SOUTH COAST CONDUIT/UPPER REACH RELIABILITY PROJECT

FINAL ENVIRONMENTAL IMPACT STATEMENT/ENVIRONMENTAL IMPACT REPORT

Appendix A
Notice of Preparation

November 2010

2nd Pipe

STATE OF CALIFORNIA

GOVERNOR'S OFFICE *of* PLANNING AND RESEARCH

STATE CLEARINGHOUSE AND PLANNING UNIT

ARNOLD SCHWARZENEGGER
GOVERNOR

CYNTHIA BRYANT
DIRECTOR

Notice of Preparation

April 12, 2007

To: Reviewing Agencies

Re: South Coast Conduit/Upper Reach Reliability Project (Secondary Pipeline Project)
SCH# 2007041052

Attached for your review and comment is the Notice of Preparation (NOP) for the South Coast Conduit/Upper Reach Reliability Project (Secondary Pipeline Project) draft Environmental Impact Report (EIR).

Responsible agencies must transmit their comments on the scope and content of the NOP, focusing on specific information related to their own statutory responsibility, within 30 days of receipt of the NOP from the Lead Agency. This is a courtesy notice provided by the State Clearinghouse with a reminder for you to comment in a timely manner. We encourage other agencies to also respond to this notice and express their concerns early in the environmental review process.

Please direct your comments to:

Rosie Thompson
Cachuma Operation & Maintenance Board
c/o Science Applications International Corporation
5464 Carpinteria Avenue, Suite K
Carpinteria, CA 93013

with a copy to the State Clearinghouse in the Office of Planning and Research. Please refer to the SCH number noted above in all correspondence concerning this project.

If you have any questions about the environmental document review process, please call the State Clearinghouse at (916) 445-0613.

Sincerely,

Scott Morgan
Senior Planner, State Clearinghouse

Attachments
cc: Lead Agency

Document Details Report
State Clearinghouse Data Base

SCH# 2007041052
Project Title South Coast Conduit/Upper Reach Reliability Project (Secondary Pipeline Project)
Lead Agency U.S. Bureau of Reclamation

Type NOP Notice of Preparation

Description The purpose of the project is to increase the operational flexibility, reliability, and capacity of the South Coast Conduit (SCC) between the South Portal of the Tecolote Tunnel (SPTT) and the Corona Del Mar Water Treatment Plan (CDMWTP). The increase in operational flexibility, reliability, and capacity are intended to accommodate peak demand levels and to allow maintenance of the pipeline. The limitations and age of the original equipment, significant system, modifications, and increased demands constrain the ability of the SCC to function at the system's original design capacity. Because of these limitations, COMB is forced to rely on water stored in Lauro, Ortega, and Carpinteria reservoirs to meet regional water needs. In addition, no redundant supply or pipeline exists to convey Cachuma Project water or State Water Project (SWP) water to the South Coast is the Tecolote Tunner or the Upper Reach of the SCC is out of service, due to scheduled and/or unexpected repairs. As the Upper Reach of the SCC has the largest demand deficit and is located upstream from the sources of demand, the proposed improvements would allow more water flow farther along the pipeline to improve the level of service and reliability.

Lead Agency Contact

Name Rosie Thompson
Agency Cachuma Operation & Maintenance Board
Phone 805 566-6400 **Fax**
email
Address c/o Science Applications International Corporation
City 5464 Carpinteria Avenue, Suite K Carpinteria **State** CA **Zip** 93013

Project Location

County Santa Barbara
City Carpinteria
Region
Cross Streets
Parcel No.
Township **Range** **Section** **Base**

Proximity to:

Highways
Airports
Railways
Waterways
Schools
Land Use

Project Issues Aesthetic/Visual; Air Quality; Biological Resources; Archaeologic-Historic; Geologic/Seismic; Toxic/Hazardous; Water Quality; Noise; Traffic/Circulation

Reviewing Agencies Resources Agency; Department of Conservation; Office of Historic Preservation; Department of Parks and Recreation; Department of Water Resources; Department of Fish and Game, Region 5; Department of Health Services; Native American Heritage Commission; Caltrans, District 5; Integrated Waste Management Board; State Water Resources Control Board, Division of Loans and Grants; State Water Resources Control Board, Division of Water Rights; Department of Toxic Substances Control; Regional Water Quality Control Board, Region 3

Note: Blanks in data fields result from insufficient information provided by lead agency.

Document Details Report
State Clearinghouse Data Base

Date Received 04/12/2007 ***Start of Review*** 04/12/2007 ***End of Review*** 05/11/2007

Note: Blanks in data fields result from insufficient information provided by lead agency.

County: Santa Barbara

SCH# 2007041052

Resources Agency

- [x] **Resources Agency** Nadell Gayou
- [ ] **Dept. of Boating & Waterways** David Johnson
- [ ] **California Coastal Commission** Elizabeth A. Fuchs
- [ ] **Colorado River Board** Gerald R. Zimmerman
- [x] **Dept. of Conservation** Roseanne Taylor
- [ ] **California Energy Commission** Paul Richins
- [ ] **Dept. of Forestry & Fire Protection** Allen Robertson
- [x] **Office of Historic Preservation** Wayne Donaldson
- [x] **Dept of Parks & Recreation** Environmental Stewardship Section
- [ ] **Reclamation Board** DeeDee Jones
- [ ] **S.F. Bay Conservation & Dev't. Comm.** Steve McAdam
- [x] **Dept. of Water Resources** Resources Agency Nadell Gayou
- [ ] _____ Conservancy

Fish and Game

- [ ] **Depart. of Fish & Game** Scott Flint Environmental Services Division
- [ ] **Fish & Game Region 1** Donald Koch
- [ ] **Fish & Game Region 2** Banky Curtis
- [ ] **Fish & Game Region 3** Robert Floerke
- [ ] **Fish & Game Region 4** Julie Vance
- [x] **Fish & Game Region 5** Don Chadwick Habitat Conservation Program
- [ ] **Fish & Game Region 6** Gabrina Gatchel Habitat Conservation Program
- [ ] **Fish & Game Region 6 I/M** Gabrina Getchel Inyo/Mono, Habitat Conservation Program
- [ ] **Dept. of Fish & Game M** George Isaac Marine Region

Other Departments

- [ ] **Food & Agriculture** Steve Shaffer Dept. of Food and Agriculture
- [ ] **Depart. of General Services** Public School Construction
- [ ] **Dept. of General Services** Robert Sleppy Environmental Services Section
- [x] **Dept. of Health Services** Veronica Malloy Dept. of Health/Drinking Water

Independent Commissions,Boards

- [ ] **Delta Protection Commission** Debby Eddy
- [ ] **Office of Emergency Services** Dennis Castrillo
- [ ] **Governor's Office of Planning & Research** State Clearinghouse
- [x] **Native American Heritage Comm.** Debbie Treadway
- [ ] **Public Utilities Commission** Ken Lewis
- [ ] **State Lands Commission** Jean Sarino
- [ ] **Tahoe Regional Planning Agency (TRPA)** Cherry Jacques

Business, Trans & Housing

- [ ] **Caltrans - Division of Aeronautics** Sandy Hesnard
- [ ] **Caltrans - Planning** Terri Pencovic
- [ ] **California Highway Patrol** Shirley Kelly Office of Special Projects
- [ ] **Housing & Community Development** Lisa Nichols Housing Policy Division

Dept. of Transportation

- [ ] **Caltrans, District 1** Rex Jackman
- [ ] **Caltrans, District 2** Marcelino Gonzalez
- [ ] **Caltrans, District 3** Jeff Pulverman
- [ ] **Caltrans, District 4** Tim Sable
- [x] **Caltrans, District 5** David Murray
- [ ] **Caltrans, District 6** Marc Birnbaum
- [ ] **Caltrans, District 7** Cheryl J. Powell
- [ ] **Caltrans, District 8** Dan Kopulsky
- [ ] **Caltrans, District 9** Gayle Rosander
- [ ] **Caltrans, District 10** Tom Dumas
- [ ] **Caltrans, District 11** Mario Orso
- [ ] **Caltrans, District 12** Bob Joseph

Cal EPA

Air Resources Board

- [ ] Airport Projects Jim Lerner
  - [ ] Transportation Projects Ravi Ramalingam
  - [ ] Industrial Projects Mike Tollstrup
- [x] **California Integrated Waste Management Board** Sue O'Leary
- [x] **State Water Resources Control Board** Jim Hockenberry Division of Financial Assistance
- [ ] **State Water Resources Control Board** Student Intern, 401 Water Quality Certification Unit Division of Water Quality
- [x] **State Water Resouces Control Board** Steven Herrera Division of Water Rights
- [x] **Dept. of Toxic Substances Control** CEQA Tracking Center
- [ ] **Department of Pesticide Regulation**

Regional Water Quality Control Board (RWQCB)

- [ ] **RWQCB 1** Cathleen Hudson North Coast Region (1)
- [ ] **RWQCB 2** Environmental Document Coordinator San Francisco Bay Region (2)
- [x] **RWQCB 3** Central Coast Region (3)
- [ ] **RWQCB 4** Teresa Rodgers Los Angeles Region (4)
- [ ] **RWQCB 5S** Central Valley Region (5)
  - [ ] **RWQCB 5F** Central Valley Region (5) Fresno Branch Office
  - [ ] **RWQCB 5R** Central Valley Region (5) Redding Branch Office
- [ ] **RWQCB 6** Lahontan Region (6)
  - [ ] **RWQCB 6V** Lahontan Region (6) Victorville Branch Office
- [ ] **RWQCB 7** Colorado River Basin Region (7)
- [ ] **RWQCB 8** Santa Ana Region (8)
- [ ] **RWQCB 9** San Diego Region (9)

- [ ] **Other** _____

Last Updated on 09/10/06

SOUTH COAST CONDUIT/UPPER REACH RELIABILITY PROJECT

FINAL ENVIRONMENTAL IMPACT STATEMENT/ENVIRONMENTAL IMPACT REPORT

Appendix B
Air Quality Technical Data

November 2010

Table 1. Emission Source Data for Construction of the South Coast Conduit (SCC) Project - Preferred Alternative.

Activity/Equipment Type	*Hp Rating*	*Ave. Daily Load Factor*	*Number Active*	*Hourly Hp-Hrs*	*Hours/ Day*	*Daily Hp-Hrs*	*Work Days*	*Total Hp-Hrs*
Construction Activity A								
Excavator	200	0.50	1	100	7	700	160	112,000
Loader	200	0.60	1	120	4	480	160	76,800
Water Truck	300	0.40	1	120	7	840	160	134,400
Welder	60	0.30	2	36	7	252	160	40,320
On-road Truck - Pipe delivery (1)	NA	NA	52	NA	58	NA	NA	3,016
On-road Truck - Aggregate delivery (1)	NA	NA	405	NA	107	NA	NA	43,335
Fugitive Dust (2)	NA	NA	2	NA	7	NA	160	320
Construction Activity B								
Excavator	200	0.60	1	120	7	840	160	134,400
Loader	200	0.60	1	120	7	840	160	134,400
Bulldozer	300	0.60	1	180	7	1,260	20	25,200

Notes: (1) Number Active = total truck trips, Hours/Day = miles/roundtrip, and Total Hp-Hrs = total miles.

(2) Number Active is acres disturbed at one time and Total Hp-Hrs is acre-days for the entire activity.

Table 2. Air Emission Factors for Construction and Operation of the SCC Project.

Source Type	Fuel Type	Emission Factors (Grams/Horsepower-Hour)							References
		ROG	CO	NOx	SOx	PM10	PM2.5	CO2	
Off-Road Equipment									
Off-Road Equipment - 51-120 Hp	D	0.99	3.49	6.90	0.006	0.69	0.63	568	(1)
Off-Road Equipment - 176-250 Hp	D	0.32	0.92	6.25	0.006	0.15	0.14	568	(1)
Off-Road Equipment - 251-500 Hp	D	0.32	0.92	6.25	0.006	0.15	0.14	568	(1)
On-Road Trucks - 2009 Annual Average									
On-road Truck - Idle (Gms/Hr)	D	7.93	41.16	65.79	0.04	1.08	0.99	6,994	(2)
On-road Truck - 5 mph (Gms/Mi)	D	5.70	31.28	20.57	0.03	1.25	1.15	3,845	(2)
On-road Truck - 25 mph (Gms/Mi)	D	0.90	9.07	9.93	0.01	0.41	0.38	2,043	(2)
On-road Truck - 55 mph (Gms/Mi)	D	0.46	6.09	10.67	0.01	0.32	0.29	1,662	(2)
On-road Truck - Composite (Gms/Mi)	D	1.07	9.21	11.51	0.01	0.43	0.40	1,957	(3)
On-Road Trucks - 2009 Max. Monthly									
On-road Truck - Idle (Gms/Hr)	D	8.26	46.72	67.42	0.04	1.21	1.11	6,994	(4)
On-road Truck - 5 mph (Gms/Mi)	D	5.71	31.74	21.20	0.03	1.26	1.16	3,845	(4)
On-road Truck - 25 mph (Gms/Mi)	D	0.90	9.20	10.28	0.01	0.41	0.38	2,043	(4)
On-road Truck - 55 mph (Gms/Mi)	D	0.46	6.19	11.05	0.01	0.32	0.29	1,662	(4)
On-road Truck - Composite (Gms/Mi)	D	1.07	9.35	11.91	0.01	0.43	0.40	1,957	(3)
On-Road Trucks - 2009 Max. Monthly									
On-road Truck - 5 mph (Gms/Mi)	G	0.68	8.78	0.98	0.01	0.11	0.11	1,174	(5)
On-road Truck - 25 mph (Gms/Mi)	G	0.19	4.83	0.63	0.01	0.04	0.04	482	(5)
On-road Truck - Composite (Gms/Mi)	G	0.39	6.41	0.77	0.01	0.07	0.07	759	(6)
Other									
Fugitive Dust (Lbs/acre-day)	---	-	-	-	-	55.00	5.61		(7)

Notes: (1) Zero hour emission factors for year 2000 (251-500 Hp), year 2002 (176-250 Hp), and year 2003 (51-120 Hp), as presented in the ARB OFFROAD2007 emissions model (ARB 2006).

(2) Heavy duty diesel truck emission factors developed from EMFAC2007 (ARB 2006). Units in grams/mile for running mode and grams/hour for idle mode for project year 2009. Based on annual average conditions at 60 degrees and 50% humidity. PM emission factors include combustive and tire/brake wear contributions.

(3) Composite factors based on a round trip of 10% at 5 mph, 20% at 25 mph, and 70% at 55 mph. Units in grams/mile. Although not shown in these calculations, emissions from 10 minutes of idling mode included for each truck round trip.

(4) Same as (2), except = maximum emission factors for either January or July.

(5) Same as (2), except for gasoline-powered light-duty trucks. Data are the maximum emission factors for either January or July.

(6) Composite factors based on a round trip of 40% at 5 mph and 60% at 25 mph. Units in grams/mile.

(7) Units in lbs/acre-day from section 11.2.3 of AP-42 (EPA 1995). Emissions reduced by 50% from uncontrolled levels to represent compliance with SBCAPD fugitive dust control measures.

Table 3. Total Air Emissions from Construction of the SCC Project - Preferred Alternative.

Construction Activity/Equipment Type	*Tons per Year*						
	VOC	*CO*	*NOx*	*SOx*	*PM10*	*PM2.5*	*CO2*
Construction Activity A							
Excavator	0.04	0.11	0.77	0.00	0.02	0.02	70.12
Loader	0.03	0.08	0.53	0.00	0.01	0.01	48.08
Water Truck	0.05	0.14	0.93	0.00	0.02	0.02	84.15
Welder	0.04	0.16	0.31	0.00	0.03	0.03	25.24
On-road Truck - Pipe delivery	0.00	0.03	0.04	0.00	0.00	0.00	6.91
On-road Truck - Aggregate delivery	0.05	0.46	0.58	0.00	0.02	0.02	96.58
Fugitive Dust	-	-	-	-	8.80	0.90	-
Construction Activity B							
Excavator	0.05	0.14	0.93	0.00	0.02	0.02	84.15
Loader	0.05	0.14	0.93	0.00	0.02	0.02	84.15
Bulldozer	0.01	0.03	0.17	0.00	0.00	0.00	15.78
Total	0.32	1.27	5.18	0.01	8.96	1.04	515.16
Conformity Thresholds - Tons per Year	100	NA	100	NA	NA	NA	NA

Table 4. Emission Source Data for Construction of the South Coast Conduit (SCC) Project - Alternative A.

