

**U.S. ARMY CORPS
OF ENGINEERS**
Los Angeles District

LOWER MISSION CREEK SANTA BARBARA, CALIFORNIA

**PROJECT MANAGEMENT PLAN – ABRIDGED VERSION:
ONLY SECTIONS 1-4 TO 1-10**

Prepared for:

U.S. Army Corps of Engineers
Los Angeles District
911 Wilshire Boulevard
Los Angeles, California 90017-3401

Prepared by:



PLANNING ■ DESIGN ■ CONSTRUCTION

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1. Major Design Elements of the Project

Bank Protection Schemes: Proposed bank protection would be either a vertical wall or a combination of vertical walls and vegetated slope protected by rock riprap. Two possible bank protection schemes are shown in Figures 1-3 and 1-4. Additional wall types and bank protection methods will be investigated during the Value Engineering phase. Portions of the existing channel already have bank protection. The entire project reach is proposed to have full or partial wall and riprap bank protection with soil coverings and bank joint plantings.

Concrete pipes in varying sizes (up to a maximum of three feet in diameter) would be strategically placed in between the riprap sideslope to allow planting of native trees and vegetation. In addition, various types of native planting are proposed on top of and in between the rock riprap bank protection as well as along the soft creek bottom. This design is intended to help restore the major elements of the riparian corridor along the project reach. Aesthetic treatment of the exposed wall surface would be incorporated into the project design to minimize the visual impacts of the vertical walls. Wherever the combination toe wall-riprap sideslope is used, the height of the toe wall would be approximately half the depth of the creek. The riprap sideslope would be built with a slope of 1.5:1.0 (H:V) at the steepest.

Upstream of Highway 101, the combination riprap and vertical wall would be the predominant bank treatment, except in two short reaches just upstream of the Haley/De la Vina Bridge and the De La Guerra Bridge. Below Highway 101, the combination riprap and vertical wall would be applied along the southeast bank, starting from the midpoint between the Yanonali/Chapala and Mason Street Bridges down to the midpoint between the Mason and State Street Bridges. Vertical walls would be applied or maintained for the remainder of this reach.

The vertical walls would be constructed in two methods, according to their proximity to any existing structures. The first method would be the use of an inverted "T" footing (See Figure 1-3). This less expensive construction method would be applied in areas where sufficient rights-of-way are available, without directly impacting existing structures. In areas with limited rights-of-way and close proximity to structures, a pier footing construction design would be applied (See Figure 1-4).

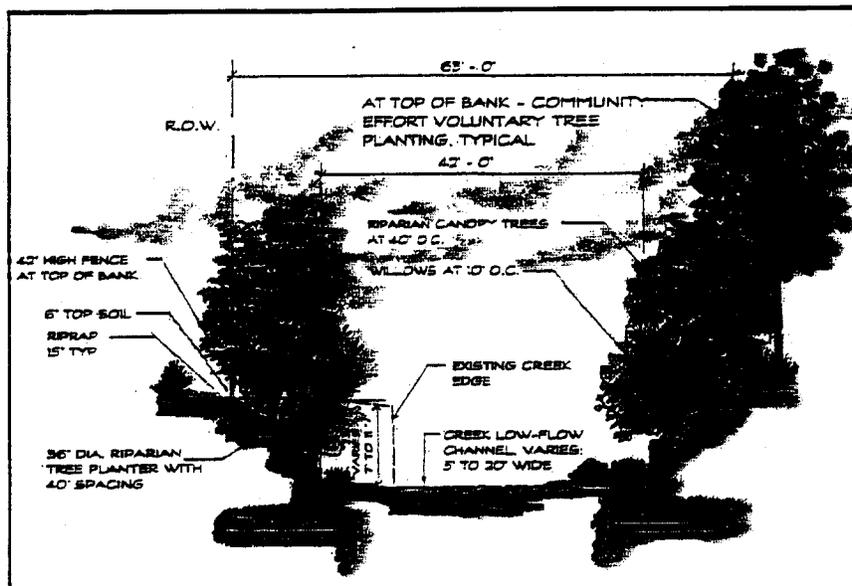


Figure 1-3. Vegetated Riprap Sideslope on Inverted "T" Footing Typical Section

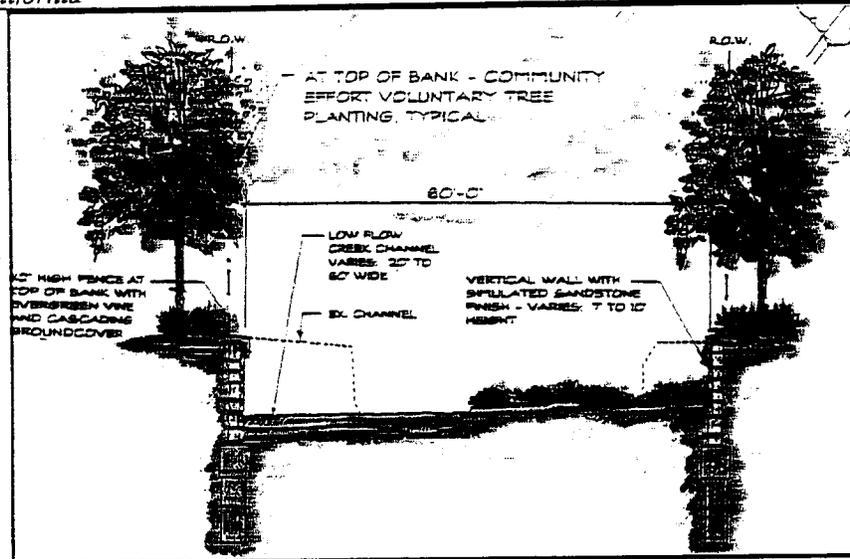


Figure 1-4. Vertical Wall on Pier Footing Typical Section

Replacement of Existing Bridges: To increase the conveyance capacity of existing bridges up to the design flow of 3400 cfs, some form of minor modifications may be required. In four cases, removal and replacement of the entire structure would be needed to increase capacity. These bridges are Ortega Street, Cota Street, Haley/De la Vina Street, and Mason Street Bridges.

Weir Inlet and Overflow Culvert that Bypasses the Oxbow: The reach referred to, as the “oxbow” is where the sharpest bends of the creek within the project area are found. The oxbow runs the length of the creek between the Gutierrez and the Yanonali/Chapala Street Bridges, where the creek makes several sharp turns while crossing Highway 101, the Montecito Street Bridge, and Union Pacific Railroad before joining its most direct path to the Pacific Ocean. The culvert (Two 15-foot wide by 6-foot high boxes) connecting both ends of the oxbow is referred to as the overflow culvert or the “oxbow bypass”. The overflow culvert would follow a more direct path across the oxbow. It would begin upstream of Highway 101, cross under the highway (where Caltrans had built a span to accommodate such a crossing to eliminate impacts to highway traffic), Montecito Street, and the railroad tracks before rejoining the creek along side the downstream end of Yanonali/Chapala Street Bridge.

The culvert alignment would be far outside the Moreton Bay Fig tree dripline to minimize impacts to its major root system. Specific attention will be given to the design of the culvert to prevent clogging of the culvert during flood events.

A weir structure would be built at the inlet of the culvert to control the flows across through the culvert and the oxbow (see Figure 1-5). The height of the weir would be set in order to direct lower flows of up to 640 cfs through the oxbow as per the National Marine Fisheries Services Biological Opinion. Also, the weir would split higher flows (up to the design conveyance capacity of 3400cfs) between the culvert and the oxbow. The culvert divider would be designed to form a “bullnose” and help minimize the potential of debris blockage.

