ITEM NO. 17

STAFF REPORT

CITY OF OCEANSIDE

DATE: August 15, 2007

TO: Honorable Mayor and Members of the City Council

FROM: Community Development Department/Planning Division

SUBJECT: **ADOPTION OF A RESOLUTION CERTIFYING A SUPPLEMENTAL ENVIRONMENTAL IMPACT REPORT (EIR) FOR THE SAN LUIS REY FLOOD CONTROL PROJECT POST AUTHORIZATION DOCUMENT WHICH ADDRESSES VEGETATION AND SEDIMENT MANAGEMENT OF THE SAN LUIS REY RIVER CHANNEL BETWEEN THE PACIFIC OCEAN AND COLLEGE BOULEVARD**

SYNOPSIS

Staff recommends that the City Council adopt a resolution certifying the Supplemental Environmental Impact Report for the San Luis Rey Flood Control Project channel maintenance program from College Boulevard to the Pacific Ocean.

BACKGROUND

The existing flood control project channel is on the lower 7.2 miles of the San Luis Rey River. Construction of the levee system and related components were completed in 2000. It currently provides a level of flood protection below its authorized level because of the vast volume of vegetation in the channel which impedes the flow conveyance within the channel. To increase flood-flow conveyance, while minimizing impacts to endangered species such as the least Bell's vireo, Willow flycatcher, Yellow-billed cuckoo, and Steelhead trout and their critical habitat, the U. S. Army Corps of Engineers (Corps) proposes to revise the vegetation and sediment management portion of the operation and maintenance of the channel.

In order to provide increased flow conveyance capacity of the flood control project channel over the existing conditions, in the winter of 2006, the Corps implemented a vegetation management treatment that involved mowing an 80-foot to 100-foot-wide swath from College Boulevard to the Benet Road Bridge in March 2006. Earlier, in December of 2005, over 23 acres of Arundo (an invasive weed species) were mowed to improve flood flows and comply with U.S. Fish and Wildlife Service requirements.

Project Description: During formal consultation, the Corps and the U.S. Fish and Wildlife Service (USFWS) agreed that a maximum reduction of 20 percent in the originally

approved flow conveyance of the channel may be implemented without Congressional reauthorization of the completed project. A 20 percent reduction would reduce the authorized 89,000 cubic feet per second (cfs) conveyance to 71,200 cfs. This would allow maximum flow conveyance without re-authorization and would also minimize impacts to endangered species and their habitat in the flood channel.

A wide range of alternatives were formulated and analyzed in the EIR to address the flood control and endangered species objectives and constraints. Alternative 11 is the proposed action and includes the following features:

- Reach 1 (Pacific Ocean to former Priory Road bridge) – A 150-foot-wide managed strip that overlays the open water/marsh area as much as possible, with the remaining vegetation unmaintained. Vegetation in this strip shall be mowed annually.

- Reach 2 (Priory Road to Foussat Road Bridge) – A 250-foot-wide strip shall be mowed annually with two 75-foot-wide strips of maintained vegetation, each managed every 10 years.

- Reach 3 (Foussat Bridge to Pilgrim Creek confluence) – In the lower end of the reach, the management will be similar to Reach 2 and increase to a 300-foot-wide annually mowed strip with a 50-foot strip on either side that will remain un-maintained. In the upper end of the reach, the mowed strip narrows to 230 feet to avoid Willow flycatcher territory, and continues as an annually mowed strip with two 60-foot-wide maintained strips, each cleared every ten years and a 50-foot-wide strip of un-maintained vegetation.

- Reach 4 (Douglas Road Bridge to College Boulevard Bridge) – A 230-foot-wide annually mowed strip with two 60-foot-wide maintained strips, each cleared every ten years and a 50-foot wide strip of unmaintained vegetation.

Conservation/mitigation measures outlined in the EIR include avoidance of vireo and flycatcher nests and territories in delineating the mowed strips to the extent practicable, phased vegetation management mowing over several years, vireo monitoring into the future, cow-bird trapping, and sediment management triggers every 100 feet of the channel to pinpoint removal needs based on updated topography. These terms have also been provided by the USFWS in the Final Biological Opinion (BO), included as an appendix to the EIR. Additional conservation measures may be required by the California Department of Fish and Game (CDFG), which is currently processing a 1601 Streambed Alteration Agreement and California Endangered Species Act (CESA) Incidental Take permit. Approval of these actions by the CDFG is contingent upon certification of the EIR.