Activity/Equipment Type	*Hp Rating*	*Ave. Daily Load Factor*	*Number Active*	*Hourly Hp-Hrs*	*Hours/ Day*	*Daily Hp-Hrs*	*Work Days*	*Total Hp-Hrs*
Construction Activity A								
Excavator	200	0.75	1	150	7	1,050	160	168,000
Loader	200	0.60	1	120	7	840	160	134,400
Water Truck	300	0.40	1	120	7	840	160	134,400
Welder	60	0.60	2	72	7	504	160	80,640
On-road Truck - Pipe delivery (1)	NA	NA	52	NA	58	NA	NA	3,016
On-road Truck - Aggregate delivery (1)	NA	NA	405	NA	107	NA	NA	43,335
Fugitive Dust (2)	NA	NA	2	NA	7	NA	160	320
Construction Activity B								
Excavator	200	0.60	1	120	7	840	160	134,400
Loader	200	0.60	1	120	7	840	160	134,400
Bulldozer	300	0.60	1	180	7	1,260	20	25,200

Notes: (1) Number Active = total truck trips, Hours/Day = miles/roundtrip, and Total Hp-Hrs = total miles.

(2) Number Active is acres disturbed at one time and Total Hp-Hrs is acre-days for the entire activity.

Table 5. Total Air Emissions from Construction of the SCC Project - Alternative A.

Construction Activity/Equipment Type	*Tons per Year*						
	VOC	*CO*	*NOx*	*SOx*	*PM10*	*PM2.5*	*CO2*
Construction Activity A							
Excavator	0.06	0.17	1.16	0.00	0.03	0.03	105.19
Loader	0.05	0.14	0.93	0.00	0.02	0.02	84.15
Water Truck	0.05	0.14	0.93	0.00	0.02	0.02	84.15
Welder	0.09	0.31	0.61	0.00	0.06	0.06	50.49
On-road Truck - Pipe delivery	0.00	0.03	0.04	0.00	0.00	0.00	6.91
On-road Truck - Aggregate delivery	0.05	0.46	0.58	0.00	0.02	0.02	96.58
Fugitive Dust	-	-	-	-	8.80	0.90	-
Construction Activity B							
Excavator	0.05	0.14	0.93	0.00	0.02	0.02	84.15
Loader	0.05	0.14	0.93	0.00	0.02	0.02	84.15
Bulldozer	0.01	0.03	0.17	0.00	0.00	0.00	15.78
Total	0.40	1.54	6.27	0.01	9.00	1.09	611.53
Conformity Thresholds - Tons per Year	100	NA	100	NA	NA	NA	NA

Table 6. Emission Source Data for Construction of the South Coast Conduit (SCC) Project - Alternative B.

Activity/Equipment Type	*Hp Rating*	*Ave. Daily Load Factor*	*Number Active*	*Hourly Hp-Hrs*	*Hours/ Day*	*Daily Hp-Hrs*	*Work Days*	*Total Hp-Hrs*
Construction Activity A								
Excavator	200	0.75	1	150	7	1,050	192	201,600
Loader	200	0.60	1	120	7	840	192	161,280
Water Truck	300	0.40	1	120	7	840	192	161,280
Welder	60	0.60	2	72	7	504	192	96,768
On-road Truck - Pipe delivery (1)	NA	NA	52	NA	58	NA	NA	3,016
On-road Truck - Aggregate delivery (1)	NA	NA	405	NA	107	NA	NA	43,335
Fugitive Dust (2)	NA	NA	2	NA	7	NA	192	384
Construction Activity B								
Excavator	200	0.60	1	120	7	840	192	161,280
Loader	200	0.60	1	120	7	840	192	161,280
Bulldozer	300	0.60	1	180	7	1,260	24	30,240

Notes: (1) Number Active = total truck trips, Hours/Day = miles/roundtrip, and Total Hp-Hrs = total miles.

(2) Number Active is acres disturbed at one time and Total Hp-Hrs is acre-days for the entire activity.

Table 7. Total Air Emissions from Construction of the SCC Project - Alternative B.

Construction Activity/Equipment Type	*Tons per Year*						
	VOC	*CO*	*NOx*	*SOx*	*PM10*	*PM2.5*	*CO2*
Construction Activity A							
Excavator	0.07	0.20	1.39	0.00	0.03	0.03	126.22
Loader	0.06	0.16	1.11	0.00	0.03	0.02	100.98
Water Truck	0.06	0.16	1.11	0.00	0.03	0.02	100.98
Welder	0.11	0.37	0.74	0.00	0.07	0.07	60.59
On-road Truck - Pipe delivery	0.00	0.03	0.04	0.00	0.00	0.00	6.91
On-road Truck - Aggregate delivery	0.05	0.46	0.58	0.00	0.02	0.03	96.58
Fugitive Dust	-	-	-	-	10.56	1.08	-
Construction Activity B							
Excavator	0.06	0.16	1.11	0.00	0.03	0.02	100.98
Loader	0.06	0.16	1.11	0.00	0.03	0.02	100.98
Bulldozer	0.01	0.03	0.21	0.00	0.01	0.00	18.93
Total	0.47	1.75	7.40	0.01	10.80	1.31	713.14
Conformity Thresholds - Tons per Year	100	NA	100	NA	NA	NA	NA

Table 8. Emission Source Data for Operation of the South Coast Conduit (SCC) Project - Preferred Alternative.

Activity/Equipment Type	*Hp Rating*	*Ave. Daily Load Factor*	*Number Active*	*Hourly Hp-Hrs*	*Hours/ Day*	*Daily Hp-Hrs*	*Work Days*	*Total Hp-Hrs*
Operations								
Backhoe	90	0.50	1	45	5	225	5	1,125
Loader	80	0.50	1	40	5	200	5	1,000
Light Duty Truck - Gasoline (3)	NA	NA	2	NA	20	40	100	4,000

Notes: (1) Number Active trips per day, Hours/Day = miles/trip, Daily Hp-Hrs = miles/day, and Total Hp-Hrs = total miles.

Table 9. Emission Source Data for Operation of the South Coast Conduit (SCC) Project - Alternatives A or B.

Activity/Equipment Type	*Hp Rating*	*Ave. Daily Load Factor*	*Number Active*	*Hourly Hp-Hrs*	*Hours/ Day*	*Daily Hp-Hrs*	*Work Days*	*Total Hp-Hrs*
Operations								
Backhoe	90	0.60	1	54	5	270	5	1,350
Loader	80	0.60	1	48	5	240	5	1,200
Light Duty Truck - Gasoline (3)	NA	NA	2	NA	20	40	100	4,000

Notes: (1) Number Active trips per day, Hours/Day = miles/trip, Daily Hp-Hrs = miles/day, and Total Hp-Hrs = total miles.

Table 10. Daily and Annual Air Emissions from the Operation of the SCC Project - Preferred Alternative.

Emissions Period/Equipment Type	*VOC*	*CO*	*NOx*	*SOx*	*PM10*	*PM2.5*	*CO2*
Daily Emissions	*Pounds per Day*						
Backhoe	0.49	1.73	3.42	0.00	0.34	0.31	281.75
Loader	0.44	1.54	3.04	0.00	0.30	0.28	250.44
Light Duty Truck - Gasoline	0.03	0.57	0.07	0.00	0.01	0.01	66.91
Daily Total - All Sources	**0.96**	**3.84**	**6.53**	**0.01**	**0.65**	**0.60**	**599.10**
Daily Total - On-road Vehicles Only	**0.03**	**0.57**	**0.07**	**0.00**	**0.01**	**0.01**	**66.91**
SBCAPCD Daily Thresholds - All Sources	**240**	**NA**	**240**	**NA**	**80**	**NA**	**NA**
SBCAPCD Daily Thresholds - On-road Vehicles Only	**25**	**NA**	**25**	**NA**	**NA**	**NA**	**NA**
Annual Emissions	*Tons per Year*						
Backhoe	0.00	0.00	0.01	0.00	0.00	0.00	0.70
Loader	0.00	0.00	0.01	0.00	0.00	0.00	0.63
Light Duty Truck - Gasoline	0.00	0.03	0.00	0.00	0.00	0.00	3.35
Annual Total - Tons	**0.00**	**0.04**	**0.02**	**0.00**	**0.00**	**0.00**	**4.68**
Conformity Thresholds - Tons/year	**100**	**NA**	**100**	**NA**	**NA**	**NA**	**NA**

Table 11. Daily and Annual Air Emissions from the Operation of the SCC Project - Alternatives A or B.

Emissions Period/Equipment Type	*VOC*	*CO*	*NOx*	*SOx*	*PM10*	*PM2.5*	*CO2*
Daily Emissions	*Pounds per Day*						
Backhoe	0.59	2.08	4.11	0.00	0.41	0.38	338.10
Loader	0.52	1.85	3.65	0.00	0.37	0.34	300.53
Light Duty Truck - Gasoline	0.03	0.57	0.07	0.00	0.01	0.01	66.91
Daily Total - All Sources	**1.15**	**4.49**	**7.83**	**0.01**	**0.78**	**0.72**	**705.54**
Daily Total - On-road Vehicles Only	**0.03**	**0.57**	**0.07**	**0.00**	**0.01**	**0.01**	**66.91**
SBCAPCD Daily Thresholds - All Sources	**240**	**NA**	**240**	**NA**	**80**	**NA**	**NA**
SBCAPCD Daily Thresholds - On-road Vehicles Only	**25**	**NA**	**25**	**NA**	**NA**	**NA**	**NA**
Annual Emissions	*Tons per Year*						
Backhoe	0.00	0.01	0.01	0.00	0.00	0.00	0.85
Loader	0.00	0.00	0.01	0.00	0.00	0.00	0.75
Light Duty Truck - Gasoline	0.00	0.03	0.00	0.00	0.00	0.00	3.35
Annual Total - Tons	**0.00**	**0.04**	**0.02**	**0.00**	**0.00**	**0.00**	**4.94**
Conformity Thresholds - Tons/year	**100**	**NA**	**100**	**NA**	**NA**	**NA**	**NA**

SOUTH COAST CONDUIT/UPPER REACH RELIABILITY PROJECT

FINAL ENVIRONMENTAL IMPACT STATEMENT/ENVIRONMENTAL IMPACT REPORT

Appendix C
Level of Service Definitions

November 2010

LEVEL OF SERVICE DEFINITIONS

In rating roadway and intersection operations, "Levels of Service" (LOS) A through F are used, with LOS A indicating free flow operations and LOS F indicating congested operations.

LOS A: Highest quality of service a particular class of highway can provide. It is a condition of free flow in which there is little or no restriction on speed or maneuverability caused by the presence of other vehicles. Operation speed is in the highest range and density is low. This condition generally exists when the traffic volume is 35 percent or less of the roadway capacity.

LOS B: A zone of stable flow. Operating speed is beginning to be restricted by other traffic. Restriction on maneuver is still negligible, and there is little probability of major restriction in speed or flow rate. This condition generally exists when the traffic volume is at 35 percent to 55 percent of the roadway capacity.

LOS C: Still a zone of stable flow, but at this volume and density level, most drivers are becoming restricted in their freedom to select speed, change lanes, or pass. Operation speeds are still in the range of 2/3 to ¾ of maximum. This condition generally exists when the traffic volume is at 55 percent to 75 percent of the roadway capacity.

LOS D: Approaches unstable flow. Tolerable operating speeds are maintained, but are subject to considerable and sudden variation. Freedom to maneuver and driving comfort are low because lane density has increased and the probability of accidents has increased. Most drivers would consider this LOS unsatisfactory. This condition generally exists when the traffic volume is at 75 percent to 90 percent of the roadway capacity.

LOS E: The upper limit of LOS E is the capacity of the roadway. Operation in this zone is unstable, speeds and flow rates fluctuate, and there is little independence of speed selection or maneuver. Headways are short and operation speeds subject to rapid fluctuation, driving comfort is low and accident potential is high. This LOS is clearly undesirable.

LOS F: LOS F describes forced flow operations after traffic has exceeded the design capacity of the roadway. Speed and rate of flow are below the levels attained in LOS E and may, for short periods of time, drop to zero.

SOUTH COAST CONDUIT/UPPER REACH RELIABILITY PROJECT

FINAL ENVIRONMENTAL IMPACT STATEMENT/ENVIRONMENTAL IMPACT REPORT

Appendix D
Mitigation Monitoring and Reporting Plan

November 2010

Table 1 South Coast Conduit/Upper Reach Reliability Project Mitigation Monitoring and Reporting Plan

Mitigation Measure	Implementation Procedure or Action	Organization Responsible for Implementation	Reporting/ Notification Requirement	Compliance Schedule	Responsible Party for Verification of Compliance
	AESTHETICS				
AES-2	Covered receptacles shall be provided onsite prior to commencement of grading or construction activities to prevent construction and/or employee trash from blowing offsite. The applicant or designee shall retain a clean-up crew to ensure that trash and all excess construction debris is collected daily or more frequently, as directed by compliance monitors, and placed in provided receptacles throughout construction.	COMB		Prior to and during construction	COMB
	BIOLOGICAL RESOURCES				
BIO-1.1	Santa Barbara honeysuckle plants shall be avoided to the greatest extent feasible during construction. Locations of this species within the construction corridor shall be clearly marked on the project plans and in the field by a qualified biologist prior to construction. The qualified biologist shall work with the Resident Engineer and construction contractor to determine which of these areas cannot be avoided. For the areas that cannot be avoided, cover of Santa Barbara honeysuckle shall be recorded using line-intercept sampling and will form the restoration criterion.	COMB	Specifications shall be included in the final construction plans	Prior to vegetation removal	COMB
BIO-1.2	The project Revegetation Plan (see Appendix F) shall include specific measures for restoring Santa Barbara honeysuckle to pre-project cover.	COMB	Specifications shall be included in the Revegetation Plan	Prior to construction	COMB
BIO-1.3	A Special-Status Species Protection Plan shall be prepared and implemented to minimize or avoid impacts to special status biological resources, including aquatic habitats, during pipeline construction. Habitat and species protection measures shall include, at a minimum: 1. Construction shall be scheduled to avoid the breeding season of special status species. For example, schedule pipeline construction (or at a minimum, crossing of drainages that support special status aquatic species) to avoid the breeding season for the California red-legged frog (November 1 through May 30) and steelhead migration and spawning (November 1 through June 30) or to occur while water is not present; 2. Work at the two stream crossings shall be scheduled to avoid the high flow seasons (October through April) if trenching is used to cross the two drainages to avoid potential impacts to downstream resources, including breeding habitat for the California red-legged	COMB	Specifications shall be included in the final construction plans	Prior to and during construction	COMB

