other two layers occurs. The layers can be stored on opposite sides of the trench.

Step 4. After placement of the pipe in the trench, backfill in accordance with Section 02200 - Earthwork to within 12 to 18 inches below the preconstruction grade level.

Step 5. Replace the topsoil layer and compact it to the minimum level that will prevent wind or water erosion. This is particularly important on slopes of greater than 10 percent. Any over-compacted areas shall be loosened with a harrow.

Step 6. Spread the seed bank layer evenly over the topsoil. Any erosion control measures over the trench that require grading shall be completed prior to spreading of the seed bank layer.

Method 5 – Natural Vegetation with Shallow Soil

In areas where topsoil is very shallow, generally in areas of Burton Mesa chaparral (identified on the Drawings as BMC) or scrub (identified as CS or VS), use steps 1, 3, 4, and 6 of Method 4; steps 2 and 5 do not apply; and in Step 4, trench zone backfill shall be increased to within 2 to 6 inches of final grade.

Method 6 – Stream Crossings and Wetlands or Marsh

In stream channels or wetlands (identified on the Drawings as M or WS), the top 12 inches of material shall be excavated and saved separately from the remainder of the excavated materials (Step 2 in Method 4). All excavated materials shall be placed so that they will not enter a flowing stream through wind or water erosion.

through wet soil drainage. The top 12 inches of material saved shall be replaced over the trench backfill to a depth of 12 inches and so that the original contours are restored. Where marsh vegetation is present, as indicated on the Drawings, and soils are wet or moist, the topsoil material shall be maintained moist during storage and appropriate erosion control measures shall be installed to prevent soil movement.

Any well defined clay layers within the top 24 inches of soils shall be replaced so as to maintain the local, subsurface hydrology.

1.8 TRENCHING, BLASTING, AND BACKFILLING

A. TRENCHING

In sensitive resource habitat (as shown on the Drawings or as directed by the OWNER), trenches with side slopes steeper than 0.5 to 1 (0.5:1) that are not filled by day's end shall have escape ramps for wildlife installed by the pipeline CONTRACTOR at distances no greater than 0.25 mile apart. The slope of the ramps shall not exceed 0.5 to 1. The CONTRACTOR shall not begin work each day in these locations until the OWNER has cleared the trench. Any animals found will be allowed to escape or be removed by the OWNER.

B. BLASTING

When blasting is required for trench excavation, the CONTRACTOR shall place mats, shields, or earth padding as necessary and appropriate to protect shrubs and trees outside the ROW.

C. BACKFILLING

1. The CONTRACTOR shall backfill the trench as soon as feasible following installation of the pipe. The CONTRACTOR shall make every effort to backfill from the top of the spoil working down in order to make the backfill approximate conditions prior to when it was removed.
2. The CONTRACTOR shall not backfill the trench until the OWNER has inspected the trench when left open overnight. Any animals found shall be allowed to escape or be removed by the OWNER.
3. The CONTRACTOR's equipment shall not move outside the ROW while placing spoil and topsoil back into the trench.
4. Except in agricultural fields, the CONTRACTOR shall compact the backfill, except topsoil, and grade the surface to preproject levels except a slight crown (less than 6 inches) can be left over the trench to compensate for subsidence. This crown shall not cause ponding or otherwise alter surface water runoff so as to cause erosion or reduce water flow to vegetation down slope.
5. The CONTRACTOR shall dispose of materials unsuitable for backfill in accordance with all regulations (federal, state, and local) and as approved by the affected landowner and the OWNER. Excess fill shall not be placed in any drainage or on unstable slopes but shall be spread within the ROW (but not over topsoil) or hauled

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off site to an approved disposal area. Excess subsoils shall not be spread over existing topsoil.

1.9 MATERIAL AND EQUIPMENT STORAGE

- A. All open construction pipes, culverts, or similar structures stored in stockpile areas or in the ROW shall be inspected for sensitive animals (such as badger and horned lizard) before the pipe is buried, capped, or otherwise used or moved, except as directed by the OWNER. All in-place pipeline segments shall be capped daily until buried to prevent entry of animals.