The Corps in consultation with the USFWS, agreed to a phased approach to implementation of the vegetation clearance. The project flow conveyance goal remains 71,200 cfs, but less or more vegetation management may be performed once updated information of channel conditions is assessed as part of Phase 1. The flow conveyance of

Phase 1 is approximately 53,000 cfs. Phases 2 and 3 will be completed after each successive vireo breeding season. Eradication of invasive species, such as arundo, will continue in all areas of the channel.

ANALYSIS

Staff believes that the Final Supplemental EIR for the Vegetation and Sediment Management for the San Luis Rey Flood Control Project has been prepared and processed in compliance with the California Environmental Quality Act (CEQA). Alternative 11, the proposed action, has been endorsed by the Corps and USFWS. Approval of this proposed action alternative is pending at the CDFG and their approval is contingent upon certification of the EIR. A wide range of environmental issues were analyzed in the EIR including biology, cultural resources, aesthetics, and hazardous materials. All impacts were found to be fully mitigated through implementation of mitigation measures. A Mitigation, Monitoring and Reporting Program was prepared that outlines all compensation/mitigation measures for project implementation, when the measure is to be enacted, and what party is responsible for implementation of each measure

FISCAL IMPACT

No fiscal impact for Certification of the EIR. The Corps estimates the project implementation will cost approximately $17,242,000 and $2,729,000 annual costs for implementation. The Federal budget includes $1,000,000 this year for the project and the Corps is hoping to receive $1 to $2 million in the next federal budget, but does not have identified funding for the entire project. The Corps has previously stated that the total City share will be approximately $1,000,000. Additionally, Congressman Issa presented to the City Council that since the problem was created by the Federal government, the City should not be burdened with the costs.

COMMISSION OR COMMITTEE REPORT

None.

CITY ATTORNEY'S ANALYSIS

The City Attorney's office has reviewed the proposed resolution and approved it as to form.

The City Council shall certify that the Environmental Impact Report (EIR) has been completed in compliance with California Environmental Quality Act (CEQA), that the information therein was reviewed and considered by the City Council, and that the

adoption of the EIR reflects the independent judgment and analysis of the City Council.

RECOMMENDATION

Staff recommends that the City Council adopt a resolution certifying the Supplemental Environmental Impact Report for the San Luis Rey Flood Control Project channel maintenance program from College Boulevard to the Pacific Ocean.

PREPARED BY:

Jerry Hittleman
Acting City Planner

SUBMITTED BY:

Peter A. Weiss
Interim City Manager

REVIEWED BY:

Michelle Skaggs Lawrence, Deputy City Manager
Mike Blessing, Deputy City Manager

ATTACHMENTS:

1. City Council Resolution
2. Mitigation, Monitoring and Reporting Program

RESOLUTION NO.

A RESOLUTION OF THE CITY COUNCIL OF THE CITY OF OCEANSIDE, CALIFORNIA CERTIFYING THE FINAL ENVIRONMENTAL IMPACT REPORT FOR THE SAN LUIS REY FLOOD CONTROL PROJECT

(City of Oceanside and the US Army Corps of Engineers - Applicant)

WHEREAS, a Final Environmental Impact Report was prepared and circulated for public and agency review and proper notification was given in accordance with the California Environmental Quality Act; and

WHEREAS, the City Council, did on the 15th day of August, 2007, conduct a public meeting on the content of the Final Environmental Impact Report and Mitigation and Monitoring and Reporting Programs; and

WHEREAS, studies and investigations made by this Council and in its behalf reveal the following facts:

For the Final Environmental Impact Report:

1. The Final Environmental Impact Report and Mitigation and Monitoring and Reporting Program were completed in compliance with the provisions of the California Environmental Quality Act (CEQA).
2. There are certain significant environmental effects detailed in the Final Environmental Impact Report and Mitigation and Monitoring and Reporting Program which have been avoided or substantially lessened by the establishment of measures which are detailed in Exhibit "A" Mitigation and Monitoring and Reporting Program.
3. The Final Environmental Impact Report and Mitigation and Monitoring and Reporting Program were presented to the City Council, and the City Council reviewed and considered the information contained in these documents prior to making a decision on the project. The Final Environmental Impact Report and Mitigation and Monitoring and Reporting Program have been determined to be accurate and adequate documents which reflect the independent judgment of the City Council.