Mitigation Measure	Implementation Procedure or Action	Organization Responsible for Implementation	Reporting/ Notification Requirement	Compliance Schedule	Responsible Party for Verification of Compliance
	frog and steelhead; 3. A U.S. Fish and Wildlife Service (USFWS)-approved California red-legged frog biologist shall conduct pre-construction California red-legged frog surveys following USFWS protocols in all suitable habitat crossed by the pipeline right-of-way (the West Fork and main stem of Glen Annie Creek) to determine the presence or absence of this species within about 500 feet of the construction area; 4. A biologist experienced in identification of steelhead shall conduct pre-construction surveys in Glen Annie Creek to determine the presence or absence of this species within about 500 feet of the construction area. A qualified steelhead biologist shall be present during construction in Glen Annie Creek to monitor for the species if any are found during the pre-construction survey. Any disturbances to occupied habitat or steelhead shall be in conformance with the terms and conditions of the project Biological Opinion from the National Marine Fisheries Service (NMFS); 5. A qualified biologist with the appropriate permits shall be present during construction in habitats that support special status species; 6. The project biologist and the project engineer shall clearly designate "sensitive resource zones" on the project maps and construction plans. Sensitive resource zones are defined as areas where construction would be limited in space, time, or methods to minimize or avoid impacts to special status species or their habitat; 7. A USFWS-approved California red-legged frog biologist shall be present during construction in locations known to support California red-legged frogs to monitor for this species. The biologist shall inspect the work area (especially areas with ponded water, if present) for the presence of the species and shall be authorized to temporarily stop work if immediate threats to the species are identified during monitoring. Any disturbances to occupied habitat or red-legged frogs shall be in conformance with the terms and conditions of the project Biological Opinion from the USFWS; 8. All machinery shall be stored and fuelled in designated locations at least 100 feet away from any sensitive habitats or in areas approved by the project biologist. Heavy equipment and construction activities shall be restricted to the defined construction corridor. Construction vehicles and personnel shall				

Mitigation Measure	Implementation Procedure or Action	Organization Responsible for Implementation	Reporting/ Notification Requirement	Compliance Schedule	Responsible Party for Verification of Compliance
	use existing access roads; 9. A qualified biologist shall conduct pre-construction surveys of the stand of eucalyptus trees for roosting monarch butterflies in the appropriate season. Surveys shall be conducted during the fall and winter (October through December) to verify the presence or absence of autumnal or wintering roost sites. If autumnal or wintering roost sites are identified, the biologist shall work with the resident engineer to either avoid removal of these trees or schedule construction to occur outside of the monarch roosting season when the species would not be present; and 10. Any other requirements stipulated by the USFWS and/or NMFS as part of Section 7 Consultation under the Endangered Species Act shall be implemented.				
BIO-1.4	Glen Annie Creek, including West Fork, bed and banks shall be restored to pre-project conditions to the greatest extent feasible. This shall include disposing of material displaced by the pipe and bedding outside the creek corridor but not over existing topsoil, replacing boulders and cobbles in the stream bed, and contouring to restore the stream bed gradient and bank structure. Biological monitors shall ensure that creek beds and banks are restored correctly and shall work with the construction contractor directly or through the resident engineer.	COMB	Specifications shall be included in the final construction plans	Prior to and during construction	COMB
BIO-2.1	Measures for restoration of riparian woodland shall be included in the Revegetation Plan (see Appendix F). All riparian woodland removed shall be replaced at a 2:1 ratio, or as mandated in project permits. For areas of temporary impact, restoration onsite will be 1:1, and an equal area shall be replaced offsite. Any permanent loss of riparian woodland shall be replaced offsite at a 2:1 ratio.	COMB	Specifications shall be included in the final construction plans	Prior to and during construction	COMB
BIO-2.2	Measures for restoration of oak woodland in the Revegetation Plan (see Appendix F) shall include planting individual coast live oak trees at suitable sites (within the pipeline right-of-way where feasible, on existing land owned by Reclamation along the pipeline, on Reclamation land at Lauro Reservoir [approximately 9 miles east of the project], and on private land along the pipeline as permitted by the landowners) and the following specifications. Coast live oak tree 6 inches or greater in diameter at breast height (DBH) removed for the project shall be replaced by establishing 10 planted trees meeting minimum performance criteria five years after planting for each tree removed. The performance criteria shall include a period of two years without supplemental watering, a healthy vigorous appearance, minimum	COMB	Specifications shall be included in the final construction plans	Prior to and during construction	COMB

Mitigation Measure	Implementation Procedure or Action	Organization Responsible for Implementation	Reporting/ Notification Requirement	Compliance Schedule	Responsible Party for Verification of Compliance
	height of 6 feet, and a minimum diameter 1 foot above the ground of 2 inches. In most cases, it will take more than five years for trees to meet these criteria. Oak tree plantings shall be appropriately spaced to promote survival past the monitoring period.				
BIO-3	The following shall be incorporated into the Special Status Species Protection Plan (Mitigation Measure BIO-1.3) to avoid or reduce impacts to migratory and resident breeding birds: 1. A qualified biologist shall conduct pre-construction bird surveys during the nesting season in areas that would require the direct removal of coastal scrub and chaparral vegetation, native and non-native trees, or other areas where suitable nesting habitat for resident or migratory bird species may occur. The surveys shall focus on breeding behavior and nesting locations in the proposed work area and immediately adjacent to that area. Based on the results of the surveys, recommended buffer areas between construction activities and observed nesting habitat shall be provided to the resident engineer if the work were scheduled to occur near those locations while nesting is occurring (February 15 through August 31); 2. A qualified biologist shall be present during removal of vegetation to ensure that breeding wildlife and nesting birds are not harmed. The biologist shall have the authority to redirect or temporarily stop work if threats to the species are identified during monitoring; and 3. Riparian vegetation and oak trees scheduled to be removed for construction shall be removed before the nesting season (April 15) to further avoid impacts to nesting birds, where feasible. For trees outside the area to be trenched, removal should be by cutting at ground level to leave the roots in place to facilitate restoration.	COMB	Specifications shall be included in the final construction plans	Prior to and during construction	COMB
BIO-4a	The Revegetation Plan shall include a seed mix appropriate for coastal scrub and chaparral areas as well as non-native grassland and other areas to be revegetated. Performance criteria for each plant community shall be included in the Revegetation Plan. Due to the relatively short distance of the project alignment and the similarity of habitats crossed by the project, one diverse seed mix may be developed for the entire route. This seed mix shall be applied to all areas where vegetation was removed.	COMB	Specifications shall be included in the final construction plans	Prior to and during construction	COMB
BIO-4b.1	Areas of invasive exotic plant infestation shall be identified and mapped within 200 feet of the alignment prior to construction. All such areas	COMB	Measure shall be a condition of	Prior to construction	COMB

Mitigation Measure	Implementation Procedure or Action	Organization Responsible for Implementation	Reporting/ Notification Requirement	Compliance Schedule	Responsible Party for Verification of Compliance
	within the construction corridor shall be marked on the construction plans and clearly flagged in the field.		project approval		
BIO-4b.2	Prior to construction and throughout restoration, Cape ivy and other weed species shall be controlled. For Cape ivy, control shall consist of herbicide treatment of growing stems where such spraying would not damage adjacent native plants and removing portions of the plants growing within native vegetation that cannot be sprayed. Cape ivy that has been removed from native vegetation shall be hauled off-site to a landfill. Treatment shall encompass a corridor a minimum of 200 feet wide centered on the pipeline alignment. Treatment shall continue a minimum of three times per year, but up to five times per year until all of the performance criteria in the Revegetation Plan have been met.	COMB	Measure shall be a condition of project approval	Prior to construction	COMB
BIO-4b.3	Unless access is refused by the property owner, the area of invasive exotic plant species infestation (primarily black mustard and Veldt grass) in the vicinity of Ellwood Reservoir shall be treated to reduce invasive exotic plant species growth and encourage non-native annual grasses and native species to recolonize the area. Treatment shall be attempted for two years prior to construction, if feasible. Areas of very dense black mustard may be sprayed aerially or by using a tractor mounted system for efficiency, but areas near native vegetation must be treated by hand. Veldt grass shall be treated by hand as many herbaceous native species co-occur with this species. Treating before construction will greatly reduce the amount of viable seed that could be spread by construction or that could come up following construction.	COMB	Measure shall be a condition of project approval	Prior to construction	COMB
BIO-4b.4	Extreme caution shall be taken in using equipment, including passenger vehicles and pickups, in areas identified as having invasive exotic plant species infestations. The undercarriage of all vehicles and equipment shall be washed prior to moving to another portion of the project area, including other areas with infestation of different or the same invasive exotic plant species, or moving off the project site. All construction personnel boots must be cleaned to remove invasive exotic plant species propagules (e.g., seeds) when moving from invasive exotic plant species infested areas to other areas of the pipeline or leaving the project site.	COMB	Specifications shall be included in the final construction plans	Prior to and during construction	COMB
BIO-4b.5	The Revegetation Plan shall include an invasive exotic plant species control component to address invasive exotic plant species removal within the native and naturalized habitats. The Plan shall also establish performance criteria for distribution and density of invasive exotic plant species infestations.	COMB	Specifications shall be included in the final construction plans	Prior to and during construction	COMB
BIO-4b.6	A weed manual shall be prepared prior to operation and maintenance	COMB	Specifications	Prior to and	COMB

Mitigation Measure	Implementation Procedure or Action	Organization Responsible for Implementation	Reporting/ Notification Requirement	Compliance Schedule	Responsible Party for Verification of Compliance
	activities that shall include photographs of the different invasive exotic plant species that are present along the pipeline route. The weed manual shall be distributed to technicians performing maintenance on the structures. They will be instructed to look for invasive exotic plant species infestations along the access roads and at structures. Invasive exotic plant species infestations identified shall be treated or removed.		shall be included in the final construction plans	during construction	
BIO-4b.7	A biologist shall inspect unpaved access roads for the project annually for invasive exotic plant species as part of regular pipeline maintenance activities. If invasive exotic species are found, they shall be removed using the methods provided in the Revegetation Plan, or currently accepted methods. In addition, vehicles shall be washed or inspected by COMB after driving through areas with identified invasive exotic plant species infestations prior to using the vehicles elsewhere to prevent the spread of those invasive exotic plant species to other areas.	COMB	Specifications shall be included in the operations plan	Upon completion of construction	COMB
BIO-5	Oak trees shall be avoided to the maximum extent feasible. Protections shall include financial incentives and penalties, and creation of exclusion zones. Trees that may be removed and those that must be protected shall be clearly shown on project plans and marked in the field. The construction plans and specifications shall include financial compensation to the construction contractor for avoiding oak trees that would be permitted to be removed and financial penalties for removing trees that are designated for protection. Financial compensation shall minimally be the estimated cost of mitigating loss of that tree (planting, monitoring, maintenance, and reporting to attain 10 trees that meet performance criteria for each tree removed). Financial penalties shall be minimally two times the compensation amount. Exclusion zones shall be created within the nominal construction easement to protect groups of trees where feasible.	COMB	Specifications shall be included in the final construction plans		COMB
CULTURAL RESOURCES					
CR-1	Prior to construction a qualified archaeologist will work with COMB to place exclusionary fencing that restricts access to the area holding archaeological site CA-SBA-3923. This area will be labeled as a sensitive area on construction plans.	COMB	Specifications shall be included in the final construction plans	Prior to and during construction	COMB
CR-2	Preconstruction meetings with a qualified archaeologist shall be conducted in order to inform construction personnel about the importance of cultural resources to archaeologists and Native Americans. The meeting will also describe reporting requirements and responsibilities of construction personnel if archaeological material is found. In the event that unexpected archaeological resources are	COMB	Specifications shall be included in the final construction plans	Prior to and during construction	COMB

Mitigation Measure	Implementation Procedure or Action	Organization Responsible for Implementation	Reporting/ Notification Requirement	Compliance Schedule	Responsible Party for Verification of Compliance
	discovered outside the boundary of CA-SBA-1775 or in the unlikely event that previously unknown intact features are found at CA-SBA-1775 or in the tailings during construction, all construction activities shall be halted in the area until the lead federal agency is notified and the appropriate Section 106 consultations, if any, can be initiated.				
	GEOLOGY AND SOILS				
GEO-2	The following erosion control protocol shall be followed in association with pipeline construction: 1. Prior to any work beginning, a Stormwater Pollution Prevention Plan (SWPPP) for construction shall be prepared and submitted to the Regional Water Quality Control Board (RWQCB) in compliance with the statewide General Construction Activity Stormwater Permit. This plan shall be designed for a 10-year, 8-hour duration storm event. Where possible, erosion control measures shall be installed prior to work beginning. Standard erosion and sediment control features as described in the Erosional Sediment Control Field Manual (California RWQCB 1999) shall be utilized during and immediately after grading to minimize short-term impacts associated with erosion and off-site siltation of West Fork and Glen Annie creeks. 2. Prior to construction-related discharges, energy dissipation measures shall be installed at groundwater dewatering discharge points into West Fork and Glen Annie creeks to prevent erosion. 3. Sedimentation basins (may be straw bales lined with filter fabric) shall be used for dewatering discharge points to prevent excess downstream sedimentation. These basins shall be constructed prior to dewatering and regularly maintained during construction, including after storm events, to remain in good working order. 4. Straw bale/filter fabric barriers, backed by wire fencing for strength, shall be installed around spoil piles to contain sediment from runoff. These barriers shall be installed prior to any stockpiling during the rainy season or immediately after stockpiling during the dry season, and shall be regularly maintained, including during major rainfall events, until the stockpiles are completely removed. 5. Subsequent to pipeline construction, erosion control matting shall be placed on disturbed slopes greater than 5:1 (20 percent), over seeding and mulching. 6. Straw bale and/or filter fabric barriers shall be installed at the base of disturbed slopes, for a minimum of two months following slope completion (or until the end of the rainy season, whichever is	COMB/ Construction Contractor	COMB shall submit Notice of Intent to the RWQCB; contractor shall provide SWPPP to COMB; BMPs shall be located on the SWPPP/Erosion and Sediment Control Plan and grading and drainage plan; copy of the SWPPP/Erosion and Sediment Control Plan shall be maintained on the project site during grading and construction activities	Prior to construction	COMB

Mitigation Measure	Implementation Procedure or Action	Organization Responsible for Implementation	Reporting/ Notification Requirement	Compliance Schedule	Responsible Party for Verification of Compliance
	longer), to reduce short-term erosion impacts prior to plant growth. 7. During construction and on all disturbed slopes, water bars, filter fabric fencing, and/or rice wattles shall be placed at 50-foot intervals on slopes greater than 5:1 (20 percent).				
GEO-4.1	A presentation by a County-qualified paleontologist explaining the potential for encountering paleontological resources during construction shall be included as an element of the project pre-construction meeting. Construction workers and other project personnel (including environmental monitors) shall be educated regarding the appearance of local paleontological resources, the proper notification channels in the event vertebrate fossils are encountered, as well as penalties for the illicit disturbance of such fossils.	COMB	County-qualified paleontologist shall conduct meeting	Prior to construction	COMB
GEO-4.2	A County-qualified paleontological monitor shall be on call during excavation activities within the Vaqueros and Rincon formations.	COMB	Specifications shall be included in the final construction and grading plans, including location of Vaqueros and Rincon formations	Prior to construction; monitoring during construction	COMB
GEO-4.3	In the event that vertebrate fossils are found by the monitor or construction personnel, the following actions shall be taken: 1. Follow appropriate notification procedures; 2. Assess the find and determine recovery procedures; 3. Provide for construction avoidance until the fossils are assessed and recovered, if appropriate; and 4. Continue paleontological monitoring while fossil assessment and/or recovery are being completed.	COMB	Specifications shall be included in all construction and grading plans	Prior to and during construction	COMB
HAZARDS AND HAZARDOUS MATERIALS					
HAZ-1	A project-specific SWPPP shall be prepared and submitted to the RWQCB in compliance with the Statewide General Construction Activity Stormwater Permit, to prevent adverse impacts to nearby West Fork of Glen Annie and Glen Annie creeks associated with construction related incidental spills. This plan shall include, but not be limited to, a description of Best Management Practices (BMPs), including spill prevention measures, spill containment equipment, and monitoring requirements. The following pollution prevention measures shall be followed in	COMB/ Construction Contractor	COMB shall submit Notice of Intent to the RWQCB; contractor shall provide SWPPP to COMB; BMPs shall be located on the SWPPP grading/drainage	Prior to issuance of grading permits	COMB