1.10 PETS, CAMPING, FIREARMS, AND USE OF AREA

- A. No camping shall be allowed on the ROW or at any construction site. Only authorized off site, established camping areas may be used by construction personnel.
- B. No pets shall be allowed on the ROW, staging areas, access roads, or any other construction sites.
- C. Possession of firearms shall be prohibited in the ROW or any construction site. This includes firearms displayed in gun racks.
- D. Construction workers and other project personnel, equipment, materials, spoil, and all activities shall stay within the marked ROW or facility site. Exceptions that will not cause environmental impacts may be granted only after permission by the property owner and only after approval by the OWNER.

1.11 TRASH CONTROL

- A. All food waste shall be placed in closed containers and disposed of at an authorized disposal site as necessary to avoid attracting animals. The ROW and other construction areas shall be policed daily by the CONTRACTOR, and any garbage shall be collected and removed by the end of each day.
- B. The CONTRACTOR shall keep the ROW and other areas used by it in a neat and clean condition, and free from any accumulation of rubbish. The CONTRACTOR shall dispose of all rubbish and waste materials of any nature (including cigarette butts) occurring at the construction site, and shall establish regular intervals of collection and disposal of such materials and waste. The CONTRACTOR shall also keep its haul roads free from dirt, rubbish, and unnecessary obstructions resulting from its operations. Disposal of all rubbish and surplus materials shall be off the construction site in accordance with local codes and ordinances governing locations and methods of disposal, and in conformance with all applicable safety laws, and to the particular requirements of Part 1926 of the OSHA Safety and Health Standards for Construction.

1.12 HAZARDOUS MATERIALS AND POLLUTION CONTROL

The following applies to materials used by the CONTRACTOR during construction. It does not apply to any known or unknown existing hazardous materials that may be within the ROW. Section 00700 - General Conditions, Article 4 covers buried hazardous materials.

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- A. The CONTRACTOR shall prepare a hazardous material (including fuels, hydraulic fluids, and lubricants) spill response plan for review and approval by the OWNER. This plan shall specify excavation and transportation procedures for spills that contact natural soils, regulatory compliance and documentation procedures, and designation of a destination for proper treatment and/or disposal of contaminated materials. The plan shall also describe methods for preventing spills and for containing any spills that do occur (for example, use of plastic sheeting under vehicles during maintenance). Storage or use of hazardous materials in or near streams shall be consistent with California Department of Fish and Game regulations and other federal or state laws. The CONTRACTOR shall be responsible for implementing the measures in the approved plan.
- B. All chemicals used during project construction or pipeline testing, including disinfectants, polymers, reactants, or of other classification, shall show approval of either the U.S. Environmental Protection Agency or the U.S. Department of Agriculture. Use of all such chemicals and disposal of residues shall be in strict accordance with the printed instructions of the manufacturer and all applicable federal, state, and local regulations. In addition, see the requirements set forth in paragraph 6.11 of the General Conditions.
- C. Servicing and refueling of mobile equipment is permitted within the ROW or at staging areas but shall not be allowed within 600 feet of any sensitive resource or streambed as shown on the Drawings or flagged by the OWNER unless approved by the OWNER. For stationary equipment, such as pumps or generators, that must be located within 600 feet of a streambed or sensitive resource, the CONTRACTOR shall place the equipment on a plastic liner within a berm sized to contain the maximum potential fuel spill. The CONTRACTOR shall maintain sorbent materials and equipment on site for use in cleaning up spills. Any such spills shall be cleaned up immediately.
- D. The CONTRACTOR shall prepare and submit a Wastewater Disposal Plan to the OWNER for review and approval prior to construction that addresses containment and disposal of water used for equipment washing and for pipeline testing and disinfection. The CONTRACTOR shall carry out the approved plan. The plan shall include methods for the following:
1. Debris removal from the water used for flushing the pipeline.
 2. Removal of toxic chlorine residual from the water used for pipeline disinfection. This can be accomplished by retaining the water in the pipeline until the residual declines to below acceptable discharge levels (0.019 mg/liter), by holding the water in a lined bermed area approved by the OWNER, or by other method approved by the OWNER.
 3. Containment and disposal of water used to wash concrete, vehicles, and other equipment.
 4. Disposal of water from dewatering required at stream crossings or where perched groundwater is encountered, in accordance with Section 02140 - Dewatering. The CONTRACTOR shall notify the OWNER a minimum of 3 days prior to any discharge.
 5. Meeting National Pollutant Discharge Elimination Permit (NPDES) General Permit for Construction Activities of the Regional Water Quality Control Board.