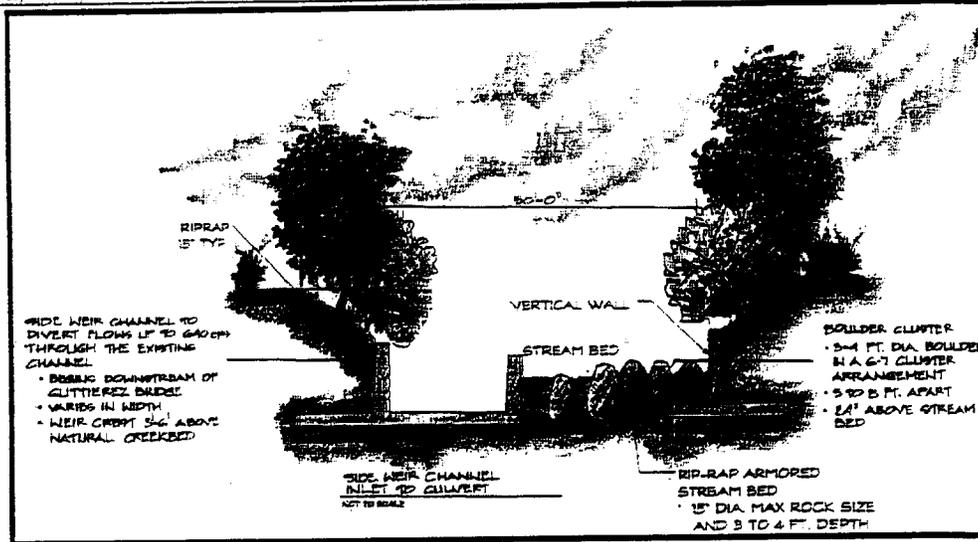


Figure 1-5. Representative Cross Section of Side Weir Channel Inlet to Overflow Culvert (Looking Downstream)

Rocky Energy Dissipaters and Boulder Clusters: In areas where undesirable high velocity flows could be expected, the streambed would be armored with riprap and boulders. These fields referred to as rocky energy dissipaters would be located in three reaches. The more upstream field would be placed from Canon Perdido Street to below the De La Guerra Street Bridge. The second would extend from upstream of the Gutierrez Street Bridge downstream to the upper bend of the natural oxbow, near US HWY 101. The third would be at the outlet of the overflow culvert. Clusters of large boulders would be embedded into the riprap fields at the first two locations. The rock energy dissipaters and the boulder clusters would serve two functions. First, they would dissipate the force of currents at vulnerable places along the creek. Second, they would impart natural turbulence and heterogeneity to the stream as a means to improve the aquatic habitat for steelhead (*Onchoryhncus mykiss*), an endangered species known to migrate through this reach of Mission Creek. Figure 1-6 shows a typical cross-section.

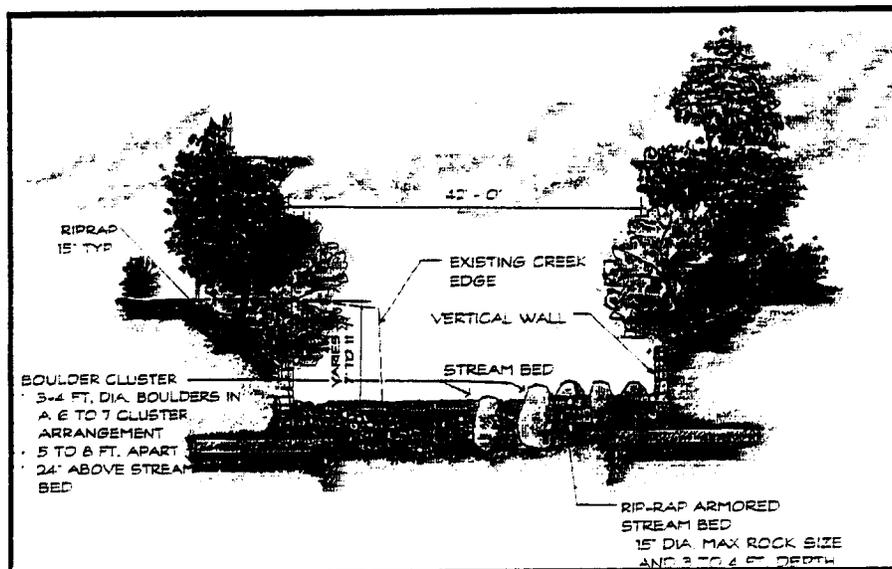


Figure 1-6. Representative Cross Section of Rocky Energy Dissipaters and Boulder Clusters

Expanded Habitat Zones: Five small parcels of open land would be left along the banks after completion of project construction. These parcels range in sizes between 0.03 and 0.52 acres. Final calculations for the channel's configuration will determine the availability of all five of these parcels. If these open land parcels are available, each would be designed to serve a dual purpose: to expand the corridor of riparian habitat to be planted along the stream banks and to provide for passive park space for area residents. Native trees, primarily western sycamores, cottonwoods, and coast live oak, from local nursery stock would be planted in the habitat expansion zones. In time, their canopies would form dense clusters on the overbank and adjacent to the stream corridor. In some of these zones, pathways and benches might also be added to create passive park spaces. Figure 1-7 shows a representative cross-section of a habitat expansion area.

Planting along the riprap and planting of native trees in habitat expansion zones are an integral part of the project design. The ecological values generated by these features would offset the impacts from the implementation of the proposed alternative on existing biological resources.

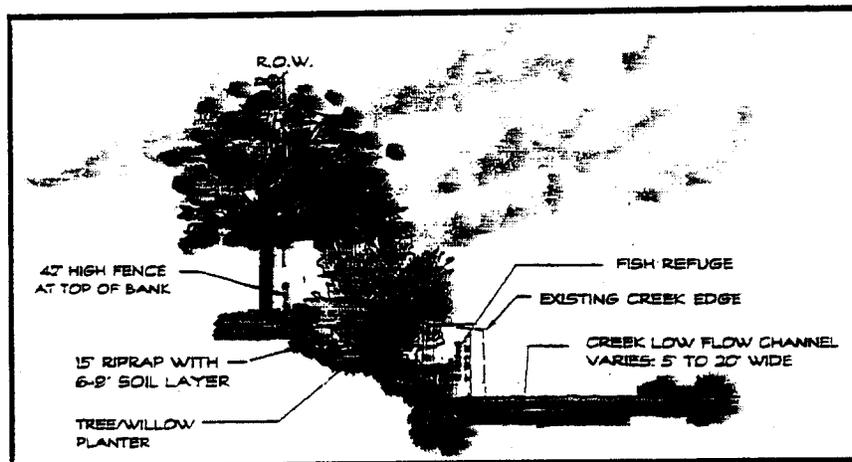


Figure 1-7. Representative Cross Section of a Habitat Expansion Area

2. Structural Features to Mitigate and Avoid Impacts to Biological Resources

Several structural features would be included to avoid and mitigate impacts to biological resources. These permanent and durable mitigation features would create hiding places where fish may take refuge. They would be composed of three separate structural elements formed by coarse surface relief of the walls (goby refugia), artificial overhangs projecting from the walls (fish ledges), and placing double rows of coarse boulders (fish baffles) between the overhangs along the creek walls. In combination, they should provide shelter for fish of all sizes.

The combination of these three features would be used within the estuary between Mason and Cabrillo Street Bridges. The fish ledges and the fish baffles would be used for the remainder of the project reach.

The Goby refugia where gobies and other small fish could escape strong currents would be made in a pattern of slanted ribs as illustrated. These molded ridges would extend from the ordinary high water mark to the bottom of the formed wall, roughly eight feet in vertical length. Most of the time water in the estuary would cover them completely and each would extend well below the streambed. Lower velocity and localized eddy currents would exist around these ribs, primarily caused by the effects of protruding ribs on the boundary layer adjacent to the wall itself.