NOW, THEREFORE, the City Council of the City of Oceanside does resolve as follows:

1. The Final Environmental Impact Report and Mitigation and Monitoring and Reporting Program for the San Luis Rey Flood Control project IS CERTIFIED, effective as of this day.
2. Pursuant to Public Resources Code Section 21081.6 the City Council adopts the Mitigation Monitoring and Reporting Program (MMRP) attached as Exhibit "A" and finds and determines that said program is designed to ensure compliance with the mitigation measures during project implementation.
3. Notice is HEREBY GIVEN that the time within which judicial review must be sought on this decision is governed by the provisions of the California Environmental Quality Act.

PASSED and ADOPTED by the City Council of the City of Oceanside, California this _____day of_____, 2007 by the following vote:

AYES:

NAYES:

ABSENT:

ABSTAIN:

_____

Mayor of the City of Oceanside

ATTEST:

_____

City Clerk

APPROVED AS TO FORM:

_____

City Attorney

Draft Mitigation Monitoring and Reporting Program – San Luis Rey River Flood Control Project Conditions

Measure		Responsible Measure Implementation	Completion Requirement	Agency Responsible for Verification
Conservation/Minimization Measure (2006 amended Final Biological Opinion)	**Terms and Conditions** (2006 amended Final Biological Opinion)			
N/A	1. The Corps, City and Service shall meet annually to ensure that only the minimum amount of vegetation clearing necessary to achieve the appropriate level of flood protection for each construction phase and future operations and maintenance is done in the optimal configuration that minimizes potential impacts to the vireo, flycatcher, gnatcatcher and arroyo toad the maximum extent practicable. The Corps and/or City shall implement all practicable minimization measures identified by the Service, Corps and/or City.	Corps City of Oceanside	Coordination with USFWS	Corps City of Oceanside
1. Vegetation and sediment removal for project construction, operations and maintenance will avoid the flycatcher territories mapped in 2003 in reach 3a; and will include two, 60 to 75-foot-wide, strips of vegetation that will be cleared (i.e., mowing, chipping, shredding) every 10 years, with a 5-year lag between the two, to reduce the width of the annually cleared area. Prevention of disturbance and trampling of riparian vegetation outside of the work zone, all riparian habitat areas receiving action (maintenance), as well as the unmaintained cottonwood/willow/mulefat vegetation areas will be accomplished by the Geographic	2. Conservation Measure 1 shall be modified to require use of the GIS/GPS demarcating procedure for: a) Phases 1, 2, and 3 of the initial vegetation and/or sediment removal (i.e., construction); and b) any subsequent mechanized exotic plant, vegetation and/or sediment removal necessary in the future (i.e., operations and maintenance), including access routes and staging areas, to prevent additional impacts. The construction contractor will be held to terms of the contract which will specify areas to be off-limits to all personnel and equipment. The GIS/GPS demarcating procedure implemented to identify and demarcate the action areas by	Contractor	Approval of final plans/ specification and final O&M plan	Corps City of Oceanside

ATTACHMENT #2

Measure		Responsible Measure Implementation	Completion Requirement	Agency Responsible for Verification
Conservation/Minimization Measure (2006 amended Final Biological Opinion)	**Terms and Conditions** (2006 amended Final Biological Opinion)			
Information System (GIS)/Global Positioning System (GPS) demarcating procedure described in the following: The areas to receive the action (maintenance) as well as the unmaintained areas will be hand mapped by a qualified biologist experienced with vireo, flycatcher, and riparian habitats, digitized into a GIS, GPS northings and eastings data points downloaded into a contemporary model (less than 5 years old) hand held GPS unit, developed into a shapefile, and field verified. The action (maintained) and unmaintained areas will be identified and demarcated by the use of flagging and taping in concert with the field verified GPS northings and eastings. This procedure will be under the direct supervision, at all times, by a qualified biologist experienced with vireo, flycatcher, and riparian habitats, GIS/GPS cartographic specialists, and a hydrologist familiar with the flood conveyance requirements, prior to construction for the initial clearing of vegetation. Contractors will be informed and educated of the significance of identified and demarcated areas (e.g., flagging and taping) in relation to habitat preservation by the qualified biologist. The alignment will be optimized in the field to further reduce impacts to riparian habitat. Decisions regarding adjustments to the alignment will be made by the Corps with input of the hydraulic engineer, the qualified biologist, and a GIS/GPS cartographic specialist, and will be based on field observations and the most recent survey	the use of flagging and taping in concert with the field verified GPS northings and eastings, shall be in place a half to full day in advance of the mowing, chipping, clearing, and/or sediment removal operations. Furthermore, the same GIS/GPS demarcating procedure will be implemented and used for all exotic plant eradication of patch size greater than 0.25 acres. The flagging and taping will be kept in place and in good repair until completion of work, at which time it will be removed. The Service will be notified at the earliest practicable time if impacts occurred outside of the flagged or taped limits, work shall be stopped and the Service notified immediately (USFWS Clarification of Terms and Conditions, May 23, 2006). All equipment maintenance, staging, and dispensing of fuel, oil, coolant, or any other such activities shall occur in designated areas outside of waters of the United States within the flagged, tapped and/or fenced project impact limits. These designated areas shall be located in previously compacted and disturbed areas in such a manner as to prevent any runoff from entering waters of the United States, and shall be shown on the construction plans. If dispensing of fuel, oil, or coolant is necessary within the flood control channel because of the distance necessary for equipment to reach the limited access points, these activities may occur within the channel, but outside the low-flow			