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E. The CONTRACTOR shall prepare and submit a NO_x Reduction Plan to be reviewed and approved by the OWNER prior to construction. The CONTRACTOR shall implement the approved plan. This plan will address the following:

1. Maintenance of engine and emission systems in all equipment in proper operating condition. Appropriate maintenance schedules will be defined and implemented. Equipment will be subject to inspection by the OWNER. If equipment is observed to be out of tune, the CONTRACTOR will be required to cease using the equipment until after it has been tuned up and approved for use by the ENGINEER.
2. Where the contractor has a choice among several pieces of equipment for the job, the contractor shall obtain emissions data for each piece and select the lowest-emitting (preferably less than 5 gms/bhp-hr of NO_x) equipment for service. The contractor shall include the data in the NO_x Reduction Plan for review and approval by the OWNER.
3. Reformulated diesel fuel shall be used in all diesel powered equipment if reformulated diesel fuel is available locally at a commercially reasonable rate and reliability of supply.
4. The feasibility of implementing 2-degree engine timing retard.
5. The feasibility of installing high pressure fuel injectors on all equipment for which these injectors are available.
6. The feasibility of installing catalytic converters on gasoline-powered equipment.
7. Reduction of construction activity during Stage 2 alerts.

1.13 FIRE CONTROL

A. The CONTRACTOR shall submit a Fire Prevention Plan for approval by the OWNER. The plan shall address the items discussed below and other requirements developed in consultation with the OWNER and local fire protection agencies. The CONTRACTOR shall be responsible for implementing the approved plan.

1. No fires shall be permitted in the construction area. This includes lunch fires, warming fires, and barbecues.
2. Smoking shall be allowed only in areas cleared of vegetation or in enclosed vehicles. Methods for enforcement shall be included in CONTRACTOR'S plan.
3. All construction equipment and workers' vehicles shall be equipped with appropriate spark arrestors. The CONTRACTOR shall provide fire extinguishers (minimum of 2 lb) at all work areas and on all construction-related vehicles. Welding rigs shall be equipped with a minimum 20 lb (or 2 10-lb) fire extinguisher and a 5-gallon water bladder bag full of water. Equipment will be subject to OWNER inspection.
4. Precautions shall be taken for any welding and torch cutting that occurs on the project to prevent starting wildfires.

5. The CONTRACTOR shall maintain contact with local firefighting agencies during the dry season to be updated on fire conditions. The CONTRACTOR shall communicate fire conditions to all construction personnel.