The second component of structural mitigation features, intended primarily for steelhead and other large fish, would consist of projecting ledges (fish ledges). The ledges would cantilever from the wall two feet into the flow, be six inches thick, and roughly fifty feet long typically. Within the estuary, cantilever ledges would be built at varying heights, say ten to twenty inches, above the invert of the streambed and substantially below the ordinary high water level. Water would cover these ledges at all times except during the lowest low tides and all fish could easily swim beneath them.

The space between successive fish ledges allows a third mitigation measure. A double row of large, angular rocks would be nestled together and placed against the wall at the foot of the ribs. Ranks of boulders would extend into the creek about five feet from each wall. The innumerable crevices, voids between rocks, and spaces between rocks and the wall itself formed in this orderly jumble would provide thoroughly natural habitat for small fish and invertebrates. A fraction of those spaces should prove large enough for steelhead smolt also to find shelter amongst the rocks.

Ribs, boulders, and ledges would line both sides of the estuary between Mason Street and Cabrillo Boulevard. All surfaces in this section of the project would have all three features intermixed, although a ledge on one wall would face ribs and boulders on the opposite wall (accompanying figure, where ledges are not drawn to scale length). Lengths of the walls allow 380 linear feet of fish ribs and boulders and 240 linear feet of overhanging ledges on the left hand side facing upstream; 360 linear feet of fish ribs and boulders and about 300 linear feet of ledges on the right-hand side facing upstream.

Fish Ledges upstream of Mason Street: Overhangs of like design would be placed along the riverine sections of the creek (including the length between Mason and Yanonali Streets, otherwise treated as the upper end of the estuary) where currents should impinge against the wall and scour persistent holes under these ledges. Adult steelhead would have access to these pools during upstream migration. All manner of aquatic animals would take advantage of these sheltered pools throughout the dry season.

Fish baffles upstream of Mason Street: Arrays of large boulders placed to the inside of walls ledges would impart diverse flow patterns and a valuable measure of aquatic heterogeneity, lacking which the creek's streambed would mostly resemble an unrelentingly flat surface characterized by steady sheet flows. Their mass and position adjacent to the wall, and thereby within the boundary currents inherent to sides of the channel, would minimize the incidence of currents dislodging them.

Each baffle would consist of a rank of large rocks or derrick stone placed touching the inside surface of the walls, with a second rank inside the first and closer to the creek. Rocks would stand proud of the streambed by 18 to 24 inches. Together, the two ranks would extend inward toward the creek approximately 5 feet. A space of 5 to 8 feet would separate individual rocks, or perhaps pairs of boulders, to facilitate periodic removal of sediments from between them.

Fish baffles would occupy locations in lower velocity sections of the creek, on one side or the other as appropriate to its curvature. In certain lengths of the creek side baffles would be placed along one side only, then for another length be built against the opposite side. Many baffles would extend along 150 feet of the creek's side, a few up to 200 feet in length, while others would be shorter by necessity. Design restrictions prevent their placement beneath bridges, for a certain distance on the upstream side of bridge abutments, and directly opposite other baffles or ledges.

The creek's channel allows fish baffles to be interspersed with ledges as indicated by the prevailing direction of currents and streambed to encourage formation of varied stream features. Side baffles would be installed over approximately 1400 linear feet of the stream's edge; 675 linear feet of fish baffles on the left and 725 linear feet on the right side facing upstream.

In-Stream Boulder Clusters: Baffle structures the full width of the streambed and 300 feet in length would combine clusters of large boulders and fields of riprap at two locations; immediately upstream and downstream of the De la Guerra and Gutierrez Street Bridges.

The boulder patches would constitute islands of very coarse and permanent streambed irregularities. Upstream of them, Mission Creek would tend to flow as a homogenous, single current. By their placement, these clusters ought to disrupt that flow regime and induce smaller and intertwined subcurrents. These many smaller currents should continually reshape the longitudinal profile over the length of the baffles fields and downstream of them for some way.

Each cluster of boulders would naturally form various internal cross currents and protected patches of water. Placement of clusters within the baffle is intended to promote the variety of water conditions trout seek out in natural streams, so clusters would be placed to outline a sinuous and meandering predominant channel, one that shifts back and forth across the streambed.

3. Additional Design Opportunity

An opportunity exists to construct another habitat expansion zone in the vicinity of the oxbow formation area just upstream of Highway 101. The total area to be created would be about 0.6 acres (approximately 25,800 square feet). The construction of this feature would provide additional ecological benefits. However, the extent of the contamination on the site is unknown. If, prior to the completion of project construction, the designated site were shown to be free of HTRW contamination, then the habitat expansion zone would be constructed as planned.

Additional analysis will be performed to minimize real estate requirements downstream of Highway 101. A 50 ft channel alternative will be examined to reach this end during Planning, Engineering and Design (PED). This could affect the modification and/or design of the Yanonali/Chapala and Mason Street Bridges.

4. Project Maintenance

It will be necessary to conduct routine flood control maintenance activities that involve a discharge of dredged or fill material into Corps jurisdictional areas in the Lower Mission Creek Flood Control Project. A permit will be required to perform the required maintenance. A General Permit is currently (as of May 2002) ready to issue pending the final findings of the California Coastal Commission. This permit has already undergone the required public review. The completed project will not be transferred to the non-Federal sponsors until such a time as an executed Maintenance General Permit is issued. Routine maintenance activities for this project would include streambed maintenance (brushing, spraying, and shaping/desilting of the earthen channel); maintenance of the concrete channel walls and maintenance/stabilization of the channel banks; box culvert maintenance; interior drainage maintenance (storm drains, pipes, etc.); and habitat expansion zone maintenance. The project would include a five-year plant establishment period as part of the contract for all project landscaping. After this five-year period, the anticipated maintenance in the habitat expansion zones would include occasional thinning, cleanup and other maintenance activities associated with a passive park area. The proposed maintenance plan may be modified pending review by the California Coastal Commission.

The proposed project maintenance would utilize the principle of adaptive management to ensure that the project is functioning as per project objectives. This would involve determining if adjustments for unforeseen circumstances are needed, or if changes to structures or their operation/management techniques are required.

The following is a summary of the regulated maintenance activities:

Streambed Maintenance--Shaping/Desilting: Maintenance of the streambed would address vegetation control, desilting and shaping. Vegetation control would be accomplished by brushing, spraying, or clearing. Clearing would be done using mechanical equipment, such as a dozer. Partial removal of vegetation would occur yearly. The removal would follow a mosaic pattern, wherein one half of the streambed would be cleared. The remaining half would then be cleared the following year. The alternate clearing process would be repeated for subsequent years.

Desilting is necessary where sedimentation significantly reduces the cross-section of a creek. Desilting is typically done with a dozer or loader working in the bottom of the channel pushing the accumulated sediment to an area where the material can be loaded directly into trucks driving on the channel bottom or to an area where a crane can access the material which is then loaded into trucks and hauled to a suitable disposal site. It is sometimes possible for lesser amounts of sediment to be placed on the channel banks (e.g. for bank maintenance).

Channel shaping may be desirable to create a low flow channel with aquatic habitat features that also provides for efficient sediment transport. Shaping is typically done with a dozer working on the channel bottom. The dozer creates a 10'-15' wide pilot channel with material placed along the sides to a height of approximately 2'. Depressions are established within the pilot channel in areas where pools are expected to form to provide refuge for aquatic species. The pilot channel consolidates the lower flows so that broad shallow flows are limited. This provides for efficient sediment transport in lower flows reducing the frequency of desilting.