Mitigation Measure	Implementation Procedure or Action	Organization Responsible for Implementation	Reporting/ Notification Requirement	Compliance Schedule	Responsible Party for Verification of Compliance
	association with pipeline construction: 1. If rain occurs during or within three days after concrete is poured for any pipeline structures, plastic sheets or tarps shall be spread and secured over the concrete in such a manner to prevent rain from coming in contact with the concrete; 2. Concrete trucks shall be washed out in a designated area where the material cannot run off into the stream or percolate into the groundwater. This area shall be specified on all applicable construction plans and be in place before any concrete is poured; 3. Upon entering the site and regularly thereafter, equipment shall be inspected and maintained prior to working in or immediately adjacent to West Fork of Glen Annie or Glen Annie creeks. Any leaks or hoses/fittings in poor condition shall be repaired before the equipment begins work; and 4. A Hazardous Materials Business Plan shall be prepared prior to equipment use on the site and followed for project construction. This plan shall include, but not necessarily be limited to: a) Specific bermed equipment maintenance and refueling areas; b) Bermed and lined hazardous material storage areas on site that are covered during the rainy season; c) Hazardous material spill cleanup equipment on site (e.g., sorbent pads, shovels, and bags to place contaminated soil in); and d) Workers trained in location and use of cleanup equipment.		plan; copy of the SWPPP shall be maintained on the project site during grading and construction activities; Hazardous Materials Business Plan shall be reviewed and approved by COMB		
	NOISE				
NOISE-1.1	Construction activity within 800 feet of the residences shall be limited to the hours of 7 A.M. to 5 P.M., Monday through Saturday. No construction shall occur on state Holidays (e.g., Thanksgiving, Christmas, 4th of July, Labor Day). Construction equipment maintenance shall be limited to the same hours. Non-noise generating construction activities are not subject to these restrictions.	COMB	Specifications shall be included on the construction plans	Prior to and during construction	COMB
NOISE-1.2	COMB shall notify the sensitive noise receptors 48 hours in advance of the commencement of any and all construction activities. The construction manager's (or representative's) telephone number shall also be provided with the notification so that concerns can be communicated.	COMB	Specifications shall be included on the construction plans	Prior to and during construction	COMB
NOISE-1.3	Stockpiling and vehicle staging areas shall be located as far as practical from sensitive noise receptors. Every effort shall be made to create the greatest distance between noise sources and sensitive receptors during construction activities.	COMB	Specifications shall be included on the construction	Prior to and during construction	COMB

Mitigation Measure	Implementation Procedure or Action	Organization Responsible for Implementation	Reporting/ Notification Requirement	Compliance Schedule	Responsible Party for Verification of Compliance
			plans		
TRANSPORTATION AND CIRCULATION					
TRANS-3	Damage caused by the Project to the Glen Annie Road segment located north of the Glen Annie Road/Cathedral Oaks Road intersection shall be repaired.	COMB/ Construction Contractor	Repair requirements shall be in contractor bid solicitation package and included in contractor's scope of work	Prior to and during construction	COMB

SOUTH COAST CONDUIT/UPPER REACH RELIABILITY PROJECT

FINAL ENVIRONMENTAL IMPACT STATEMENT/ENVIRONMENTAL IMPACT REPORT

Appendix E
Comment Letters and Response to Comments

November 2010

Public Comment Process

The public comment period is a critical part of the NEPA and CEQA public participation process. It provides the opportunity for other responsible agencies and interested parties to analyze the Proposed Action and provide any comments they might have on the adequacy of the environmental document. The responses to comments are intended to provide complete explanations to the commenter and improve the overall understanding of the Proposed Action.

Comments on the Draft EIS/EIR

Reclamation and COMB received five comment letters on the draft EIS/EIR during the public review period. Table 1 presents a list of the agencies that provided comment letters on the Draft EIS/EIR. The written comments are grouped by the affiliation of the commenter, including Federal, State, and Local Government. Each letter is given a letter code based on the name of the commenter (e.g., National Marine Fisheries Services is given the letter code "NMFS"). The individual comments within the letter are annotated in the margin using the letter code and consecutive numbering (e.g., NMFS-1, NMFS-2). The responses to comments use the same annotation in order to easily correspond with the comment letter. These letters, in addition to the responses to comments, are located on the following pages.

Table 1 Public Comment Letters Received

Individual /Organization	Letter Code	Date
FEDERAL GOVERNMENT		
National Marine Fisheries Service	NMFS	10/02/08
U.S. Department of the Interior, Fish and Wildlife Service	USFWS	10/03/08
U.S. Environmental Protection Agency	EPA	11/13/08
STATE GOVERNMENT		
State Water Resources Control Board	SWRCB	09/29/08
LOCAL GOVERNMENT		
County of Santa Barbara	CSB	10/03/08

UNITED STATES DEPARTMENT OF COMMERCE
National Oceanic and Atmospheric Administration
NATIONAL MARINE FISHERIES SERVICE
Southwest Region
501 West Ocean Boulevard, Suite 4200
Long Beach, California 90802-4213

In response, refer to:
150308SWR2008PR00374

OCT 2 2008

Ms. Judi Tapia
U.S. Bureau of Reclamation
1243 N Street
Fresno, CA 93721-1831

Dear Ms. Tapia:

NOAA's National Marine Fisheries Service (NMFS) offers the following comments regarding the South Coast Conduit Upper Reach Reliability Project (Draft EIS/EIR, August 20, 2008) proposed by the U.S. Bureau of Reclamation (BOR) and Cachuma Operations and Maintenance Board (COMB). NMFS-1

The proposed project occurs within the range of the endangered Southern California Distinct Population Segment of steelhead (*Oncorhynchus mykiss*) and its designated critical habitat. As disclosed in the Draft EIS/EIR, the proposed project constitutes a major federal construction action. This is important to recognize because section 7(c) of the U. S. Endangered Species Act (ESA) require preparation of biological assessments if listed species or critical habitat may be present in the area affected by a major construction activity (50 CFR §402.01). For reasons described more fully below, the BOR should submit to NMFS a biological assessment that describes the effects of the proposed action on endangered steelhead and critical habitat for this species prior to publishing the record of decision. The biological assessment is expected to support consultation with NMFS in accordance with Section 7 of the ESA.

While the Draft EIS/EIR concludes that endangered steelhead cannot presently access the project area, the technical information on which BOR seems to base this conclusion is not entirely appropriate for this purpose. The Draft EIS/EIR recognizes the presence of *O. mykiss* in Glen Annie Creek at the location of the proposed pipeline construction. However, referencing Stoecker et al. (2002), the BOR determined that the anadromous form (steelhead) was not expected to be present and, therefore, would not be impacted by the proposed project. While Stoecker et al. (2002) provides a useful account of possible impediments and/or barriers to upstream migrating steelhead associated with Glen Annie Creek, this report appears to rely primarily on qualitative observations in determining the degree an obstruction affects upstream migratory potential for adult steelhead. NMFS is not aware of any quantitative assessments that reliably indicate these structures are completely impassible to adult steelhead, and believes passage of steelhead at these structures requires further review before firm conclusions can be made in this regard. NMFS-2

NMFS-3 The Draft EIS/EIR project description states that existing roads would be used to access the project area during construction. The USDA-Forest Service's Gap Fire-Burned Area Emergency Response Assessment (2008), which encompasses the proposed project, stated the COMB access road is at risk of loss "due to lack of adequate drainage and non-current design standards". Additional use of this road for construction, and subsequent maintenance, could further increase the likelihood of failure and excessive erosion. Increased sedimentation of the adjacent streams could adversely affect steelhead and its critical habitat. For this reason, the effects arising from using the road as part of the project should be considered as part of the project, and proposals for road stabilization and maintenance should be developed and included in the project.

NMFS-4 Overall, the EIS/EIR creates the perception that the project will have no effect on endangered steelhead or critical habitat for this species. However, based on NMFS' current understanding of the project and familiarity with the project area, NMFS recommends that the BOR reconsider the effects of the proposed project on endangered steelhead and its designated critical habitat in the EIS/EIR, and develop a biological assessment as prescribed by and for the purpose of interagency consultation pursuant to the ESA. The draft biological assessment should be submitted to NMFS for review in accordance with Section 7 of the ESA.

NMFS would be pleased to meet with you and discuss these issues further. Darren Brumback is the NMFS designated representative for this proposed action. Please contact him at (562) 980-4060 for further coordination.

Sincerely,

for Rodney R. McInnis
Regional Administrator

National Marine Fisheries Service, Undated

NMFS-1 The comment correctly states that the Proposed Action site is within the range of endangered steelhead (*Oncorhynchus mykiss*) and its designated critical habitat. Reclamation agrees that consultation under Section 7 of the Endangered Species Act (16 U.S.C. 35 §1531 et seq.) is necessary for the Proposed Action. As the lead federal agency for Section 7 consultation, the Corps requested NMFS to concur with their "not likely to adversely affect" determination. On July 1, 2010, NMFS concurred with the Corps's determination that their Proposed Action is not likely to adversely affect the Southern California Distinct Population Segment of steelhead or its critical habitat.

NMFS-2 The comment suggests that insufficient data exists to demonstrate that steelhead cannot presently access the Proposed Action site due to impediments to upstream migration. Reclamation accepts NMFS' premise that steelhead can access the Proposed Action area past the barriers described by Stoecker et al. (2002). The Final EIS/EIR has been revised to reflect the potential for steelhead to be present in Glen Annie Creek.

NMFS-3 The comment states that potential impacts on streams associated with use of the access road (i.e., erosion and sedimentation) should be included in the Final EIS/EIR. Road stabilization designs will be added to the final Proposed Action design as needed. Specific areas of stabilization will be determined on a case-by-case basis. Roads that would contribute to sedimentation of known steelhead habitat will be either stabilized to avoid increased sedimentation or will be included as part of the Section 7 consultation.

NMFS-4 The comment requests preparation of a Biological Assessment to address potential impacts on endangered steelhead and its critical habitat. The Final EIS/EIR has been revised to clarify that steelhead could be present and affected by construction at Glen Annie Creek. The presence of critical habitat is also discussed in the Final EIS/EIR. Please see response to comment NMFS-1 regarding Section 7 consultation.

United States Department of the Interior

FISH AND WILDLIFE SERVICE
Ventura Fish and Wildlife Office
2493 Portola Road, Suite B
Ventura, California 93003

TAKE PRIDE IN AMERICA

IN REPLY REFER TO:
2008-FA-0107

October 3, 2008

Judi Tapia
U.S. Bureau of Reclamation
1243 N Street
Fresno, California 93721

Subject: Comments on the Draft Environmental Impact Statement and Environmental Impact Report for the Proposed South Coast Conduit/Upper Reliability Project, Goleta, Santa Barbara County, California

Dear Ms. Tapia:

We are responding to your request, dated August 13, 2008, received in our office on August 14, 2008, for comments on the draft environmental impact statement/environmental impact report (DEIS/DEIR) for the subject project. The proposed project includes construction of a second water supply pipeline and related facilities to increase the reliability, operational flexibility, and capacity of the South Coast Conduit between the South Portal of the Tecolote Tunnel and Corona del Mar Water Treatment Plant. The project site is located north of the city of Goleta in Glen Annie Canyon. The project area for the installation of the pipeline, under the preferred alternative, is approximately 7,000 feet long by 100 feet wide, and would result in a total of approximately 18 to 19 acres of ground disturbance. The terrain in the project area is generally comprised of steep, south facing slopes that are densely vegetated. Approximately half of the project area consists of several vegetation classification types including chaparral, coastal sage scrub, coast live oak (*Quercus agrifolia*) woodland, and riparian, while the remaining portion consists of eucalyptus woodland, orchard, and several other previously disturbed, non-native habitats. The proposed project would cross both the west fork and main stem of Glen Annie Creek. USFWS-1

The U.S. Fish and Wildlife Service's (Service) responsibilities include administering the Endangered Species Act of 1973, as amended (Act), including sections 7, 9, and 10. Section 9 of the Act prohibits the taking of any federally listed endangered or threatened species. Section 3(18) of the Act defines take to mean to harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect, or to attempt to engage in any such conduct. Service regulations (50 CFR 17.3) define harm to include significant habitat modification or degradation which actually kills or injures wildlife by significantly impairing essential behavioral patterns, including breeding, feeding or sheltering. Harassment is defined by the Service as an intentional or negligent action that creates the likelihood of injury to wildlife by annoying it to such an extent as to significantly disrupt normal behavioral patterns which include, but are not limited to, breeding, feeding, or

USFWS-1 sheltering. The Act provides for civil and criminal penalties for the unlawful taking of listed species. Exemptions to the prohibitions against take may be obtained through coordination with the Service. If the U.S. Bureau of Reclamation (Reclamation) determines that a listed species or critical habitat is likely to be adversely affected, it should request, in writing through our office, formal consultation pursuant to section 7 of the Act. Informal consultation may be used to exchange information and resolve conflicts with respect to threatened or endangered species or their critical habitat prior to a written request for formal consultation. During this review process, Reclamation may engage in planning efforts but may not make any irreversible commitment of resources. Such a commitment could constitute a violation of section 7(d) of the Act.

USFWS-2 The proposed project DEIR/DEIS includes an analysis of five different alternatives including the preferred alternative, alternative A, alternative B, no project alternative, and a no action alternative. The preferred alternative proposes installation of the new pipeline, which would run parallel and adjacent to the existing pipeline in the majority of the proposed project area, but would deviate from the existing pipeline alignment for slightly more than 2,000 feet just before the Glen Annie turnout. Alternative A proposes to install the new pipeline parallel and adjacent to the existing pipeline for nearly the entire length of the proposed project site. Alternative B proposes to install the new pipeline non-parallel and generally southwest or north of the existing pipeline. The no project alternative would include construction of site improvements and regular maintenance, but does not include the installation of an entirely new pipeline. Lastly, the no action alternative would involve no change from the current state.

We are concerned about the potential adverse effects of the proposed project on the federally threatened California red-legged frog (*Rana aurora draytonii*), which was one of the species found to occur in the proposed project area during the biological assessment, as noted in the DEIS/DEIR (Padre 2005). The DEIR/DEIS indicates that the sources of information used in developing the biological resources section included a biological constraints study conducted by Padre Associates in 2005; a search of rare, sensitive, threatened, and endangered species in the California Natural Diversity Database in 2007; literature review; and field surveys conducted by SAIC biologists in January, March, April, and August of 2007. We have attached a species list containing additional federally listed species which occur or have the potential to occur within the project vicinity. Of the species included on the attached species list, only the California red-legged frog (*Rana aurora draytonii*) and steelhead trout (*Oncorhynchus mykiss*), are discussed in the DEIS/DEIR. The DEIS/DEIR does not include sufficient information to establish whether adequate surveys were conducted for federally listed species in the project area other than California red-legged frogs and steelhead trout; therefore, we can not determine the potential effects of the proposed project on these other species.

USFWS-3 The California red-legged frog is known to occur in Glen Annie Creek. It is reasonable to expect that individual California red-legged frogs make overland excursions between the drainages in this region. Under such circumstances, it is likely that California red-legged frogs disperse through the project area when they move overland between aquatic habitats.