1.14 COLLECTION AND HARASSMENT OF SPECIES

- A. The CONTRACTOR'S attention is directed to the federal Endangered Species Act (16 USC 1531, as amended), the California Endangered Species Act (California Fish and Game Code 2050-2098, as amended), and the California Native Plant Protection Act (California Fish and Game Code 1900-1913) that provide protection of threatened, endangered, and rare species of plants and animals. The CONTRACTOR shall comply with these and any other applicable federal and state laws that provide protection to plants and animals.
- B. The CONTRACTOR shall not intentionally "take" (meaning harm, harass, pursue, hunt, shoot, wound, trap, kill, capture, or collect) any species that are listed as threatened, endangered, or special status (see Management Agreement for list of species). Protection extends to animals, dead or alive, and all their body parts. The exceptions are those incidentally taken during normal clearing of the ROW in conformance with the above acts and all permits or agreements obtained for this project under these acts. In addition, the CONTRACTOR shall not intentionally "take" any other species of plant or wildlife at or around the construction site. This includes all snakes, lizards, frogs, turtles, birds, and mammals.
- C. In the event that any threatened or endangered species, or other special status wildlife, are found in or near the project where they could be affected by construction activities, the CONTRACTOR shall notify the OWNER and proceed with construction after the OWNER has removed these species. The CONTRACTOR must immediately report to the OWNER any accidental "takings," as defined above, of any animals or plants listed in the Management Agreement. The protocol for dealing with listed and candidate species has been established in the Management Agreement with the California Department of Fish and Game and in the Biological Opinion issued by the U.S. Fish and Wildlife Service.

1.15 OAK TREE AND CHAPARRAL PROTECTION

- A. Incentives to Minimize Loss of Oak Trees and Chaparral

The OWNER will pay the CONTRACTOR for selected oak trees and designated chaparral habitat not destroyed within the ROW shown on the Drawings. Oak trees that qualify for compensation are defined as trees (a) whose trunks are within the ROW, (b) that are not red-flagged by the OWNER, and (c) that have either no visible signs of construction damage to the roots or canopy, or have more than 50 percent of both the canopy and roots remaining following construction. The approximate locations and numbers of oak trees for which compensation opportunities apply are shown on the Drawings. A tree may have more than one trunk giving it the appearance of a clump of trees.

1. For undamaged eligible oak trees, compensation shall be \$2,500 for each tree greater than 12 inches in diameter at breast height (DBH); \$1,750 for trees of 6 to 12 inches DBH; and \$750 for trees 2 to 6 inches DBH. DBH is measured at 4 feet above ground level. Classification for compensation purposes is strictly at the discretion of the OWNER.

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2. For trees that are pruned by the CONTRACTOR, compensation shall be reduced, at the sole discretion of the OWNER, in proportion to the amount of canopy and/or roots remaining. For example, compensation shall be reduced 25 percent (payment = 75 percent of maximum) when 25 percent of the tree is removed by the CONTRACTOR. Trees with less than 50 percent remaining may not qualify for compensation.
3. Oak trees within the ROW, but outside the trench zone, that are not saved by the CONTRACTOR for compensation shall be cleanly cut within 2 to 6 inches of the ground surface.

Chaparral qualifying for compensation is defined as those areas within the ROW classified as Burton Mesa chaparral (BMC) on the Drawings that the CONTRACTOR has not further disturbed by cutting, thinning, driving through, or otherwise altering the plants present. Three categories of chaparral are present within the ROW, and these are shown on the Drawings: prime (BMC1), previously disturbed (BMC2), and previously very disturbed (BMC3). All or part of the chaparral within the ROW on Vandenberg Air Force Base (VAFB) may be cleared by the OWNER prior to construction.

4. Chaparral compensation shall be \$25,000 for each acre of prime (BMC1 on Drawings) remaining undisturbed by CONTRACTOR after completion of CONTRACTOR'S construction activities; \$20,000 for each acre of previously disturbed (BMC2 on Drawings) remaining undisturbed by CONTRACTOR after construction; and \$15,000 for each acre of previously very disturbed (BMC3 on Drawings) remaining undisturbed by CONTRACTOR after construction.

Disturbance of chaparral within the ROW by the CONTRACTOR that reduces the category, for example from BMC1 to BMC2, shall reduce the compensation to that appropriate for the category remaining after construction. The OWNER shall determine the category of the chaparral after construction.