Channel Wall Maintenance: Channel wall maintenance is necessary when there is cracking, chipping, or breaking of the concrete to an extent which might affect the stability of the wall or its watertightness, or loss of or damage to backfill behind the wall. Normally, eroded concrete is repaired by sandblasting the area and matching the decorative treatment with the appropriate material. Channel wall maintenance also includes cleaning weep holes and debris that may accumulate in front of weep holes, bridge piers, and splitter walls.

Channel Bank Maintenance: Channel bank maintenance is necessary when the earthen fill over rip-rap is damaged or missing such that it does not encourage understory growth. In worst cases where >250 square feet of the bank are severely damaged by scour, erosion, or other means, replacement is often necessary through the use of filter fabric, rip-rap, earthen fill, and plants.

Channel bank maintenance also includes keeping access ramps clear of debris and obstructions and planted with native grass. Obstructive debris on channel banks is typically removed or chopped and left in place prior to the rainy season. Damage to fencing and rails along the top of the channel banks is typically repaired as soon as possible. Non-native vegetation is typically controlled with herbicide and/or removed.

Box Culvert Maintenance: Box culvert maintenance is typically necessary when there is cracking, chipping, or breaking of the concrete to an extent which might affect the stability of the culvert or its watertightness, or sufficient sediment and/or obstructions have accumulated within the culvert to significantly impair its design flow.

Box culvert maintenance would also include cleaning weep holes and debris that may accumulate in front of weep holes. Sediment and/or obstruction removal is usually conducted by pushing the material to the inlet and/or outlet where it can be removed with a crane or excavator.



REPLY TO
ATTENTION OF

DEPARTMENT OF THE ARMY

LOS ANGELES DISTRICT CORPS OF ENGINEERS
P.O. BOX 532711
LOS ANGELES, CALIFORNIA 90053-2325

June 7, 2006

Planning Division
Environmental Resources Branch

Mr. Peter Douglas
Executive Director
California Coastal Commission
Attn: Mr. Mark Delaplaine
45 Fremont, Suite 2000
San Francisco, California 94105

Dear Mr. Douglas:

Enclosed are the Lower Mission Creek reports requested in the November 14, 2001 Adopted Findings on Consistency Determination Number CD-117-99. This determination received concurrence from the California Coastal Commission (CCC) in November 2001 for the Lower Mission Creek Flood Control Project.

The U.S. Army Corps of Engineers (Corps) submitted a Coastal Consistency Determination (CCD) on December 20, 1999 to the CCC, with a draft environmental impact statement/environmental impact report (EIS/EIR) for the Lower Mission Creek Flood Control Project. This submittal was in accordance with CZMA requirements (Section 106 (d)) to certify consistency to the maximum extent practicable within approved State Coastal Zone Management Plan. The proposed project is partially within and will have an effect on the coastal zone, as established by the California Coastal Act of 1976. Mr. James Raives of the CCC determined that a CCD would be required for the Lower Mission Creek Flood Control Project. At that time, Coastal Commission requested additional information to evaluate the proposed project consistency with the habitat, water quality, sand supply, visual, and archaeological policies of the Coastal Act.

The City provided a letter (February 22, 2000) to respond to some of the Coastal Commission concerns on construction of vertical walls between Yanonali and State Streets and aesthetics in the coastal zone. The City identified the possibility of using Redevelopment Agency Funds to improve aesthetic resources of the coastal zone within the project area. The Corps provided additional available information via e-mail and by letter, dated June 21, 2000. Other Lower Mission Creek Flood Control Project submittals included:

1. Biological Assessments, December 1999
2. Draft Fish and Wildlife Coordination Act Report, September 1999
3. Biological Opinion (BO) from National Marine Fisheries Service (NMFS), August 2, 2000

4. Final EIS/EIR, September 2000
5. BO from U.S. Fish and Wildlife Service (USFWS), June 1, 2001

A CCC hearing regarding the Lower Mission Creek Flood Control Project was held on August 9, 2001. The Adopted Findings of the Consistency Determination, Number CD-117-99, was revised on November 14, 2001 and stated that:

"The Commission hereby conditionally concurs with the consistency determination by Corps of Engineers on the grounds that, as conditioned, the project described therein is consistent with the enforceable policies of the CCMP, provided the Corps satisfies the conditions specified below pursuant to 15 CFR 930.4."

These conditions required providing the following documents:

1. Tidewater Goby Studies, management Plan and Recommendations
2. Maintenance Plan
3. Pilot Channel Design
4. Landscaping Plan

In addition to the reports required to meet the CCC conditions above, the CCC requested the sediment characterization data report and a study of tidewater goby genetics.

Project related information is provided in the Final EIS/EIR. A copy of the Final Feasibility Report and EIS/EIR was provided to your office during a previous public review of the Final EIS/EIR. In response to the conditions of the November 14, 2001 Adopted Findings on Consistency Determination, the Corps is submitting the following enclosures:

1. Santa Barbara County Streams – Lower Mission Creek, Feasibility Study, Hydraulic Technical Appendix, Sedimentation Engineering, November 1999.

The purpose of the sediment analysis is to provide the results of the detailed sediment study completed since the publication of the Final Santa Barbara County Streams Lower Mission Creek Flood Control Feasibility Report. Initially, a sediment budget analysis was completed for the subject study. However, the study team determined that a more detailed sediment study was needed due to 1) the complexity of the proposed project features; 2) the potential for deposition at several key locations within the project reach; and 3) the local sponsor's request for the expected annual operation and maintenance requirements. The computer program HEC-6T was used for the detailed sediment study. This program was used instead of the library version of HEC-6 for its network capabilities, which were needed to model the proposed project features. The computer program HEC-RAS was used to model the final water surface profiles. The model sedimentation analysis shows that the recommended plan is feasible. However, maintenance

would be required to remove the deposition that would occur after every large flood event. Additional maintenance in some reaches would also be required periodically.

2. Tidewater Goby Management Plan – Lower Mission Creek Flood Control Project, April 2005.

This plan summarizes the management measures that will reduce adverse impacts to the project on the tidewater goby within the Lower Mission Creek project area and nearby ocean.

3. Channel Design Recommendations – Lower Mission Creek Flood Control Project, June 2005.

This study summarizes the various channels and bridge improvements along Mission Creek from Canon Perdido Street to Cabrillo Boulevard. The improvements in the channel include widening the existing channel; replacing and widening four bridges; constructing vertical wall channels with the upper slope and adjacent buffer zone to be planted with riparian trees and understory plants; constructing a by-pass weir and parallel culvert to convey high flows under Highway 101; and constructing various channel features to improve habitat conditions for fish.

4. Lower Mission Creek Flood Control Project Adaptive Channel Maintenance Plan. Santa Barbara County Flood Control District. June 2005 (This is Appendix C in #3 above).

This maintenance plan establishes criteria to be followed by the District for conducting maintenance in the channel along the project reach in order to maintain design capacity of the Lower Mission Creek improvements. This plan is an elaboration of the maintenance activities described in the EIS/EIR. The plan identifies methods to maintain the channel and protect the fish habitat enhancements installed as part of the project, such as rock weirs, pools, and low flow channels.

5. Genetics of *Eucyclogobius newberryi* in Mission Creek Santa Barbara: a regional metapopulation analysis using mitochondrial control region sequence and microsatellites, August 19, 2005. (Supplement to the Tidewater Goby Management Plan).

This genetic assessment was completed to better assess the impacts to the tidewater goby, a federally listed endangered fish species. Ten study sampling sites were evaluated to determine the importance of the Mission Creek population of tidewater gobies to the maintenance of goby populations in surrounding areas. Mission Creek is the largest lagoon regularly inhabited by tidewater gobies in this region. The larger size population, evidence of persistence, proximity to other habitats, and regional history of anthropogenic impacts, as well as the evidence of extirpation and recolonization of the sites in the region suggest that Mission Creek may serve as a tidewater goby "source" population in a metapopulation context. Extirpation of the population during construction, if it were to occur, would have an intermediate level of impact on the genetic variation in the region. Therefore, this report also provides recommendations to limit the potential negative impacts during construction.