Reclamation and the Cachuma Operation and Maintenance Board (COMB) have proposed the following mitigation measures (under BIO-1.3 of the DEIS/DEIR) to reduce potential impacts of the construction to any California red-legged frogs that may occur in the project area during the proposed construction activities: USFWS-3

> "A Special Status Species Protection Plan shall be prepared and implemented to minimize or avoid impacts to special status biological resources, including aquatic habitats, during pipeline construction. Habitat and species protection measures shall include, at a minimum:
> 1. Construction shall be scheduled to avoid the breeding season of special status species. For example, schedule pipeline construction (or at a minimum, crossing of drainages that support special status aquatic species) to avoid the breeding season for the California red-legged frog (November 1 through May 30);
> 2. Work shall be scheduled to avoid the high flow seasons (October through April) if trenching is used to cross the two seasonal drainages to avoid potential impacts to downstream resources, including breeding habitat for the California red-legged frog and steelhead;
> 3. A USFWS-approved California red-legged frog biologist shall conduct pre-construction California red-legged frog surveys following USFWS protocols in all suitable habitat crossed by the pipeline right-of-way (the West Fork and main stem of Glen Annie Creek) to determine the presence or absence of this species within about 500 feet (152 meters) of the construction area;
> 4. A qualified biologist with the appropriate permits shall be present during construction in habitats that support special status species;
> 5. The project biologist and the project engineer shall clearly designate "sensitive resource zones" on the project maps and construction plans. Sensitive resource zones are defined as areas where construction would be limited in space, time, or methods to minimize or avoid impacts to special status species or their habitat;
> 6. A USFWS-approved California red-legged frog biologist shall be present during construction in locations known to support California red-legged frogs to monitor for this species. The biologist shall inspect the work area (especially areas with ponded water, if present) for the presence of the species and shall be authorized to temporarily stop work if immediate threats to the species are identified during monitoring. Any disturbances to occupied habitat or red-legged frogs shall be in conformance with the terms and conditions of the project Biological Opinion from the USFWS;
> 7. All machinery shall be stored and fuelled in designated locations at least 100 feet (30.5 meters) away from any sensitive habitats or in areas approved by the project biologist. Heavy equipment and construction activities shall be restricted to the defined construction corridor. Construction vehicles and personnel shall use existing access roads; and
> 8. Any other requirements stipulated by the USFWS and/or NMFS as part of Section 7 Consultation under the ESA shall be implemented."

We are concerned about the project's potential impacts to migratory birds in the proposed project area. The Service has conservation responsibilities and management authority for migratory USFWS-4

USFWS-4 birds under the Migratory Bird Treaty Act of 1918, as amended (MBTA) (16 U.S.C. 703 et. seq.). Any land clearing or other surface disturbance associated with proposed actions should be timed to avoid potential destruction of bird nests or young of birds that breed in the area, as such destruction may be in violation of the MBTA. Under the MBTA, nests with eggs or young of migratory birds may not be damaged, nor may migratory birds be killed. If this seasonal restriction is not possible, we recommend that a qualified biologist survey the area for nests or evidence of nesting (e.g., mated pairs, territorial defense, carrying of nesting material, transporting food) prior to the commencement of land clearing activities. If nests or other evidence of nesting are observed, a protective buffer should be delineated and the entire area should be avoided to prevent destruction or disturbance to nests until they are no longer active.

USFWS-5 The DEIS/DEIR mentions that seasonal wetlands were in the project area found during surveys in 2005, but that seasonal wetland areas were not found in the pre-project biological surveys that were conducted in 2007, which was an unusually dry year. The absence of seasonal pools or ponds that are typically characterized as vernal pools may preclude breeding habitat for the California tiger salamander, but it does not rule out the presence of vernal pool branchiopod species including the federally threatened vernal pool fairy shrimp (*Branchinecta lynchi*). Typical habitat for vernal pool fairy shrimp includes small swales or earthen slumps with a grassy or muddy bottom in unplowed grassland where water will persist for 6 to 7 weeks in the winter or as few as 3 weeks in the spring (Eriksen and Belk 1999). Because vernal pool fairy shrimp are known to persist in habitat that is not generally considered characteristic of vernal pools (e.g., the presence of concentric vegetation rings) and because some seasonal wetland areas were noted in 2005, we recommend that protocol-level surveys should be conducted for vernal pool branchiopod species in all suitable habitats in accordance with our current guidelines. We recommend avoidance of vernal pools/seasonal wetlands and surrounding uplands as the best way to minimize project effects on these habitats and any constituent listed species. Additionally, we recommend that Reclamation and COMB work with us to ensure the proposed project minimizes impacts to vernal pool fairy shrimp (and other listed branchiopod species) to the maximum extent feasible and to identify suitable conservation strategies for those impacts determined to be unavoidable.

USFWS-6 This letter does not reflect a comprehensive review of the DEIS/DEIR document on our part; however, we are concerned that the South Coast Conduit/Upper Reach Reliability Project, as proposed, could result in take of the California red-legged frog and potentially other listed species, and might have potentially significant effects on the breeding success of other federally listed species. Therefore, we recommend that you address these potential effects of the proposed project in the final environmental impact statement/environmental impact report. We also

USFWS-7 encourage Reclamation and the COMB to coordinate with us through consultation pursuant to section 7 of the Act. Please note that despite the incorporation of any mitigation measures developed pursuant to the California Environmental Quality Act, any take of listed species that could result from the proposed project would require exemption pursuant to section 7 or authorization pursuant to section 10 of the Act.

Based on our review of the proposed project and its associated supplemental information, we are unable to determine the extent of effects of the proposed project on the California red-legged frog and other federally listed species that may occur in the project vicinity. To make a determination on the potential effects of the proposed project on federally listed species, we request the following information: USFWS-8

1. Specific information regarding the timeframe for implementing the proposed project.

2. Detailed information regarding surveys conducted for California red-legged frogs in the project area. Biological surveys were conducted in the project area in 2005 (referenced as Padre 2005, but were not included in the DEIR/DEIS); and in January, March, April, and August of 2007 by SAIC biologists (citations for these surveys were not included in the DEIR/DEIS). USFWS-9

3. Detailed information (e.g., results from focused surveys) regarding the presence/absence of the following federally listed species that are either known to occur in the vicinity or have the potential to occur within the project area: the endangered California condor (*Gymnogyps californianus*), least Bell's vireo (*Vireo bellii pusillus*), southwestern willow flycatcher (*Empidonax traillii extimus*), arroyo toad (*Bufo californicus*), California tiger salamander (*Ambystoma californiense*), longhorn fairy shrimp (*Branchinecta longientenna*), Gaviota tarplant (*Deinandra increscens* ssp. *villosa*), Gambel's watercress (*Nasturtium* [*Rorippa*] *gambelii*), Contra Costa goldfields (*Lasthenia conjugens*), marsh sandwort (*Arenaria paludicola*); and the threatened vernal pool fairy shrimp. The DEIR/DEIS does not indicate whether these species were not considered in the biological assessment. USFWS-10

Only listed species receive protection under the Act. However, sensitive species should be considered in the planning process in the event they become listed or proposed for listing prior to project completion. We recommend that you review information in the California Department of Fish and Game's Natural Diversity Data Base. You can contact the California Department of Fish and Game at (916) 324-3812 for information on other sensitive species that may occur in this area. We appreciate the opportunity to provide comments on the proposed project. If you have any questions regarding these comments, please contact Heather Abbey of my staff at (805) 644-1766, extension 290. USFWS-11

Sincerely,

Roger P. Root

Roger P. Root
Assistant Field Supervisor

Enclosure

REFERENCES CITED

Bulger, J.B., N.J. Scott, and R.B. Seymour. 2003. Terrestrial activity and conservation of adult California red-legged frogs (*Rana aurora draytonii*) in coastal forests and grasslands. Biological Conservation 110(2003):85-95.

Eriksen, C. and D. Belk. 1999. Fairy shrimps of California's pools, puddles, and playas. Mad River Press, Eureka, California.

Hayes, M.P. and M.R. Jennings. 1985. Pre-1900 over harvest of California red-legged frogs (*Rana aurora draytonii*): the inducement for bullfrog (*Rana catesbeiana*) introduction. Herpetologica 31:94-103.

Hayes, M.P. and M.R. Jennings. 1988. Habitat correlates of distribution of the California red-legged frog (*Rana aurora draytonii*) and the foothill yellow-legged frog (*Rana boylii*): implications for management. Pages 144-158. In Proceedings of the symposium on the management of amphibians, reptiles, and small mammals in North America. R. Sarzo, K.E. Severson, and D.R. Patton (technical coordinators). U.S.D.A. Forest Service General Technical Report RM-166.

Padre Associates. 2005. Biological constraints study, South Coast Conduit Goleta Reach. Santa Barbara County, California. July 2005.

ENDANGERED AND THREATENED SPECIES
WHICH MAY OCCUR IN THE VICINITY OF THE
SOUTH COAST CONDUIT/UPPER REACH RELIABILITY PROJECT,
GOLETA, SANTA BARBARA COUNTY, CALIFORNIA

Birds		
California condor	*Gymnogyps californianus*	E
Least Bell's vireo	*Vireo bellii pusillus*	E
Southwestern willow flycatcher	*Empidonax traillii extimus*	E
Amphibians		
Arroyo toad	*Bufo californicus*	E
California red-legged frog	*Rana aurora draytonii*	T
California tiger salamander	*Ambystoma californiense*	E
Fish		
Steelhead trout	*Oncorhynchus mykiss*	*
Invertebrates		
Vernal pool fairy shrimp	*Branchinecta lynchi*	T
Longhorn fairy shrimp	*Branchinecta longientenna*	E
Plants		
Gaviota tarplant	*Deinandra increscens* ssp. *villosa*	E
Gambel's watercress	*Nasturtium* [*Rorippa*] *gambelii*	E
Contra Costa goldfields	*Lasthenia conjugens*	E
Marsh sandwort	*Arenaria paludicola*	E

Key:

E Endangered
T Threatened

* Species for which the National Marine Fisheries Service has responsibility. For more information, call the Santa Rosa Field Office at 707-575-6050 or go to http://swr.ucsd.edu/

U.S. Department of the Interior, Fish and Wildlife Service, October 3, 2008

USFWS-1 Thank you for participating in the Draft EIS/EIR public review process. We appreciate your time and effort. As one listed species, California red-legged frog is known to be present in the West Fork and main stem of Glen Annie Creek, formal consultation with USFWS has been requested by Corps through the CWA Section 404 permit process. No irreversible commitment of resources that would "have the effect of foreclosing the formulation or implementation of any reasonable and prudent alternative measures (ESA §7(d)" will be made prior to completion of the Section 7 consultation process.

USFWS-2 The comment suggests that the Draft EIS/EIR does not include sufficient information to establish whether adequate surveys were conducted for federally listed species in the Proposed Action area other than the California red-legged frog and steelhead. The entire pipeline route was walked by SAIC biologists in 2007, and no suitable habitat for least Bell's vireo or southwestern willow flycatcher was observed. Based on the current known distribution of arroyo toad, California tiger salamander, Contra Costa goldfields, marsh sandwort, Gaviota tarplant, and Gambel's watercress, none of these species would be present in the Proposed Action area. The arroyo toad is found in the Santa Ynez River and Sisquoc River drainages located approximately 14 miles from the Proposed Action site. The Glen Annie Creek watershed is not within either of these river drainages. The closest known occurrences of the California tiger salamander are in the Santa Ynez Valley (USFWS 2007 distribution map) approximately 19 miles northwest of the Proposed Action site. The Contra Costa goldfields occurs in vernal pools and swales, and no habitat for this species is present in the Proposed Action area. This species has been extirpated from the only known location in Santa Barbara County, in Isla Vista. The nearest known location of the marsh sandwort is near Oceano in San Luis Obispo County, and no suitable habitat (thick mats of freshwater marsh vegetation) is present in the Proposed Action area. Gaviota tarplant occurs in coastal grassland from Gaviota northward, and the nearest known location is approximately 17 miles west of the Proposed Action site. The nearest known location of Gambel's watercress is on Vandenberg Air Force Base, approximately 40 miles northwest of the Proposed Action site. No revisions to the Final EIS/EIR are required.

The Sisquoc-San Rafael Condor Area is located 20 miles north of the Proposed Action area and the Matilija Condor Area is located 26 miles northeast of the Proposed Action area. California condors can travel 100 miles in one flight, so there is a low potential that an individual from either of the two Condor Areas could fly over the Proposed Action area while foraging for food. No known nesting or roosting, however, occurs in the Proposed Action area. Construction and operation of the Proposed Action would not remove any potential foraging areas or affect individuals of this species. No revisions to the Final EIS/EIR are required.

No temporary pools or wetlands suitable for vernal pool fairy shrimp or longhorn fairy shrimp were observed during any of the field surveys. The terrain along the

three alternative pipeline routes is generally very steep with two stream crossings. Both streams have incised beds and steep banks. No revisions to the Final EIS/EIR are required.

USFWS-3 The comment correctly summarizes the potential for impacts on California red-legged frogs and proposed mitigation measure as stated in Draft EIS/EIR Section 3.3.3.3 (Impact BIO-1). No revisions to the Final EIS/EIR are required.

USFWS-4 The comment expresses concerns regarding potential impacts on migratory birds in the Proposed Action vicinity. To the extent feasible, the Proposed Action will be scheduled to avoid the bird breeding season. However, construction of the two creek crossings will need to be completed in the dry season, which overlaps with the breeding season, when water flows are low and listed aquatic species are not breeding. Whenever vegetation would be cleared during the bird breeding season, nesting bird surveys will be conducted as described in Mitigation Measure BIO-3. If nesting is found, a buffer will be established to protect the nesting birds until the young have fledged. Therefore, no revisions to the Final EIS/EIR are required.

USFWS-5 The comment suggests that the absence of seasonal ponds that are typically characterized as vernal pools does not preclude the presence of vernal pool branchiopod species, including the federally threatened vernal pool fairy shrimp. The seasonal wetlands referred to in the comment are located along the banks of Glen Annie Creek. No other potential wetlands that could support vernal pool fairy shrimp were observed during the field surveys. In addition, a wetland delineation was conducted along Glen Annie Creek and West Fork of Glen Annie Creek on 14 October 2008 which only identified wetlands within the channel of Glen Annie Creek. Therefore, no revisions to the Final EIS/EIR are required.

USFWS-6 The comment suggests that the Proposed Action could have the potential for significant effects on the breeding success of other federally listed species not included in the Draft EIS/EIR. No other federally listed species would be affected by the Proposed Action as described in response to comment USFWS-2. Therefore, no changes need to be made for the Final EIS/EIR.

USFWS-7 Reclamation and COMB will consult with USFWS under Section 7 of the Endangered Species Act through the Clean Water Act Section 404 permit process, with the Corps as the lead federal agency.

USFWS-8 Specific information on timing of construction activities will be included in the Biological Assessment for initiation of Section 7 consultation.

USFWS-9 The comment requests detailed information regarding surveys conducted for California red-legged frog in the Proposed Action area. California red-legged frog surveys were conducted on the nights of June 30 and July 6, 2005 while botanical and wildlife surveys were conducted in the daytime on May 10 and 25, 2005 (Padre 2005). The SAIC surveys in January, March, April, and August 2007 included a general reconnaissance of the alternative pipeline routes with project engineers to

refine locations for the preferred route, a site visit in March, and vegetation surveys in April and August. Oak tree locations were recorded with GPS and vegetation types were identified and mapped during the vegetation surveys. Searches for sensitive plant species were also performed during these surveys, and the locations of Santa Barbara honeysuckle (only sensitive plant species found) were recorded using GPS.

USFWS-10 Please see response to comment USFWS-2. This information will be included in the Biological Assessment submitted for Section 7 consultation.

USFWS-11 Thank you for the contact information regarding sensitive species. The CNDDB information was reviewed in preparation of the Draft EIS/EIR.