The number and size of oak trees saved shall be recorded by the OWNER on the Drawings. Oak trees within areas shown as Burton Mesa chaparral (BMC) on the Drawings are considered part of the chaparral and do not qualify for separate compensation as oak trees. The OWNER shall also map the chaparral remaining after completion of CONTRACTOR'S construction activities on the Drawings as soon as surface restoration and cleanup are completed. The area shall be calculated by the ENGINEER.

- B. Oak trees shall be protected by the CONTRACTOR throughout the construction period. The following measures shall be used, as applicable, in addition to those described above in subsection 1.5 B – Clearing and Grubbing.

1. No work, including the movement of vehicles, shall be permitted within the protected zone of red flagged oak trees, except as approved by the OWNER. The protected zone of a tree includes the soil under the dripline (defined in 1.5 B) and a 5-foot buffer outside of that area.
2. Where work is necessary within the protected zone of oak trees, the trunks shall be protected from damage as described under Clearing and Grubbing (1.5 B). Removal of these protective structures shall not occur until after all equipment movement within the protected zone of the tree is complete. Removal shall be done by hand. Any trenching required within the protected zone shall be conducted using a method

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that prevents pulling and tearing roots and results in a clean cut root at the edge of the trench.

3. Activities that could compact soils shall not be allowed under oak trees except as approved by the OWNER. Where vehicle or equipment movement under a tree is approved by the OWNER, a layer of weed-free wheat or barley straw about 2 inches thick shall be placed on the ground surface as a marker and covered with at least 12 inches of soil, or a layer of wood chips (weed-free if imported, or use chipped limbs pruned from trees for access) 12 or more inches thick shall be placed on the ground, prior to vehicle movement but after trunk protection is in place.
4. If necessary, limbs may be pruned off trees, after prior approval of the OWNER, to allow equipment movement. Pruning shall be done only by personnel having completed a training course provided by the CONTRACTOR and approved by the OWNER. CONTRACTOR shall provide OWNER with the course schedule for approval and with a list of trained workers. Limbs shall be cut just outside the branch bark ridge and the branch collar; for large limbs, a three-cut method shall be used (see Figure 1). No more than 30 percent of the tree canopy shall be removed except as approved by the OWNER. Sealing of the cut surface is not required.
5. The CONTRACTOR is not permitted to operate vehicles and equipment or store materials outside the ROW except at locations shown on the Drawings as approved by the landowner and OWNER, and then only to the extent necessary to avoid oak trees within the ROW.
6. Where soil under trees is compacted by vehicle movement, a layer of weed-free mulch 6 inches thick shall be placed over the compacted soils.
7. Spoils may be placed under oak trees where necessary, as approved by the OWNER. The trunk shall be cushioned, as described above. A layer of weed-free wheat or barley straw shall be placed a minimum of 2 inches deep over the protected zone where spoils are to be piled. All spoils shall be removed when construction in the vicinity of that particular tree is complete. Care to remove only the spoils and leave the straw shall be undertaken.
8. Any roots within the trenching zone, greater than 2 inch in diameter, shall be cleanly cut. The cut surface shall be sealed with a standard root sealant on the day of cutting or treated as otherwise directed by the OWNER.

C. Where Burton Mesa chaparral (shown as BMC on Drawings) cannot be avoided, the CONTRACTOR shall implement the following measures to enhance the potential of restoring this habitat:

1. All Burton Mesa chaparral shrubs shall be cut just above the ground surface in a manner that avoids disturbance of or damage to the root system and any associated burls, except in the area to be excavated.
2. Cut vegetation shall be mulched, if not cut by a flail mower, and spread over the area from which it was cut unless otherwise directed by OWNER.
3. Topsoil salvage and handling shall be as described in subsection 1.7 D. The mulched vegetation shall be included in the topsoil during salvage.