6. Landscaping Plan, May 2006.

The Landscape Plan includes mitigation requirements as contained in the EIS/EIR previously submitted. The landscape plan will revegetate areas on the banks in the upper portion of lower mission creek with native species of trees, shrubs, and grasses. All native plants will be arranged and planted in a natural and random manner and watered by an automatic irrigation drip system.

7. CD with electronic version (1, 5, & 6 from above).

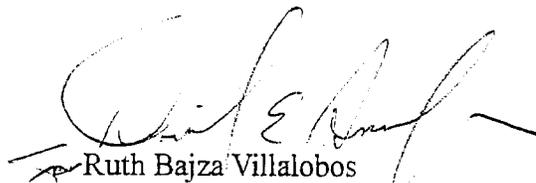
This completes all the commitments made by the Corps pursuant to this action. The Corps concludes that the proposed project is consistent with approved State's Coastal Zone Management Program, to the maximum extent practicable. This determination received concurrence from the CCC in November 2001, a finding that the Corps holds as valid and is now complete. We are requesting staff concurrence that the enclosures fulfill all commitments made by the Corps and that no further action is required.

Please respond within forty five (45) days of receipt of this letter. Your timely concurrence with the CD would be greatly appreciated and enable use to continue to meet the August 2006 timeframe. Correspondence may be sent to:

Ms. Ruth Villalobos
Chief, Planning Division
U.S. Army Corps of Engineers
Attn: Mrs. Gail Campos (CESPL-PD-RL)
P.O. Box 532711
Los Angeles, California 90053-2325

If you have any questions regarding the project, please contact Mrs. Gail Campos, Ecologist, Regional Planning Section, at (213) 452-3874.

Sincerely,



Ruth Bajza Villalobos
Chief, Planning Division

Enclosure(s)

CALIFORNIA COASTAL COMMISSION

45 FREMONT STREET, SUITE 2000
 SAN FRANCISCO, CA 94105-2219
 VOICE AND TDD (415) 904-5200

**F 4b****STAFF RECOMMENDATION****ON CONSISTENCY DETERMINATION**

Consistency Determination No.	CD-046-06
Staff:	MPD-SF
File Date:	6/9/0226
60th Day:	8/8/2006
75th Day:	8/23/2006
Commission Meeting:	8/11/2006

FEDERAL AGENCY: U. S. Army Corps of Engineers

DEVELOPMENT
LOCATION:

Lower Mission Creek, Santa Barbara (Exhibit 1)

DEVELOPMENT
DESCRIPTION:

Phase II of Lower Mission Creek flood-control improvements: tidewater goby, flood control channel maintenance, pilot channel design, and landscaping plans (Exhibits 2-9)

SUBSTANTIVE FILE
DOCUMENTS:

See page 12.

EXECUTIVE SUMMARY

On August 9, 2001, the Commission conditionally concurred with the U. S. Army Corps of Engineers' (Corps') consistency determination for a flood control project to improve flood protection on Mission Creek, in the City of Santa Barbara (CD-117-99). The flood control project was located both within and inland of the coastal zone and consisted of: (1) increasing the channel capacity to 3400 cubic feet per second (cfs), thereby providing an approximately a 20-year storm level of protection; (2) replacing four bridges along the study reach;

(3) installing a new culvert bypassing the oxbow below Highway 101 ("oxbow bypass") (the oxbow would be left in place as a low-flow channel); (4) planting of native riparian species along sloped banks stabilized by riprap and creation of additional riparian habitat by enlarging planted slopes in areas where the Corps must purchase property adjacent to the stream; (5) creek banks consisting of either a vertical wall or a combination vertical wall and riprap sideslope (combination vertical wall/riprap sideslope would consist of vertical wall for the bottom half, with ungrouted riprap for the upper half, and with native riparian vegetation planted within the riprap); (6) maintaining existing natural stream bottom, and restoring concrete lined stream bottom to natural conditions (except immediately underneath bridges and through the oxbow); and (7) fish habitat improvements.

As originally proposed, mitigation measures included: (1) creation of riparian habitat on the banks of the stream; (2) widening the estuary; (3) construction of a pilot channel functioning as a low flow channel for the entire creek above the estuary; (4) instream features improving fish habitat; and (5) seasonal limitations on construction and maintenance activities. The Commission conditioned its concurrence to require the Corps to: (1) prepare and submit to the Commission plans for (a) the pilot channel, (b) maintenance and adaptive-management activities, and (c) landscaping with native riparian vegetation adjacent to the vertical floodwalls in the coastal zone; and (2) accelerate the goby portion of the comprehensive estuary management plan and incorporate relevant recommendations of that portion of the plan into the proposed project. In addition, the Corps agreed to participate in the development of a comprehensive management plan for the estuary and submit a consistency determination for that plan. The Commission found the original flood control project was necessary for flood-control purposes, was the least damaging feasible alternative, included feasible mitigation and, with the mitigation and proposed design, would, as conditioned, protect stream resources, water quality, and environmentally sensitive habitat (including federally listed threatened species - steelhead trout and tidewater goby), scenic views, and archaeological resources.

Under the "phased review" federal consistency procedures,¹ the Corps has submitted a consistency determination for this second phase of the project, consisting of four plans (tidewater goby management, flood control channel maintenance, pilot channel design, and landscaping plans). For this phase, the Corps has submitted the following plans:

¹ 15 CFR §930.36 (d) provides: *Phased consistency determinations.* In cases where the Federal agency has sufficient information to determine the consistency of a proposed development project or other activity from planning to completion, the Federal agency shall provide the State agency with one consistency determination for the entire activity or development project. In cases where federal decisions related to a proposed development project or other activity will be made in phases based upon developing information that was not available at the time of the original consistency determination, with each subsequent phase subject to Federal agency discretion to implement alternative decisions based upon such information (*e.g.*, planning, siting, and design decisions), a consistency determination will be required for each major decision. In cases of phased decisionmaking, Federal agencies shall ensure that the development project or other activity continues to be consistent to the maximum extent practicable with the management program.

1. Tidewater Goby Management Plan – Lower Mission Creek Flood Control Project, April 2005.
2. Channel Design Recommendations – Lower Mission Creek Flood Control Project, June 2005.
3. Lower Mission Creek Flood Control Project Adaptive Channel Maintenance Plan. Santa Barbara County Flood Control District. June 2005 (This is contained as Appendix C in #2 above).
4. Genetics of *Eucyclogobius newberryi* in Mission Creek Santa Barbara: a regional metapopulation analysis using mitochondrial control region sequence and microsatellites, August 19, 2005. (Supplement to the Tidewater Goby Management Plan).
5. Landscaping Plan, May 2006.
6. Santa Barbara County Streams – Lower Mission Creek, Feasibility Study, Hydraulic Technical Appendix, Sedimentation Engineering, November 1999.

In preparing these plans, the Corps convened the experts needed to analyze the biological, hydrological, water quality, and other specific design issues raised. The pilot channel design plan is based on input from technical experts at the Corps, City, County, University of California, NOAA Fisheries, as well as input from environmental organizations (EDC and Santa Barbara Channel Keeper). The refined plan maximizes feasible fish enhancement features, minimizes (to the extent feasible) artificial walls and stream bottom, includes a pilot channel lined with gravel/cobbles designed to concentrate flows and maintain temperatures beneficial for fish year-round, and provides for continued monitoring and adaptive management, including continuing consultation with the City, County, NOAA Fisheries, and other members of the Channel Design Working Group to monitor and modify the project, if warranted.