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION IX
75 Hawthorne Street
San Francisco, CA 94105-3901

November 13, 2008

Ms. Judi Tapia
Bureau of Reclamation
1243 N Street
Fresno, CA 93721

Subject: Draft Environmental Impact Statement (DEIS) for the South Coast Conduit/Upper Reach Reliability Project, Santa Barbara County, California (CEQ #20080381)

Dear Ms. Tapia:

The U.S. Environmental Protection Agency (EPA) has reviewed the above project pursuant to the National Environmental Policy Act, Council on Environmental Quality regulations (40 CFR Parts 1500-1508), and our NEPA review authority under Section 309 of the Clean Air Act. These comments were also prepared under the authority of, and in accordance with, the provisions of the Federal Guidelines promulgated at 40 CFR 230 under Section 404(b)(1) of the Clean Water Act (CWA). Our detailed comments are enclosed. EPA-1

Based on our review, we have rated this DEIS LO-1, Lack of Objections, Adequate Information (Summary of EPA Ratings attached). We suggest the FEIS include a discussion of any alternatives that were considered but eliminated from further consideration. We also recommend the FEIS discuss the potential to use directional drilling for creek crossings to avoid impacts to the creek bed and banks that proposed trenching would incur. EPA-2 Additional information should be included in the FEIS to explain the purpose and justification of the 80-foot wide pipeline maintenance easement and whether the impacts of this easement have been quantified as permanent impacts. EPA-3 We recommend the FEIS discuss the potential to avoid oak woodland impacts by field-fitting the pipeline alignment and through structural techniques that prevent root damage. EPA-4 Finally, we ask that the FEIS clarify the mitigation ratios to compensate for riparian resources. EPA-5

Thank you for the opportunity to review this DEIS. Please send a copy of the Final EIS to us at the address above (Mail Code: CED-2) at the same time it is published with our Headquarters office in Washington DC. If you have any questions, please contact the lead reviewer for this project Paul Amato or me. Paul can be reached at 415-972-3847 or amato.paul@epa.gov; I can be reached at 415-972-3521 or goforth.kathleen@epa.gov. EPA-6

Sincerely,

Kathleen M. Goforth, Manager
Environmental Review Office

Enclosures: Summary of EPA Rating System
EPA's Detailed Comments

Cc:
Mr. Brett Gray,
Cachuma Operation and Maintenance Board
3301 Laurel Canyon Road
Santa Barbara, CA 93105-2017

Alternatives

EPA-7

The Bureau of Reclamation (Bureau) should present in the Final Impact Statement (FEIS), any alternatives that were eliminated from detailed study and briefly explain why they have been eliminated (40 CFR 1502.14(a)). Currently the DEIS does not appear to mention the elimination of any other alternatives considered.

Recommendation:
The FEIS should include a discussion of any alternatives that were considered but not carried forward for further consideration in the DEIS.

Waters of the United States

EPA-8

Action alternatives would result in impacts to waters of the U.S. (WOUS) and to riparian resources as a result of excavation for pipeline crossings. The DEIS does not discuss alternatives to trenching, such as directional drilling, that might result in lesser impacts to these resources.

Recommendation:
The FEIS should discuss the feasibility of directional drilling over trenching and whether this approach would reduce impacts to WOUS and riparian resources.

Biological Resources

EPA-9

Oak Woodlands

According to the DEIS, a permanent 80 foot-wide easement would be maintained free of large trees over the proposed pipeline alignment but there is no explanation for the size of the easement. It is also not clear from the DEIS whether this is considered a permanent impact to biological resources and whether it has been included in the quantification of biological impacts. The FEIS should clarify why an 80-foot wide easement is needed for the length of the pipeline and whether the maintenance of this easement is included in the vegetation removal amounts in Tables 3.3-2 and 3.3-4.

EPA-10

It is unclear from the DEIS whether impacts to oak woodlands can be further avoided by field-fitting the alignment of the pipeline and by providing structural protection to the proposed pipeline. Currently, the Proposed Alternative, and Alternatives A and B would result in 3.37 acres, 3.26 acres, and 3.41 acres of impacts to oak woodland, respectively. The FEIS should describe whether field-fitting the alignment of the pipeline at time of construction could result in reduced impacts. The FEIS could also commit to implementing a measure that would require field crews to try to identify variations in the pipeline alignment to avoid mature native trees.

EPA-11

Though not explained in the DEIS, EPA assumes that the 80-foot wide easement will be maintained free of large trees to prevent root damage to the pipeline. If this is the case, have the Bureau and the Cachuma Operation and Maintenance Board considered using structural

EPA-11 techniques, like root barriers, to protect the proposed pipeline from root damage and allow for a narrower maintenance easement?

EPA-12 *Recommendations:*
The FEIS should clarify whether maintaining the 80-foot easement free of trees is included in the quantification of permanent impacts and discuss why an easement this size is needed.

EPA-13 Include in the FEIS a discussion of the feasibility of field-fitting the proposed pipeline to further avoid impacts to trees. If appropriate, the FEIS should commit to a measure that would require field crews to try to identify variations in the pipeline alignment that would reduce impacts to oak woodlands.

EPA-14 The FEIS should discuss available structural measures to protect the pipeline from root damage and whether this is feasible or not.

EPA-15 **Riparian Woodlands**
The DEIS states that "all riparian woodland removed shall be replaced at a 2:1 ratio, or as mandated in project permits." The description goes on to say that "for each acre of riparian woodland that can be restored onsite, an additional acre shall be restored offsite" but goes on to commit to restoring all permanently impacted riparian woodland offsite at a 2:1 ratio (p. 3.3-21). Is this intended to commit to providing a mitigation ratio of 2:1 (or higher if required by permits) whether the mitigation is onsite, offsite, or both? Please explain this in the FEIS.

Recommendation:
The discussion of riparian woodland mitigation is confusing and should be clarified in the FEIS.

SUMMARY OF EPA RATING DEFINITIONS

This rating system was developed as a means to summarize EPA's level of concern with a proposed action. The ratings are a combination of alphabetical categories for evaluation of the environmental impacts of the proposal and numerical categories for evaluation of the adequacy of the EIS.

ENVIRONMENTAL IMPACT OF THE ACTION

LO" (Lack of Objections)

The EPA review has not identified any potential environmental impacts requiring substantive changes to the proposal. The review may have disclosed opportunities for application of mitigation measures that could be accomplished with no more than minor changes to the proposal.

"EC" (Environmental Concerns)

The EPA review has identified environmental impacts that should be avoided in order to fully protect the environment. Corrective measures may require changes to the preferred alternative or application of mitigation measures that can reduce the environmental impact. EPA would like to work with the lead agency to reduce these impacts.

EO" (Environmental Objections)

The EPA review has identified significant environmental impacts that must be avoided in order to provide adequate protection for the environment. Corrective measures may require substantial changes to the preferred alternative or consideration of some other project alternative (including the no action alternative or a new alternative). EPA intends to work with the lead agency to reduce these impacts.

"EU" (Environmentally Unsatisfactory)

The EPA review has identified adverse environmental impacts that are of sufficient magnitude that they are unsatisfactory from the standpoint of public health or welfare or environmental quality. EPA intends to work with the lead agency to reduce these impacts. If the potentially unsatisfactory impacts are not corrected at the final EIS stage, this proposal will be recommended for referral to the CEQ.

ADEQUACY OF THE IMPACT STATEMENT

Category 1" (Adequate)

EPA believes the draft EIS adequately sets forth the environmental impact(s) of the preferred alternative and those of the alternatives reasonably available to the project or action. No further analysis or data collection is necessary, but the reviewer may suggest the addition of clarifying language or information.

"Category 2" (Insufficient Information)

The draft EIS does not contain sufficient information for EPA to fully assess environmental impacts that should be avoided in order to fully protect the environment, or the EPA reviewer has identified new reasonably available alternatives that are within the spectrum of alternatives analysed in the draft EIS, which could reduce the environmental impacts of the action. The identified additional information, data, analyses, or discussion should be included in the final EIS.

"Category 3" (Inadequate)

EPA does not believe that the draft EIS adequately assesses potentially significant environmental impacts of the action, or the EPA reviewer has identified new, reasonably available alternatives that are outside of the spectrum of alternatives analysed in the draft EIS, which should be analysed in order to reduce the potentially significant environmental impacts. EPA believes that the identified additional information, data, analyses, or discussions are of such a magnitude that they should have full public review at a draft stage. EPA does not believe that the draft EIS is adequate for the purposes of the NEPA and/or Section 309 review, and thus should be formally revised and made available for public comment in a supplemental or revised draft EIS. On the basis of the potential significant impacts involved, this proposal could be a candidate for referral to the CEQ.

*From EPA Manual 1640, "Policy and Procedures for the Review of Federal Actions Impacting the Environment."

U.S. Environmental Protection Agency, November 13, 2008

USEPA-1 Thank you for participating in the Draft EIS/EIR public review process. We appreciate your time and effort. A discussion of alternatives considered but not carried forward for analysis has been included in Final EIS/EIR Section 2.4.

USEPA-2 Please see response to comment USEPA-8. Directional drilling was considered for the two creek crossings, and it was not found to be feasible at either location.

USEPA-3 Please see response to comments USEPA-9 and USEPA-12. Vegetation maintenance over the pipeline has been clarified in Final EIS/EIR Section 2.3.7.

USEPA-4. Oak trees along the pipeline route have been mapped on the engineering plans using GPS data and are being avoided to the extent feasible. Further avoidance in the field will be implemented where feasible. In addition, the construction specifications will include monetary incentives (Mitigation Measure BIO-5) for the contractor to avoid oak trees. Root damage will be avoided where feasible during construction. No revisions to the Final EIS/EIR are necessary.

USEPA-5 The comment requests clarification of the mitigation ratios to compensate for riparian resources. The mitigation ratios for riparian resources have been clarified in Final EIS/EIR Mitigation Measure BIO-2.1 (see Appendix D).

USEPA-6 A copy of the Final EIS/EIR will be sent to Kathleen Goforth at the address specified in the comment.

USEPA-7 Please see response to comment USEPA-1 regarding alternatives considered but not carried forward in the EIS/EIR analysis.

USEPA-8 The comment states that the Draft EIS/EIR does not include discussion of alternatives to trenching that could minimize impacts to waters of the U.S. Horizontal Directional Drilling (HDD) was considered for the Glen Annie Creek main stem crossing in Alternative A and Alternative B to avoid trenching through the creek. For Alternative B, this would avoid construction through a very steep bank. This evaluation occurred prior to identification of the Preferred Alternative, but the location of the Preferred Alternative crossing of Glen Annie Creek is adjacent to the Alternative A crossing, so the evaluation would also apply to the Preferred Alternative. Considering topography, access, work space and water requirements, length of HDD required, cost, and characteristics of HDD (e.g., radius of curvature and penetration angles), this method was found to be infeasible. For the West Fork of Glen Annie Creek crossing, steep topography would prevent use of HDD.

USEPA-9 The reference to the 80-foot easement has been deleted from the Final EIS/EIR because it does not apply to the entire pipeline route. Where the existing pipeline crosses private lands, existing easements are present and the new pipeline would be within the existing easement where it parallels the existing pipeline. Where the new pipeline diverges from the existing route on private lands, new easements will need

to be obtained from the landowners, including temporary construction easements and a permanent easement over the pipeline. The widths of these easements will depend on the negotiations with the landowners. Much of the new pipeline route is on land owned by Reclamation, and COMB has requested easements for these sections.

During operation of the new pipeline, vegetation maintenance over the pipeline would be limited to removal of individual trees of species that can grow to a large size (e.g., eucalyptus and oaks) directly over and within approximately 20 feet of the pipeline to allow access for pipeline maintenance. Other vegetation such as shrubs, small trees, vines, and herbaceous species would be planted and allowed to grow for erosion control and to prevent invasion by weedy species. The vegetation removal amounts included in the Draft EIS/EIR (Tables 3-7 through 3-9) are for construction and were calculated based on a 100-foot wide construction easement. No permanent loss of vegetation would occur due to pipeline operation.

USEPA-10 Please see response to comment USEPA-4 for discussion regarding avoidance of oak trees during construction. The proposed pipeline would be welded steel, so root damage to the pipeline is not anticipated and no structural protection would be required.

USEPA-11 The removal of large trees over and adjacent to the pipeline would be required to provide access for maintenance and not to protect the pipeline from root damage as discussed in response to comment USEPA-10.

USEPA-12 Please see response to USEPA-9. The removal of large trees over and adjacent to the pipeline would be required for maintenance of the pipeline. The entire construction disturbance corridor would be revegetated so that no permanent loss of vegetation will occur.

USEPA-13 As described in response to comment USEPA-4, oak trees are being avoided to the extent feasible.

USEPA-14 As root damage to the pipeline is not anticipated (see response to comment USEPA-10), no structural measures would be needed. No revisions to the Final EIS/EIR are required.

USEPA-15 The discussion of riparian woodland mitigation has been clarified in the Final EIS/EIR Mitigation Measure BIO-2.1 (see Appendix D) to state that areas of temporary impact will be restored onsite at a 1:1 ratio plus an equal area will be replaced offsite. Any permanent losses of riparian woodland shall be replaced offsite at a ratio of 2:1 (because no restoration onsite is possible if loss is permanent). Therefore, mitigation of both temporary and permanent impacts would occur at a 2:1 ratio, or as required by permit conditions.

State Water Resources Control Board

Division of Financial Assistance
1001 I Street, Sacramento, California 95814 • (916) 341-5700
Mailing Address: P.O. Box 944212 • Sacramento, California 94244-2120
FAX (916) 341-5707 • http://www.waterboards.ca.gov

Linda S. Adams
Secretary for
Environmental Protection

Arnold Schwarzenegger
Governor

SEP 29 2008

Mr. Brett Gray
Cachuma Operation and Maintenance Board
3301 Laurel Canyon Road
Santa Barbara, CA 93105-2017

Dear Mr. Gray:

DRAFT ENVIRONMENTAL IMPACT REPORT/ENVIRONMENTAL IMPACT STATEMENT (EIR/EIS) FOR CACHUMA OPERATION AND MAINTENANCE BOARD (BOARD); SOUTH COAST CONDUIT/UPPER REACH RELIABILITY PROJECT (PROJECT); STATE CLEARINGHOUSE NO. 2007041052; SANTA BARBARA COUNTYWIDE INTEGRATED REGIONAL WATER MANAGEMENT (IRWM) IMPLEMENTION GRANT PROGRAM; GRANT AGREEMENT NO. 08-613-550-0

SWRCB-1

Thank you for the opportunity to review the above document. State Water Resources Control Board (State Water Board) staff has reviewed the EIR/EIS. The Santa Barbara County Water Agency is receiving a grant under the Santa Barbara Countywide IRWM Implementation Grant Program to distribute funds to the Board for their Project. Since the State Water Board is funding the Board's Project, it must make its own findings based on the California Environment Quality Act (CEQA) document. The Board is the lead agency under CEQA and jointly prepared an EIR/EIS with the U.S. Bureau of Reclamation (BOR) to address the Project.

Following the public review period, please send us a copy of: (1) A Resolution certifying the EIR and making CEQA findings, including a Statement of Overriding Considerations for Identified Significant and Unavoidable Environmental Impacts, (2) all comments received during the review period and the Board's responses to those comments, (3) the adopted Mitigation Monitoring and Reporting Plan, (4) the Notice of Determination filed with the Governor's Office of Planning and Research, and (5) the Record of Decision from BOR applicable to the Project. In addition, we would appreciate notices of any hearings or meetings held regarding any projects.

SWRCB-2

Following are my specific comments on the EIR/EIS:

1. Page 3.3-27 states that "the number of trees required to replace those removed cannot be accommodated in the space that is currently occupied by oak woodlands; therefore, replanting of oak trees at a ratio 10:1 or as required by project permits would expand the current oak woodland habitat." Discuss where new oak woodland habitat will be located, and if that land is suitable for the sustainable growth of oak trees.

SWRCB-2 The State Water Board has no further comments on the EIR/EIS. Thank you once again for the opportunity to review the draft EIR/EIS. If you have any questions or concerns, please feel free to contact me at (916) 327-9401, or contact Ms. Justine Herrig at (916) 327-9117.

Sincerely,

Lisa Lee
Environmental Scientist

Enclosure

cc: State Clearinghouse
(Re: SCH# 2007041052)
P.O. Box 3044
Sacramento, CA 95812-3044

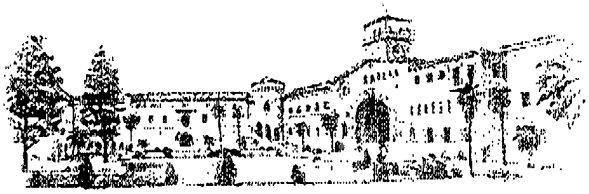
State Water Resources Control Board, September 29, 2008

SWRCB-1 Thank you for your comment. Upon completion of the NEPA and CEQA process, the following will be sent to the State Water Resources Control Board: (1) the resolution certifying the EIR and making CEQA findings with a statement of overriding considerations for unavoidable impacts; (2) comments received and responses to those comments; (3) the adopted MMRP; (4) NOD; and (5) ROD. The public scoping meeting and public comment meeting notices for the Draft EIS/EIR were submitted to the State Clearinghouse.