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4. Prior to driving any equipment in the ROW, a layer of straw (weed-free wheat or barley) a minimum of 4 inches thick shall be spread over the construction easement where spoils will be stored or equipment will be driven. In areas where equipment will be driven, excavated material (excluding topsoil) shall be spread over the straw to form a layer (minimum of 12 inches thick) to protect the burls and roots of vegetation from damage by equipment traffic.
5. During backfilling, replacement of the excavated materials shall be conducted in a manner that ensures that the original ground surface, marked with the straw layer, is not disturbed.

1.16 COLLECTION OF CULTURAL ARTIFACTS

- A. The CONTRACTOR'S attention is directed to the National Historic Preservation Act of 1966 (16 USC 470) and 36 CFR 800 that provide for the preservation of potential historical architectural, archaeological, or cultural resources (hereinafter called "cultural resources").
- B. The CONTRACTOR shall conform to the applicable requirements of the National Historic Preservation Act as it relates to the preservation of cultural resources. This prohibits collection of prehistoric or historic cultural resource artifacts along the ROW or at project facilities.
- C. In the event that potential cultural resources are discovered during subsurface excavations at the site of construction, the protocol for dealing with cultural resources will be followed as established in the Programmatic Agreement with the State Historic Preservation Office. In addition, the following procedures shall be instituted:
 1. The OWNER shall be notified immediately.
 2. The CONTRACTOR shall cease all construction operations at the location of such a potential cultural resources find when directed by the ENGINEER. The work may be redirected to a location beyond the cultural resource site.
- D. If the archaeologist determines that the potential find is an eligible site requiring further evaluation according to the Programmatic Agreement, at the direction of the OWNER, the CONTRACTOR shall suspend work at the location of the find under the provisions for changes contained in Articles 10, 11, and 12 of the General Conditions.

1.17 CLEANUP

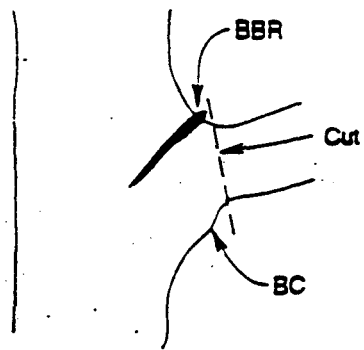
- A. The CONTRACTOR shall clean up the ROW and all temporary use areas (staging areas and access roads) promptly after construction is complete. This includes removal of stakes, lath, flagging, barrels, cans, drums, temporary fencing, accidental spills (not covered under subsection 1.12 above), hazardous materials, contaminated soils, and any other trash, debris, refuse, or wastes generated by or during construction activities. Structures and materials placed in streams that are not designed to withstand high seasonal flows shall be removed to areas above the highwater mark before such flows occur.
- B. The CONTRACTOR shall remove all temporary erosion control and water diversion structures that are no longer needed.

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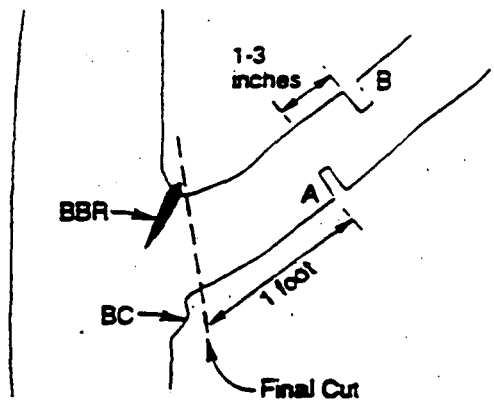
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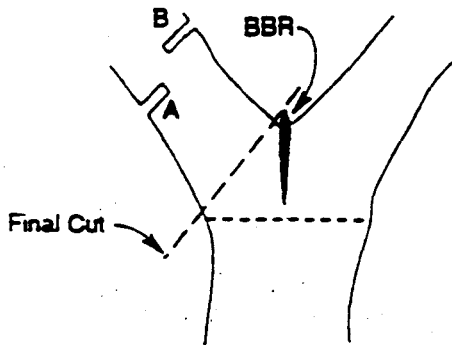
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SMALL LIMB