The Corps has also included the County's adaptive Channel Maintenance Plan, as the County will be performing the maintenance activities. This plan includes inspection and adoption of methods to protect fish enhancement features of the project, minimizing effects of vegetation removal and channel desilting, minimizing use of herbicides (and continuation of the original "no use of herbicides in the coastal zone" feature), re-creating pilot channels where needed, and removal of non-native vegetation.

The tidewater goby management plan discusses the result of the tidewater goby genetic studies conducted since the Commission's original review, notes the importance of Mission Creek as one of the primary regional "source" estuaries, notes that fish habitat improvements (e.g., baffles, ledges, slower velocities along the perimeter of the lagoon) discussed above will also

benefit gobies, notes that only very limited construction would occur within the estuary itself, contains measures addressing and minimizing impacts from construction impacts on the goby, and provides for continuing goby monitoring.

Measures to protect water quality (including preparation of a storm water pollution prevention plan (SWPPP)), and sediment testing to determine the suitability of maintenance dredging for beach nourishment, have not yet been finalized. Thus, the Corps will still need to provide these details for Commission review and concurrence prior to any construction or maintenance dredging.

With the measures included in the revised design, monitoring, maintenance, mitigation, and adaptive management plans, and the on-going review of water quality plans and maintenance dredging, as well as any future project modifications, the Commission finds the project would protect stream resources, water quality, environmentally sensitive habitat (including steelhead trout and tidewater goby), scenic views, and would therefore be consistent with Sections 30236, 30231, 30233, 30240, and 30251 of the Coastal Act.

STAFF SUMMARY AND RECOMMENDATION:

I. Project Description. The Corps has submitted four plans comprising the second phase of its previously-concurred-with Lower Mission Creek flood-control improvement project (CD-117-99). The overall flood control project is described on pages 4-8 of the attached Commission Findings for CD-117-99 (Exhibit 10). The four plans that are the subject of this consistency determination and are intended to satisfy the four conditions below consist of: (1) a tidewater goby management plan; (2) a flood control channel maintenance plan; (3) a refined pilot channel design; and (4) a landscaping plan. The Commission's conditions of concurrence provided:

1. Tidewater Goby Studies, Management Plan and Recommendations: *The Corps of Engineers with input from interested biological experts shall conduct Tidewater Goby studies and develop a Management Plan for Tidewater Gobies in the Mission Creek Estuary that evaluates project specific impacts and includes recommendations to minimize those effects. . The Corps shall implement all feasible short- and long-term recommendations in the plan to mitigate impacts associated with the project or intended to lessen project-specific or cumulative impacts to Tidewater Gobies. The Corps shall also make recommendations regarding whether or not to proceed with a Tidewater Goby genetic study to help assess project impacts related to potential extirpation and recolonization. In addition, the Corps shall make recommendations regarding allowing the Mission Creek and Laguna Creek estuaries to merge under natural conditions (or as recommended by the team of biologists) in order to benefit Tidewater Gobies. The results of the tidewater goby Management studies and recommendations shall be submitted to the Commission as part of the consistency determination for the design phase review of the Lower Mission Creek Flood Control Project.*

2. **Maintenance Plan:** *The Corps shall develop a new adaptive creek maintenance plan that includes hand clearing and that minimizes the use of herbicides and heavy equipment. The Maintenance Plan shall be submitted to the Commission as part of the consistency determination for the design phase review of the Lower Mission Creek Flood-Control Project.*

3. **Pilot Channel Design:** *The Corps shall develop a new pilot channel configuration for the Lower Mission Creek Flood Control Project. The Corps shall consider, as design alternatives, all feasible suggestions and recommendations on the pilot channel's physical characteristics (e.g., dimensions, morphology, sinuosity, substrate, etc.) received from the Environmental Defense Center, Dr. Ann Riley, Dr. Ed Keller, Dr. Scott Cooper, Dr. Camm Swift, Dr. Kevin Lafferty, National Marine Fisheries Service, and the City and County of Santa Barbara. The new configuration shall be developed with the goal of promoting effective and efficient transport of sediment through the creek, minimizing streambed erosion and sedimentation impacts and related creek maintenance impacts associated with the project, and protecting aquatic habitat. The pilot channel design shall be submitted to the Commission as part of the consistency determination for the design phase review of the Lower Mission Creek Flood Control Project.*

4. **Landscaping Plan:** *The Corps shall develop a new Landscaping Plan that includes native landscaping along all reaches of the project length on both sides of the creek including segments adjacent to vertical floodwalls where vegetated rip-rap banks are not proposed. The Plan shall include provisions for planting on private property to ensure a continuous riparian corridor wherever space physically permits. The Landscaping plan shall be submitted to the Commission as part of the Lower Mission Creek Flood Control Project.*

II. **Federal Agency's Consistency Determination.** The Corps of Engineers has determined the project consistent to the maximum extent practicable with the California Coastal Management Program.

III. **Staff Recommendation.**

The staff recommends that the Commission adopt the following motion:

MOTION: I move that the Commission **concur** with consistency determination CD-046-06 that the project described therein is fully consistent, and thus is consistent to the maximum extent practicable, with the enforceable policies of the California Coastal Management Program (CCMP).

Staff Recommendation:

The staff recommends a **YES** vote on the motion. Passage of this motion will result in an agreement with the determination and adoption of the following resolution and findings. An affirmative vote of a majority of the Commissioners present is required to pass the motion.

Resolution to Concur with Consistency Determination:

The Commission hereby **concurs** with the consistency determination by the Corps of Engineers, on the grounds that the project described therein is fully consistent, and thus is consistent to the maximum extent practicable, with the enforceable policies of the CCMP.

IV. Findings and Declarations:

The Commission finds and declares as follows:

A. **Stream Alteration and Environmentally Sensitive Habitat.** The Coastal Act provides:

Section 30236. *Channelizations, dams, or other substantial alterations of rivers and streams shall incorporate the best mitigation measures feasible, and be limited to (1) necessary water supply projects, (2) flood control projects where no other method for protecting existing structures in the floodplain is feasible and where such protection is necessary for public safety or to protect existing development, or (3) developments where the primary function is the improvement of fish and wildlife habitat.*

Section 30233

(a) The diking, filling, or dredging of open coastal waters, wetlands, estuaries, and lakes shall be permitted in accordance with other applicable provisions of this division, where there is no feasible less environmentally damaging alternative, and where feasible mitigation measures have been provided to minimize adverse environmental effects, and shall be limited to [eight specified uses]: ...

Section 30240

(a) Environmentally sensitive habitat areas shall be protected against any significant disruption of habitat values, and only uses dependent on those resources shall be allowed within those areas.

(b) Development in areas adjacent to environmentally sensitive habitat areas and parks and recreation areas shall be sited and designed to prevent impacts which would significantly degrade those areas, and shall be compatible with the continuance of those habitat and recreation areas.