SWRCB-2 The comment requests clarification of the location where new oak woodland habitat would be planted. Oak trees will be planted within the pipeline right-of-way where feasible, on existing land owned by Reclamation along the pipeline, on Reclamation land at Lauro Reservoir (approximately 9 miles east of the Proposed Action), and on private land along the pipeline as permitted by the landowners. Only areas that appear suitable for oak trees will be used for planting the trees that have access for watering and other maintenance needed to assure establishment and survival of the planted trees.

COUNTY OF SANTA BARBARA

Michael F. Brown
County Executive Officer



105 East Anapamu Street, Suite 406
Santa Barbara, California 93101
805/568-3400 • Fax 805/568-3414
www.co.santa-barbara.ca.us

EXECUTIVE OFFICE

October 3, 2008

Brett Gray **FAX: 805-569-5825**
Cachuma Operation and Maintenance Board
3301 Laurel Canyon Road
Santa Barbara, CA 93105-2017

RE: ***Draft Environmental Impact Statement/ Environmental Impact Report South Coast Conduit/Upper Reach Reliability Project***

Dear Mr. Gray:

Thank you for the opportunity to comment on the Draft Environmental Impact Statement/ Environmental Impact Report South Coast Conduit/Upper Reach Reliability Project. At this time, the County is submitting the following comments for your consideration regarding sections: CSB-1

3.0 Environmental Setting and Project Impacts
3.8.3 Consistency with Plans and Policies

The Draft EIR should provide a consistency analysis with the Goleta Community Plan as the proposed project is within the boundaries of this planning area. This analysis should include a review of all habitat protection policies and development standards. The Draft EIR should also contain a consistency analysis with the County General Plan Conservation Element, inclusive of the Oak Tree Protection in the Inland and Rural Areas supplement. CSB-2 Finally, the Draft EIR should provide a consistency analysis with County Code Chapter 14- Grading, Erosion and Sediment Control and the Land Use Development Code, Chapter 35.22 Resource Protection Zones. CSB-3

The County has no further comments on this project at this time and looks forward to continued dialogue on future projects. If you should have further questions, please do not hesitate to contact my office directly, or David Matson, Deputy Director in the Office of Long Range Planning at (805) 568-2068.

Sincerely,

John Baker
Assistant County Executive Officer/Director of Planning & Development

cc: John McInnes, Director, Office of Long Range Planning
David Matson, Deputy Director, Office of Long Range Planning
Derek Johnson, Deputy Director, Office of Long Range Planning

John Baker
Assistant County Executive Officer
jbaker@co.santa-barbara.ca.us

Terri-Maus-Nisich
Assistant County Executive Officer
tmaus@co.santa-barbara.ca.us

Susan Paul
Assistant County Executive Officer
spaul@co.santa-barbara.ca.us

Jason Stilwell
Assistant County Executive Officer
jstil@co.santa-barbara.ca.us

County of Santa Barbara, October 3, 2008

CSB-1 Thank you for participating in the Draft EIS/EIR public review process. We appreciate your time and effort.

CSB-2 Draft EIS/EIR Section 3.8.3 has been revised consistent with this comment in Section 3.10 in the Final EIS/EIR.

CSB-3 The comment is acknowledged and appreciated.

SOUTH COAST CONDUIT/UPPER REACH RELIABILITY PROJECT

FINAL ENVIRONMENTAL IMPACT STATEMENT/ENVIRONMENTAL IMPACT REPORT

Appendix F
Revegetation Plan

November 2010

Revegetation Plan for South Coast Conduit/ Upper Reach Reliability Project

March 2009

Prepared for

Cachuma Operation and Maintenance Board

Prepared by

Science Applications International Corporation
5464 Carpinteria Avenue, Suite K
Carpinteria, CA 93013

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1.0 INTRODUCTION

This Revegetation Plan (Plan) provides the methodology to be used for revegetation of areas that will be disturbed during construction of the South Coast Conduit/Upper Reach Reliability Project (See Figure 1). This Plan has been prepared to meet mitigation requirements in the EIR/EIS for this project, to facilitate establishment of native vegetation over the pipe for erosion control, and to reduce the spread of non-native invasive species.

Prior to construction, the project route was characterized by shrubs on slopes, intermixed grassland and shrubs on hilltops and low valleys, and riparian trees and shrubs along creeks. Agriculture (orchards) was present in some locations. Plant communities include coastal scrub, coast live oak woodland, chaparral, riparian woodland, non-native grassland, weed-dominated, eucalyptus woodland, and orchard. Disturbed/developed (e.g., roads) areas are also present. A detailed discussion of plant communities present along the route, dominant species, sensitive species, and sensitive habitat areas are described in the EIR/EIS for this project.

During the EIR/EIS process, the Gap Fire burned the entire proposed project route and the surrounding area. Most shrub and herbaceous vegetation was completely burned. Riparian trees, oak trees, orchards, and some non-native eucalyptus were burned to varying degrees, but most were not killed by the fire.

Figure 2 shows the approximate boundaries of construction disturbance and the areas to be revegetated upon completion of construction. Approximately 15 acres of native or naturalized habitat will be disturbed during construction activities. Approximately 40 coast live oak trees are likely to be removed or severely impacted by construction, and up to about 60 more may be affected.

All areas where native or non-native vegetation is removed will be revegetated with native plant species as described in this Plan, except where replaced by man-made structures. This Plan addresses site preparation, temporary surface stabilization, seed sources, seed application, maintenance, performance criteria, monitoring, and reporting.

The Construction Contractor will be responsible for site preparation and temporary surface stabilization. The Revegetation Contractor will be responsible for maintaining temporary surface stabilization devices, acquiring seed, applying seed, installing container plantings, weed control, watering, and other maintenance. The Project Biologist will be responsible for working with the Revegetation Contractor and COMB to ensure that installation and maintenance are conducted as appropriate, for monitoring, and for reporting.

2.0 REVEGETATION

2.1 SITE PREPARATION

The Construction Contractor will be responsible for site preparation and temporary surface stabilization. Prior to construction, topsoil will be salvaged from all areas to be excavated that

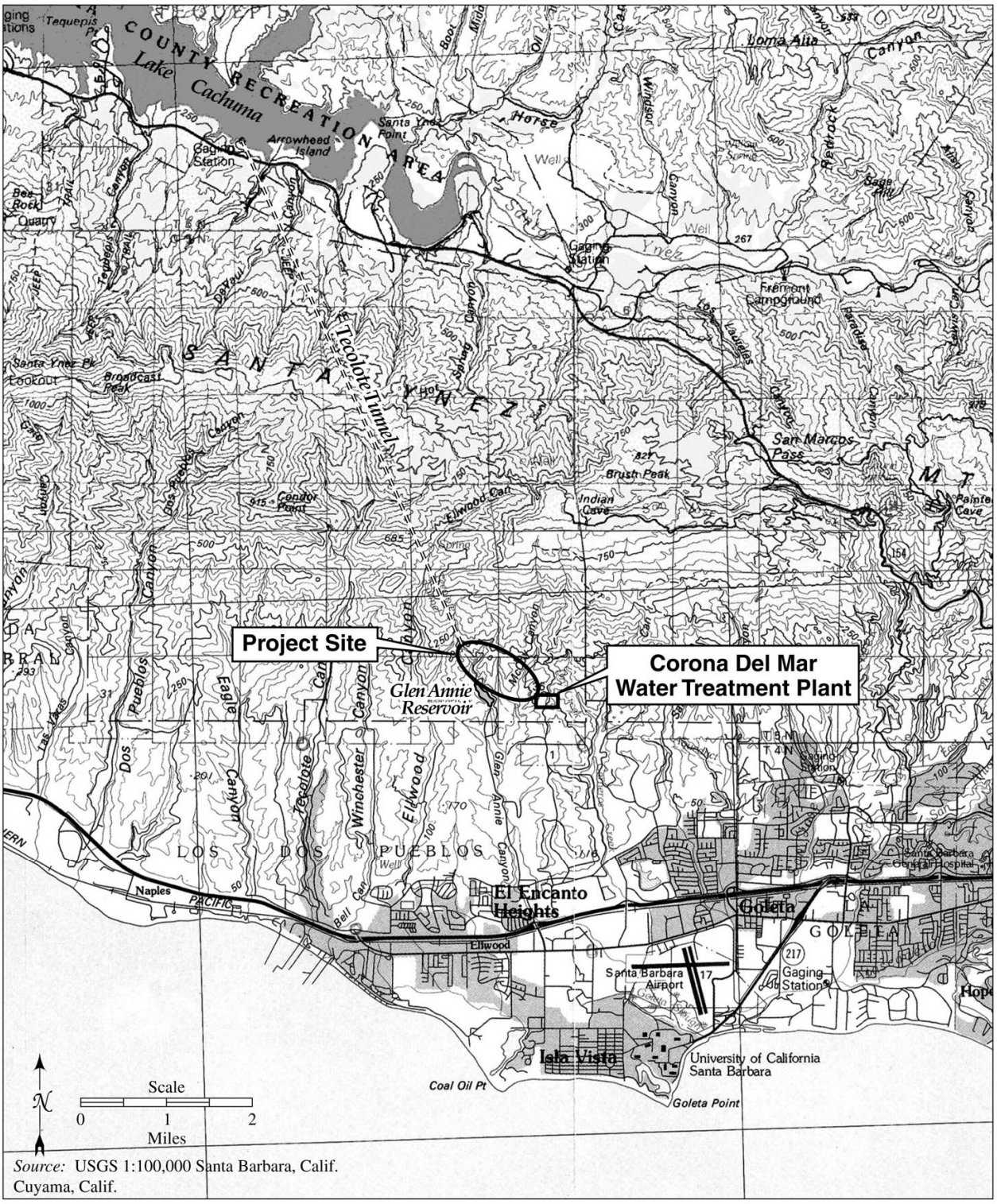

Figure 1. Regional Location Map

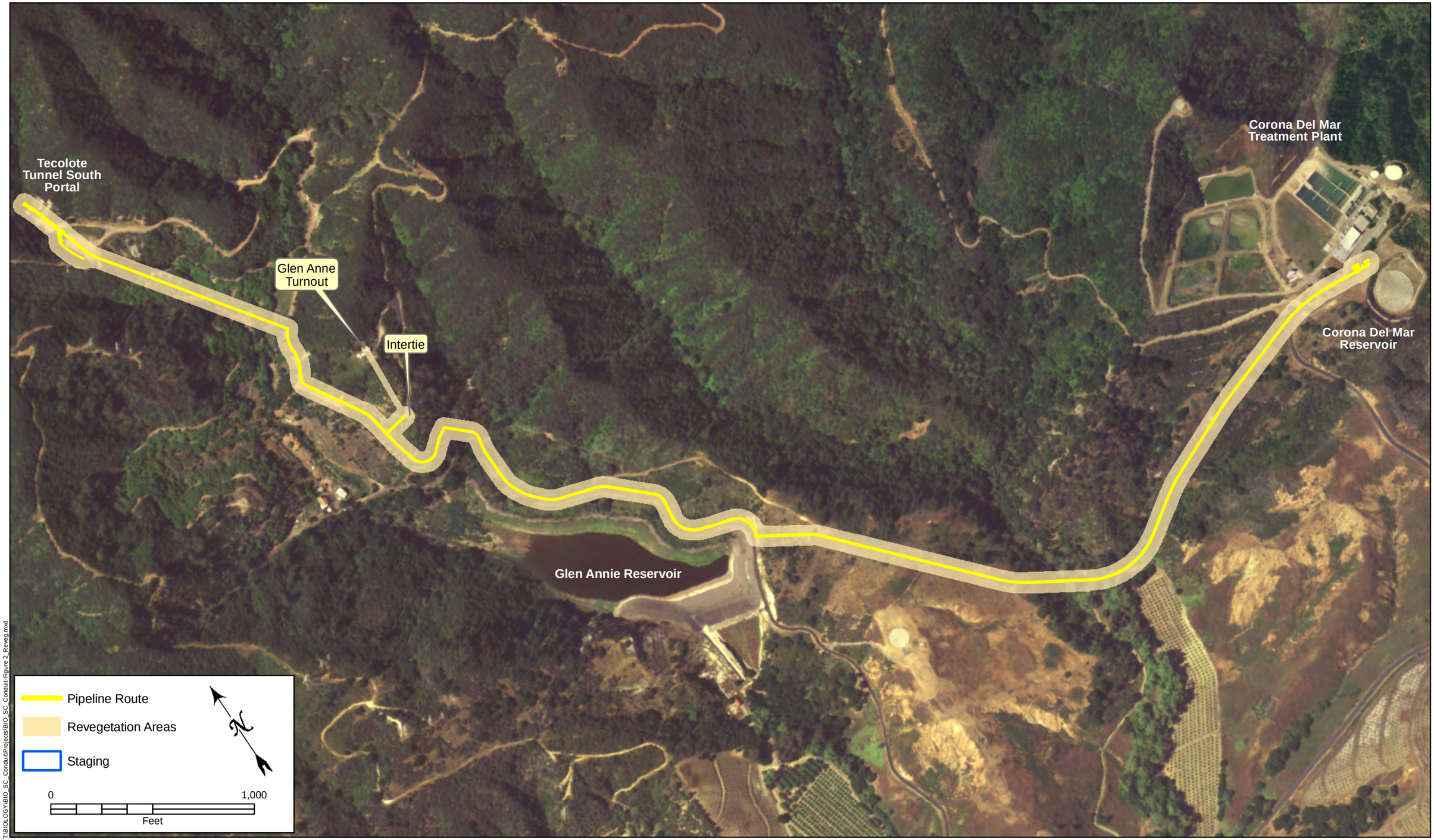

Figure 2. - Revegetation Areas

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support vegetation and will be stored separately labeled to minimize loss or confusion. The entire construction corridor, staging areas, areas adjacent to access roads, and any other non-road ground surface disturbances will be restored to pre-project contours. All restoration activities will be confined to areas disturbed by project construction, and no new disturbance will occur in connection with revegetating the site. Recontouring of the project site will involve pulling soil back onto the disturbance site. The topsoil will be replaced over the ROW in the vicinity of where it was removed following final contouring. If feasible and safe, all areas to be revegetated will be "track walked" with the vehicle running either up or down slope (not perpendicular to the slope). This will help to reduce the likelihood of erosion while providing suitable micro-sites for plant establishment. In addition, it is essential that the soil surface not be compacted to such an extent as to prevent the establishment of desirable plants.

2.2 TEMPORARY SURFACE STABLIZATION

Following site preparation, temporary surface stabilization measures will be installed. These measures will include water bars and straw wattles, or similar devices placed on slopes to slow the speed of water runoff. Straw wattles and waterbars will be placed according the Storm Water Pollution Prevention Plan (SWPPP), approximately perpendicular to the slope, and will be left in place after all restoration efforts have been completed.

Straw wattles will be placed and properly secured. Wattles will be placed in 2- to 4-inch deep trenches. Trench spoil material will be placed on the uphill side of the wattle and compacted. Wattles will be secured into place by driving stakes through the center of the wattles, at a spacing of no more than 4 feet between stakes. Where more than one section of straw wattle is required, wattles will be installed to overlap by a minimum of 1 foot. Water bars and straw wattles will be placed almost perpendicular to the slope so that water flows along them very slowly and is discharged into adjacent vegetation. If feasible, waterbars and straw wattles will alternate slope directions so that one will discharge water onto one side of the disturbance corridor and the barrier above it will direct water to the opposite side of the corridor. Where waterbars are present along a road and the roadside is to be revegetated, the water bars and straw wattles will be tied into each other to form a continuous barrier. Waterbars and/or straw wattles will extend into naturally-occurring vegetation to ensure that all water is directed off the unvegetated soils of the project.