LARGE LIMB



CO-DOMINANT STEM

| LEGEND | |
|--------|--|
| BBR | Branch Bark Ridge |
| BC | Branch Collar |
| A | First cut, 1/3 branch diameter |
| B | Second cut, limb should split away cleanly |

Figure 1
TREE PRUNING METHODS

1.18 SURFACE RESTORATION

- A. The CONTRACTOR shall contour the ROW, staging areas, and other temporary construction sites to within 6 inches of the original topography, except where otherwise shown on the Drawings or directed by the OWNER, in a timely manner after the pipe is installed. CONTRACTOR shall include the restoration and cleanup schedule in the project schedule submitted to the OWNER.
- B. The CONTRACTOR shall loosen surface soils (top 2 to 4 inches) heavily compacted during construction using a cultivator or similar device. No cultivation shall occur under oak trees.
- C. The CONTRACTOR shall replace stockpiled topsoil on the surface of the excavation as described above in subsection 1.7. With replacement of topsoil, rock and natural plant debris shall be replaced in areas where such material was originally found to the degree practical.
- D. Contouring to natural grade must be done without disruption of adjacent undisturbed areas. Sediment collected in any sediment traps shall be removed and deposited at a site where it will not erode back into a water course.
- E. Waterbars and any other new erosion control structures shall be installed as required and covered with topsoil where appropriate.

1.19 GRASSLAND RESEEDING

- A. The CONTRACTOR shall apply 10 lbs/acre pure live seed (PLS) of grassland seed mix for drill seeding, or 20 lbs/acre PLS for other application methods, to the entire work area, prior to spreading mulch or weed-free straw for erosion control, at locations shown on the Drawings. Acceptable methods of seed application include hydroseeding, drill seeding, and hand broadcasting with raking to mix into soil surface. Seed mixes to be used are commercially available. CONTRACTOR shall submit proposed source and type of weed-free straw to OWNER for approval.

1. Grassland seed mix shall be 65 percent (by weight) Blandobrome (*Bromus hordeaceus* = *B. mollis*), 25 percent Zorrofescue *Vulpia myuros* = *Festuca megalura*), and 10 percent rose or crimson clover (*Trifolium hirtum* or *T. incarnatum*).

- B. Erosion control mulching shall be applied as soon as feasible after surface restoration and cleanup are completed. CONTRACTOR may apply seeding just before mulching or wait until the beginning of the rainy season (1 November). Topsoil shall not be compacted during seeding, and erosion control mulch removed or lost during seeding shall be replaced by the CONTRACTOR. When seeding is scheduled to occur between 1 January and 1 November methods other than hydroseeding, unless approved by the OWNER, shall be used. For seeding scheduled between 1 November and 1 January, hydroseeding is an appropriate method.

- C. The CONTRACTOR shall guarantee the revegetation success, in all areas to be reseeded by the CONTRACTOR, for one year after construction is complete. Revegetation success in grasslands is defined as complete cover of the reseeded areas in grasses to a density similar to that adjacent to the ROW. If the OWNER determines within one year of reseeded, that any areas seeded by the CONTRACTOR have a substantially lower density of grasses or a higher density of noxious weeds than the areas on either side of

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the construction area, the CONTRACTOR shall apply additional seed in the fall (October - November) and/or remove weeds prior to seed set (timing to be determined by OWNER'S field monitoring, as it varies by species). Herbicides shall not be used except as approved and directed by the OWNER. Where such remedial measures are necessary, the one-year period of CONTRACTOR responsibility shall start over.

Noxious weeds are defined as plants not native to the area that can reproduce in the wild and that grow in such abundance as to exclude the growth of native or desirable non-native species. Noxious weeds include, but are not limited to, non-native thistles, castor bean, pampas grass, veldt grass, black mustard, fennel, and poison hemlock.

PART 2 – PRODUCTS (NOT USED)

PART 3 – EXECUTION (NOT USED)

- END OF SECTION -