As discussed in its findings on the original consistency determination for this flood control project (Exhibit 10)(hereby incorporated by reference), the Commission found that the flood control project was an allowable use for stream alteration and fill, was the least environmentally damaging feasible alternative, included adequate monitoring and mitigation, and would benefit the stream resources by widening of the stream and estuary and removal of artificial hard bottom in the estuary and stream. The Commission conditioned its concurrence to address any remain impacts to stream resources (see pages 4-5 above for condition language). Aside from these conditions, during the Commission's original review, the Corps had also incorporated a number changes into the project, as follows:

1. Pursuant to section 930.36(d) of the regulations that implement the CZMA, the Corps will submit to the Commission one or more additional consistency determinations for future phases of the project and the maintenance thereof. In the future consistency determination(s), the Corps will 1) describe the specific characteristics of the design, and 2) consider all design-related issues including design of the pilot channel, adaptive management plan, and maintenance plan.
2. The Corps will convene a team of biologists with expertise on the tidewater goby. The team will consider issues related to the management of the tidewater goby within Mission Creek. Among other issues, the team will discuss the need for a study of tidewater goby genetics. If there are regional benefits and the team recommends proceeding with the study, the team will define the scope, parameters and protocols to be followed.
3. The Corps will perform additional hydraulic analyses to investigate the feasibility and effectiveness of raising the State Street and Cabrillo Boulevard Bridges independently or together. The Corps will submit to the Commission and EDC [the Environmental Defense Center] results of these analyses.
4. The Corps will compile the adaptive management and maintenance plan into a single document and will present the document to the Commission upon completion. In that plan, the Corps will clarify the methods for maintenance (e.g., herbicide and heavy equipment vs. hand clearing of vegetation).
5. The Corps will submit to the Commission as part of a consistency determination for a future phase of this project 1) a final design for the pilot channel, and 2) analysis that supports the Corps' final design choice. This analysis will reflect the fact that the current (feasibility level) characteristics and functions are not necessarily appropriate to optimal fluvial behavior for sediment transport and conveyance through Lower Mission Creek.

6. The Corps will participate with the City of Santa Barbara in the development of a management plan for the Mission Creek estuary, which will include an analysis of tidewater goby habitat as part of the overall plan along with water quality, flood control concerns, aesthetics, safety, and recreational opportunities. The Corps will submit to the Commission a consistency determination for this comprehensive management plan.
7. The Corps will accelerate the goby portion of the comprehensive estuary management plan as part of the proposed flood-control project. This goby plan will consider, among other issues, the commingling of the Laguna Channel and Mission Creek at the estuary. To the extent feasible, the Corps will implement recommendations from the plan that are associated with the flood-control project.

In compliance with the above commitments and Commission conditions, the Corps has convened the experts needed to analyze the biological, hydrological, water quality, and other specific design and has submitted the results of these more refined analyses, in the form of a tidewater goby management plan, a flood control channel maintenance, a refined pilot channel design, and landscaping plans. The pilot channel design plan is based on input from technical experts at the Corps, City, County, University of California, NOAA Fisheries, as well as input from environmental organizations (EDC and Santa Barbara Channel Keeper). The refined plan includes: (1) unlined stream bottom (except under existing bridges); (2) wider openings at four bridges; (3) widened stream sections, including (a) 2,200 ft. of widening from Canon Perdido to Haley St. (from 25 ft. to 42 ft), 1000 ft. from Haley St. to Highway 101 (25 ft. to 50 ft.), and 1,100 ft. from Yanonali St to the Beach (27 ft. to 60 ft.); (4) removal of existing concrete bottom; (5) installation of riprap lining to protect bridges from scour due to increased widths; (6) construction of a pilot channel lined with gravel/cobbles designed to concentrate flows and maintain temperatures beneficial for fish year-round; (7) placement of clusters of boulders as rock energy dissipaters; (8) installation of fish ledges and fish baffles to provide fish protection and resting areas (particularly for steelhead); (9) consideration of measures to reduce the extent of riprap; and (10) an adaptive management program including consultation with the City, County, NOAA Fisheries, and other members of the Channel Design Working Group to monitor and modify the project, if warranted, including adding or removing weirs, modifying the size of instream boulders, placing additional boulders to encourage formation of a more stable and deeper low flow channel and series of pools. (See Exhibit 7 for further recommendations, details and mitigation measures the Corps has agreed to implement.)

The Corps' submittal also includes the County's adaptive Channel Maintenance Plan, as the County will be performing the maintenance activities. This plan includes inspection and adoption of methods to protect fish enhancement features of the project, minimizing effects of vegetation removal and channel desilting, minimizing use of herbicides (and continuation of the original "no use of herbicides in the coastal zone" feature), re-creating pilot channels where needed, and removal of non-native vegetation (see Exhibit 9 for further details and mitigation measures).

The tidewater goby management plan, which is a combined City, County, and Corps proposal, discusses the result of the tidewater goby genetic studies conducted since the Commission's original review and notes the importance of Mission Creek as one of the primary regional "source" estuaries (i.e., for repopulation to other estuaries) for tidewater gobies in southern Santa Barbara County, due to its relatively large size and long history of goby occupation, larger tidal reach, and longer upstream accessibility. The management plan also notes fish habitat improvements (e.g., baffles, ledges, slower velocities along the perimeter of the lagoon) discussed above will also benefit gobies, which are poor swimmers and need refuge during high flow events. The plan notes that, as discussed above, limited construction (primarily repair of damaged channel walls) would occur within the estuary itself. The plan contains measures addressing construction impacts on the goby and proposes the following measures to protect gobies:

- (1) limit construction in the estuary to avoid the peak spawning season (i.e., limit construction to June 15-Dec. 15);
- (2) separate construction areas from the estuary using cofferdams and leave at least half the estuary (upstream of Cabrillo Blvd.) watered at all times;
- (3) remove gobies using seine netting supervised by a qualified biologist and replace them in undisturbed portions of the estuary;
- (4) conduct pre- and post-construction goby monitoring;
- (5) float intake pumps to the maximum extent possible to minimize effects on gobies;
- (6) use 1/8 inch or smaller mesh size for intake pump and frequently monitor mesh; and
- (7) provide annual reports to the U.S. Fish and Wildlife Service analyzing effects on gobies and recommending any needed modifications.

The Plan also reflects the Corps' agreement to implement the recommendations from its "goby genetics" study, including: (a) assuring no construction will occur in Arroyo Burro during construction at Mission Creek (Arroyo Burro is located upcoast (and west) of Mission Creek and is one of the other regionally critical goby habitat areas); (b) maintaining Mission Creek and Laguna Channels as separate channels during construction; and (c) creating a small artificial lagoon "a modest distance down the beach" and populating it with gobies "until well after construction is complete."

Exhibit 8 provides a complete list of the tidewater goby Management Objectives, Management Actions for the Design Phase, Construction Phase, and Post-construction Phase, Other Actions/Lagoon Management, including limiting estuary breeching, allowing the Mission Creek and Laguna Channel lagoons to merge, planting stabilizing native vegetation, and placement of interpretive signs, monitoring and developing plans for enhancing tidewater goby recolonization after any "extirpation" events, and, finally, a Monitoring and Adaptive Management Program.

With the measures included in the revised design, monitoring, maintenance, mitigation, and adaptive management plans, and the on-going review of water quality plans (discussed in the following section) and of any future project modifications, the Commission finds the project, as refined, would maximize the project's stream and estuary habitat benefits (including benefits to steelhead and tidewater goby habitat), would minimize adverse construction-related impacts, and would be consistent with the stream alteration and fill and environmentally sensitive habitat policies (Sections 30236, 30233 and 30240) of the Coastal Act.

B. Water Quality. Section 30231 of the Coastal Act provides:

The biological productivity and the quality of coastal waters, streams, wetlands, estuaries, and lakes appropriate to maintain optimum populations of marine organisms and for the protection of human health shall be maintained and, where feasible, restored through, among other means, minimizing adverse effects of waste water discharges and entrainment, controlling runoff, preventing depletion of ground water supplies and substantial interference with surface water flow, encouraging waste water reclamation, maintaining natural vegetation buffer areas that protect riparian habitats, and minimizing alteration of natural streams.