As construction work is completed and prior to planting, a survey of the completed area will be conducted by the restoration biologists to inspect the integrity of the soil surface and to ensure that erosion control methods (water bars, straw wattles, etc.) are in place. Waterbars and straw wattles will be maintained by hand periodically throughout the first year after installation or until the revegetation is well established, whichever occurs sooner. Waterbars and straw wattles will be inspected at least monthly when storms are forecast. This is especially important because breaks in erosion control devices can result in channeling of water in the disturbed area and causing accelerated erosion in that location.

2.3 SEED MIX

To preserve the integrity of local plant gene pools, to ensure adaptation to site-specific conditions, and to avoid inadvertent introduction of inappropriate species or pathogens, all

seed and plant materials (cuttings, etc.) of native species to be used for revegetation will have originated from the area south of the crest of the Santa Ynez Mountains from Gaviota to the north end of Carpinteria (see Figure 3). In some cases, this may require custom seed collection, in others, commercially available seed from the project area may be purchased.

The seed mix will consist of the species shown in Table 1 at given application rates. It is anticipated that the seed mix will be adjusted and revised based on the availability of seed from various species during the collection period.

Table 1. Seed Mix

Scientific Name	*Common Name*	*lbs/acre**	*Minimum PLS/lb**
Artemisia californica	California sage bush	2.5	550
Calystegia macrostegia	Morning glory	0.6	30
Encelia californica	California encelia	1.0	75
Eriogonum fasciculatum	Buckwheat	1.0	45
Lotus scoparius	Deerweed	1.5	144
Malacothamnus fasciculatus	Bush mallow	1.8	40
Melica imperfecta	Coast range melic	0.6	245
Nassella pulchra	Purple needlegrass	0.5	82
Salvia mellifera	Black sage	3.0	208
Yucca whipplei	Our Lord's candle	1.0	15
Total		13.5	

* Pounds per acre assuming minimum pure live seed (PLS) based on seed laboratory tests. Actual poundage applied may be greater due to inclusion of non-live seed materials such as chaff that may be impractical to separate from the live seed.

All seed collected for restoration efforts will be of commercial quality, cleaned, and tested by a certified commercial seed laboratory. The seed will be free of seeds of non-native invasive species.

If specified seed is not available, the rate per species or species chosen may be adjusted. Any substitutions are subject to the same restrictions regarding area of collection.

2.4 SEED APPLICATION METHODS

Seed application will generally occur in the fall, prior to the onset of the rainy season, if feasible. This schedule will be adjusted to reflect weather conditions (e.g., rainfall) in the year seeding will occur. All seed specified in this plan will be applied by a hydroseeder in a slurry consisting seed, water, and bonded fiber matrix (BFM) at a rate specified by the manufacturer. A suitable BFM would consist of wood and other fibers and a tackifier that form a spray-on, erosion-control blanket. The hydrodseed application is particularly effective in controlling sediment and water runoff and can also expedite vegetation establishment.

N

Scale

0 5

Miles

Source: Google Earth 2008

Figure 3. Seed Collection Area for South Coast Conduit

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2.5 SPECIES MITIGATION PLANTINGS

Several sensitive habitats and sensitive species would be impacted by project construction. Mitigation measures were developed as part of the EIS/EIR for the project to avoid or reduce impacts to those resources. Those mitigation measures are addressed in this section.

2.5.1 Santa Barbara Honeysuckle

Revegetation of Santa Barbara honeysuckle will consist of two parts, assessment to determine planting number and performance criteria. The portion of the pipeline corridor occupied by the Santa Barbara honeysuckle will be identified on the project plans. Those areas will be avoided to the extent feasible. Areas that cannot be avoided will be sampled to determine density and/or cover of Santa Barbara honeysuckle, by one of three methods: direct count of individuals, belt transect, or line-intercept transect. Number and placement of transects will be determined in the field by the Project Biologist, based on current site conditions. If individual plants can be determined, belt transects will be established to determine preconstruction density of Santa Barbara honeysuckle. If individual plants cannot be determined, due to thick growth, unavoidable Santa Barbara honeysuckle habitat will be sampled using line-intercept transects to determine pre-construction cover. In addition, the entire area occupied by groups of Santa Barbara honeysuckle plants will be mapped using a differential Global Positioning System (dGPS). Areas containing individually mapped/counted plants from pre-construction surveys will not be resampled. All three methods of sampling will be combined to come up with an estimated number of individuals removed for construction, as described below.

If density of Santa Barbara honeysuckle is determined, an approximate number of plants removed will be calculated by multiplying the area of removal by the density and adding individual plants that were mapped separately. If individual Santa Barbara honeysuckle removed cannot be determined, it will be assumed that one plant covers an area approximately 4 feet in radius (50 square feet) and an approximate number of plants will be determined, based on cover and area. Mapped locations of individual plants previously mapped on project plans will be compared to actual construction disturbance to determine which plants were removed. Data from the three sampling methods will be combined to determine the approximate number of plants removed by construction. This number of plants will be the number required to be established at the completion of mitigation.

At least one and one-half times the number of plants removed will be planted from one gallon-size or similar containers following construction. Locations for installation will be based on suitable habitat and accessibility for watering and maintenance, as determined by the Project Biologist. Plants will be installed approximately one year after seeding to ensure newly germinating seedlings of other species from the seed mix are not badly trampled during the planting effort. Plants will be watered approximately monthly for at least one year after planting.

2.5.2 Coast Live Oak Trees

The precise number of oak trees removed or severely damaged by construction will not be known until the pipeline is built. Prior to construction, but after the pipeline is staked for

construction, the Project Biologist will conduct an inventory to determine the number of trees that will be removed in consultation with the Construction Contractor and the Project Engineer. Individual trees will be marked to indicate those that are permitted to be removed and that are required to be avoided during construction.

Individual trees in both of these categories will be identified on plan sheets. Following construction or during construction monitoring the individual trees removed will be marked on the plan sheets and the total number removed will be determined. To ensure that adequate trees are planted to meet mitigation requirements, a goal of approximately 15 times the number of trees that are removed will be replanted. Existing trees within the construction corridor for which work (such as grading, trenching, or equipment parking) occurred within the critical root zone, but the stem is intact, will be monitored for five years to determine if they survive and are healthy. If they are healthy at the end of the 5-year period, no more monitoring or mitigation will be required. However, if they deteriorate, unhealthy trees will be mitigated the same as for trees that are removed.

Individual oak plants will be installed one year after site seeding to ensure that newly establishing seedlings are not trampled. Plants will be installed from one-gallon size containers or from acorns, depending on availability and project goals and limitations under the direction of the Project Biologist. Regardless of planting method, a hole approximately 2 times the size of the container will be excavated, or in the case of acorn plantings, the size to accommodate the gopher basket. A gopher basket will be inserted into the hole and the plant will be installed. If acorns are planted directly, the gopher basket will be installed and the hole backfilled to within approximately one inch of the soil surface, three acorns will be placed and covered with approximately one-inch of soil. Plantings or acorn planting spots will be watered after planting. Tree plantings will have tree tubes or other above ground protection to prevent damage by herbivores. Irrigation methods and frequency will be determined on a site-specific basis, taking into consideration the characteristics of the site. Individual trees will be numbered for tracking purposes.

Most of the plantings will occur along the pipeline corridor, but it is expected that will not be sufficient. It is also possible that private landowners along the corridor may refuse to have oak trees planted on their land. Other potential sites to install oak trees will be considered in Santa Barbara and Goleta including Lauro Reservoir and at the COMB offices in Santa Barbara. Planting locations will be selected based on proximity to the project site, suitability of the site to oak establishment, and accessibility for watering and maintenance. All planting locations will be approved by the Project Biologist.

2.5.3 Riparian Woodland

The EIS/EIR identifies a mitigation ratio of 2:1, or as required in project permits, for riparian woodland necessary for construction. Riparian vegetation will be planted where it was removed and in other areas that will be identified for additional planting. Due to the nature and quality of the habitat in proximity to the project, suitable places for planting riparian vegetation may be limited. Additional areas in close proximity to the project will be identified for planting and those areas will be restored and/or enhanced by planting riparian vegetation, particularly willows (*Salix* spp.), western sycamores (*Platanus racemosa*), and California bay trees (*Umbellularia californica*).

Trees will be planted under the direction of the Project Biologist in suitable, natural appearing arrays, taking into consideration the tolerance of flooding and scour, distance from the creek, access, and landowner concerns. Planting methods for sycamore and California bay will be as for oak plantings (1 gallon size), except that no tree tube will be used. Willows will be planted from rooted or un-rooted cuttings.

3.0 MAINTENANCE, MONITORING, AND REMEDIAL ACTION

After construction and prior to planting, a survey of the pipeline corridor will be conducted to inspect the integrity of the soil surface and to ensure that erosion control methods (water bars, straw wattles, etc.) are in place. After planting, the objectives of monitoring will be to document establishment and growth of planted species, to identify the need for maintenance (including erosion control), and to identify incipient weed problems. Incipient weed problems are defined as establishment in the treatment area of weedy species not abundant in adjacent areas that might, by establishment in the treatment area, interfere with revegetation by native species or threaten to invade adjacent undisturbed habitats. Maintenance will be conducted as necessary to ensure that revegetation goals can met in a timely manner.

Monitoring visits will be conducted in the fall after seeding. During the year following seeding, subsequent monitoring will be scheduled by the Project Biologist based on timing of heavy rainfall events and progression of spring annuals as it pertains to the establishment of non-native invasive species. In general, monitoring will occur 2 to 3 times in the spring and at least once in the fall in the early part of the program. The need for additional visits will be determined by the Project Biologist as required to detect and correct erosion following significant rainstorms. The purpose of monitoring visits will be to document and provide recommendations for weed control and/or erosion control. Fall monitoring will also include documentation of establishment of native perennial vegetation, photographs of the treatment area, and quantitative monitoring of individual Santa Barbara honeysuckle, oaks, and riparian trees.

Once weed infestations and erosion appear to be under control in specific portions of the construction corridor, monitoring may be reduced to once in the spring and once in the fall. Monitoring of specific areas will cease when performance criteria are met. This schedule is preliminary and may be modified by the Project Biologist.

Seed planting will generally be done during the fall or early winter (2009) and monitoring will begin during that growing season. For this reason, 2010 is generally assumed to be the first year of the revegetation monitoring effort. For areas where construction is not complete prior to about April 2010, the first year of revegetation monitoring will be 2011. This schedule may be modified by the Project Biologist or as necessary depending on site-specific conditions. In addition, while minor maintenance can be accomplished during monitoring, major maintenance efforts (such as erosion and weed control, supplemental irrigation, reseeding, or replanting, etc.) will be scheduled, as necessary.

Whenever the performance criteria (see below) are not met or when monitoring indicates that additional erosion control or weed control actions are necessary, the Project Biologist in

consultation with COMB, will determine what measures are required and make sure that they are implemented.

4.0 PERFORMANCE CRITERIA

4.1 MATRIX VEGETATION

The goal of this restoration effort is to establish self-regenerating ground cover that is effective in long-term slope stabilization and erosion control and that does not serve as a corridor to transmit the seeds of invasive non-native vegetation. In addition the project should address the goals and intent of the mitigation measures in the EIR/EIS related to revegetation.

Goal: Establish self-regenerating ground cover that is effective in long-term slope stabilization and erosion control and that does not pose a threat to adjoining plant communities as a source of weeds.

Objectives: At completion of monitoring the following objectives must have been met:

- Topsoil (or soil surface) is stable and not being lost to wind and water erosion.
- Ground cover of native perennial vegetation is approximately 60 percent of the cover value of similar vegetation adjacent to the disturbance area. In areas dominated by grasses and herbs, cover of all species shall be at least 40 percent.
- No concentrations of weeds are present that would threaten to invade adjoining habitats, unless already present in adjacent areas not disturbed by construction, or present prior to construction. Examples of weeds that would pose a threat to adjoining habitats include castor bean, spiny cocklebur, tree tobacco, and non-native thistles. The abundance of these species on the project site must not be substantially greater than on adjacent areas not disturbed by construction.

4.2 RIPARIAN HABITAT

Goal: Restore and enhance suitable areas previously disturbed by construction or other activities to riparian habitat having species composition and habitat value equivalent to pre-disturbance conditions.

Objectives: Within approximately 5 years, the site will have the following characteristics:

- Well-established saplings of tree species present onsite before construction in suitable positions to eventually (and without additional protection or maintenance) form a canopy over the stream and banks equivalent to that of adjacent areas. Established saplings shall meet the following:
    - have vigorous appearance

- be a minimum of 2 inches in diameter measured 1 foot above the ground
- meet size and/or cover criteria specified in the Streambed Alteration Agreement
- be a minimum of 6 feet tall for tree species not covered in the Streambed Alteration Agreement
- have survived 3 years with no supplemental irrigation and 2 years with no protection from herbivores.

- Cover by weedy species will be at a minimum. In particular, the site must be completely free of perennial exotic species such as tree tobacco, tamarisk, artichoke thistle, giant cane, and castor bean that would substantially interfere with continued development of the riparian habitat. At acceptance, the total ground cover by weeds must meet one or more of the following conditions: (1) be less than ten percent of the habitat area; (2) be of equivalent (or lower) density to that in adjoining habitat areas not disturbed by construction; or (3) be composed of species that are typical of early successional riparian habitats but that are gradually eliminated as the riparian habitat develops. Weeds must be in a decreasing or stable condition based upon a year-to-year comparison.

Acceptance would require a demonstration that the above-mentioned criteria have been met. Prior to acceptance, the site must have demonstrated survival for 3 years without supplemental irrigation.

4.3 SANTA BARBARA HONEYSUCKLE

Goal: To establish Santa Barbara honeysuckle plants or areas of cover present prior to construction.

Objectives: At completion of monitoring the following objectives must have been met:

- Santa Barbara honeysuckle plants have survived on site for a minimum of 3 years including at least 2 years without supplemental irrigation and herbivore protection. If this objective becomes hard to measure, due to extensive growth of Santa Barbara honeysuckle plants, the number of plants will be assumed to be the same as at the last time measurement was possible.

- Plants exhibit normal form and morphology and are in vigorous condition.

At acceptance, the required number of plants for mitigation (1 plant for each plant removed) will meet the above outlined criteria. If plants are installed over two or more years, some plants may meet performance criteria earlier. Monitoring will be discontinued for individual plants as they meet performance criteria.

4.4 COAST LIVE OAKS

Goal: Planted oaks must be established and should be able to survive indefinitely without further protection or maintenance. Young trees must readily able to withstand normal seasonal droughts and herbivore pressure.

Objectives: At least 5 years after planting, planted trees shall meet the following criteria:

- have a vigorous appearance.
- be a minimum of 2 inches in diameter one foot above ground
- be a minimum of 6 feet tall
- have survived 2 years with no supplemental irrigation and with no protection from herbivores

At acceptance, the required number of planted oak trees, an average of 10 saplings (5 years after planting) per tree lost (with a trunk diameter of 6 inches or more) will have met the above-outlined criteria. While 5 years is the minimum monitoring period, it is likely that it will take more than 5 years to meet these requirements. As individual trees meet performance criteria, monitoring will be discontinued for those trees. During drought years, irrigation may be provided during the normal rainy season (October through April) to make up for precipitation deficits and ensure continued growth and survival of the plants.

5.0 REPORTING

For restoration monitoring, a summary report will be prepared each year that describes the monitoring conducted, any weed control or other maintenance (e.g., watering) performed, problems noted and how resolved, and progress towards meeting the performance criteria. The report will include at least two photographs. Once the performance criteria are met, no further reporting will be necessary. The restoration monitoring reports will be submitted to the CDFG no later than February 1, covering the previous calendar year.