In its original review the Commission found:

The proposed flood-control facility provides the Corps with an opportunity to restore water quality resources in Mission Creek by incorporating appropriate measures or technologies into the project design to reduce non-point source pollution. The reconstruction of the flood-control facility, including the replacement of bridges, installation of a culvert under Highway 101, and construction of floodwalls, provide the Corps with an opportunity to design the facility to incorporate measures into the project in order to reduce non-point source pollution. Section 30231 of the Coastal Act requires the restoration of water quality resources where feasible. However, based on discussions with water quality experts within the Commission staff and Santa Barbara County, it is undesirable to install non-point source pollution treatment devices at the storm drain outfall into the flood-control channel because that location makes maintenance of the treatment device more problematic.² It seems preferable to place the treatment devices away from the creek where it is more accessible for maintenance purposes. In addition, the City of Santa Barbara is applying for a Phase II Stormwater NPDES to address non-point source pollution and the City has other programs to address water quality. Finally, the Corps has agreed that prior to construction it will coordinate with the City's water quality staff to determine if any of the activities proposed by the City could be coordinated with the flood-control project. With these measures, the project is consistent with the water quality policies of the Coastal Act.

² Personal Communication, Santa Barbara County, 3/29/01. [footnote in original]

In conclusion, the Commission finds that the proposed project will not significantly affect water quality resources of the coastal zone. Specifically, the project provides for water quality protection measures for construction and maintenance of the flood-control channel. Additionally, the Corps will coordinate its construction activities with the City's non-point source pollution program to avoid redundant construction efforts and increasing construction efficiency. Therefore, the Commission finds that the proposed project is consistent with the water quality policies of the CCMP.

Measures to protect water quality in the original project included: (1) no vegetation removal or herbicide use in the coastal zone; (2) use of silt curtains and mosaic vegetation removal where such activities occur inland of the coastal zone boundary; (3) coordinating the construction of the flood-control facility with the water quality efforts within the City of Santa Barbara, so that, if necessary and advantageous, the City could construct measures to control appropriate non-point source pollution concurrent with the project; and (4) preparation of a storm water pollution prevention plan (SWPPP) to minimize water quality impacts from the construction of the flood-control facility, to be subject to further Commission consistency review (both the SWPPP and the maintenance plan). Final water quality plans have not been included in this second phase of the submittal; thus, the Corps will still need to provide these details for Commission review and concurrence prior to any construction. The Commission reiterates its previous water quality conclusion that, with the opportunity to review the final SWPPP/water quality plans, the project is consistent with the water quality policy (Section 30231) of the Coastal Act.

C. **Sand Supply.** Section 30233(d) of the Coastal Act provides for the use of suitable material removed from coastal streams to be used for beach replenishment purposes. This section provides that:

Erosion control and flood control facilities constructed on water courses can impede the movement of sediment and nutrients which would otherwise be carried by storm runoff into coastal waters. To facilitate the continued delivery of these sediments to the littoral zone, whenever feasible, the material removed from these facilities may be placed at appropriate points on the shoreline in accordance with other applicable provisions of this division, where feasible mitigation measures have been provided to minimize adverse environmental effects. Aspects that shall be considered before issuing a coastal development permit for such purposes are the method of placement, time of year of placement, and sensitivity of the placement area.

In its original review the Commission noted that maintenance activities including removal of sediment from the stream should be tested prior to excavation to determine if it is suitable for beach disposal. The Commission noted that the final EIS for the proposed project did not include an evaluation of the suitability of this material for beach replenishment. Without this information, the Commission was unable to determine if sediment disposal activities would adversely affect coastal resources, but since the Corps agreed to provide this information at a

later phase, like the water quality plans, the Commission determined the proper procedures were in place to enable beach replenishment where appropriate. The Commission therefore concluded that "With the commitments for phased consistency review and use of suitable material for beach replenishment purposes, the Commission finds that the proposed project is consistent with the sand supply policies of the Coastal Act." This information is still unavailable; thus, like the water quality issue discussion contained in the previous section, sediment analysis and beach replenishment options will need to be reviewed at a later phase when the information becomes available. The Commission reiterates its previous sand supply conclusion that, with the opportunity to review the final sediment test results and disposal proposals, the project is consistent with the sand supply policy (Section 30233(d)) of the Coastal Act.

D. Visual Resources. Section 30251 of the Coastal Act provides, in part, that:

The scenic and visual qualities of coastal areas shall be considered and protected as a resource of public importance. Permitted development shall be sited and designed to protect views to and along the ocean and scenic coastal areas

The Commission previously found:

As stated above, most of the Creek within the coastal zone will be developed with vertical walls and will not appear as a natural stream. However, most of the stream within the coastal zone (approximately 85%) is already developed with some manmade structures. The remaining portion of the stream within the coastal zone still has some natural appearance. The proposed project will change that appearance of the entire stream within the coastal zone to a channelized hardened stream. Despite this change in character, the Corps believes that the project will improve the visual character of the creek. This conclusion is based on several factors: 1) the project will remove trash and debris from the creek and project fences will make it more difficult to dispose of trash in the stream; 2) the project will remove buildings that are immediately adjacent to the creek (in some cases the walls of the buildings are the banks of the stream); 3) removal of several different types of existing bank treatments that have already adversely affected the stream's visual quality; and 4) the floodwalls will be constructed out of sandstone which will be more aesthetically pleasing than the current bank treatments and the project will include planting of vegetation that will also improve the visual quality of the stream. Finally, through the PED consistency review, the Commission will be able to ensure that the final design will protect and improve visual resources. Therefore, the Commission finds that the proposed project is consistent with the view protection policies of the Coastal Act.

The Corps's submittal includes several measures providing both habitat benefits, as described above, as well as aesthetic improvements. The landscaping proposal (Exhibits 5-6) provides for planting, monitoring, and maintaining native riparian habitat within the creek, planting

riparian habitat within Corps'- and City-controlled areas adjacent to the creek banks, providing incentives for private landowners to plant additional riparian habitat adjacent to the creek banks, monitoring the landscaping plans to assure they meet identified success criteria, removing concrete from the creek bottom (except under four bridges), and the above-discussed designs for floodwalls that, to the degree possible, mimic a natural creek bank. With the measures included in the revised design, monitoring, maintenance plans, the Commission finds that the project would improve scenic public views and be consistent with the visual resource protection policy (Section 30251) of the Coastal Act.

V. Substantive File Documents:

1. Consistency Determination CD-117-99, Army Corps, Mission Creek Flood Control Project.
2. Landscape Plan, Lower Mission Creek Flood Control Project, U.S. Army Corps of Engineers and City of Santa Barbara, April 2006.
3. Genetics of *Eucyclogobius newberryi* in Mission Creek Santa Barbara: a regional metapopulation analysis using mitochondrial control region sequence and microsatellites. Prepared for Army Corps of Engineers 8/19/05, D. K. Jacobs, K. D. Louie, D. A. Earl, C. Bard, C. Vila & C.C. Swift, Department of Ecology & Evolution, UCLA.
4. Santa Barbara County Streams – Lower Mission Creek, Feasibility Study Hydraulic Technical Appendix, Sedimentation Engineering, Army Corps of Engineers November 1999.
5. Final Environmental Impact Statement/Environmental Impact Report and Feasibility Study for Lower Mission Creek Flood Control Project, Santa Barbara, California, September 2000.
6. Biological Assessments, Lower Mission Creek Flood Control Project, Santa Barbara, California, December 1999.
7. Draft Fish and Wildlife Coordination Act Report, Lower Mission Creek Flood Control Project, Santa Barbara, California, U.S. Fish and Wildlife Service, September 1999.
8. Biological Opinion for the Lower Mission Creek Flood Control Project, Santa Barbara, County California, National Marine Fisheries Service, August 2, 2000.
9. Biological Opinion for the Lower Mission Creek Flood Control Project, Santa Barbara, County California, U.S. Fish and Wildlife Service, June 1, 2001.