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information. Adjustments to the alignment will be documented. An element within the contract task order is the requirement to have GIS/GPS capability for identifying and demarcating the alignments. A Corps biologist(s) or its designated contract biologist will be on site to monitor the project site during the contracted vegetation mowing, chipping, and shredding. Though GPS accuracy can be affected by the inclement conditions, the use of the GIS/GPS demarcating procedure will continue on days of inclement weather."	channel or any open waters areas, using the Best Management Practices (BMP's) described below. As part of the project Plans and Specifications document, the Corps requires the construction contractor to address environmental protection and pollution control using BMPs as requirements prescribed under the Storm Water Pollution Prevention Plan (SWPPP) for potential hazardous or contaminated material. This is a mandatory requirement of the Plans and Specs and is further implemented into the contractual agreement as part of the projects' Clean Water Act Section 402 permit requirement. Areas in which work will be accomplished, containment areas will be created using, as an example, berms and heavy duty liners and spill kits within immediate proximity. BMPs include such actions as having staged on site, hazardous waste clean-up equipment and spill kits, using the appropriate size and gauge drip pans and absorbent diapers. Contractor equipment shall be checked for leaks prior to operation and repaired as necessary. "No-fueling zones" shall be designated on construction plans. The Corps and/or City shall provide for a monitoring biologist(s) approved by the Service to be onsite during: a) exotic plant removal; b) risk reduction mowing and chipping; c) Phases 1-3 of the initial vegetation and/or sediment removal (i.e., construction); and d) any subsequent			

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	vegetation and/or sediment removal necessary in the future (i.e., operations and maintenance). The biologist must be knowledgeable of vireo, flycatcher, gnatcatcher and arroyo toad biology and ecology. The Service will provide the Corps with a list of qualified biologist with Section 10(A)(1)(a) permits, so that the Corps may select and notify the Service of the selection. Any changes will be discussed between the Corps and Service. The Corps and/or City shall submit the biologist's name, address, telephone number, and work schedule on the project to the Service at least seven days prior to initiating each exotic plant, vegetation and/or sediment removal effort during project construction or operations and maintenance. The Corps will also provide the Service a list of possible biologists who the Corps expects to monitor construction activities over the next several years and provide their qualifications. Any changes will be discussed between the Corps and the Service. The biologist shall perform the following duties: a. Be onsite daily to oversee all contractors and construction personnel to ensure compliance with the project description and conservation measures as modified by the terms and conditions of this biological opinion. b. Report any violation to the Service within 24 hours of its occurrence.			

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	c. Submit monthly reports (including photographs of impact areas) to the Service during: a) exotic plant removal; b) risk reduction mowing and chipping; c) Phases 1-3 of the initial vegetation and/or sediment removal; and d) any subsequent vegetation and/or sediment removal necessary in the future. The monthly reports shall consist of a concise account documenting: a) the acreage and location of exotic plant, vegetation and/or sediment removal, either by graphic map or table or other convenient means; b) that impacts did not occur in riparian/wetland habitat to be avoided; c) general compliance with all conservation measures and terms and conditions; and d) the number and location of all incidental sightings of vireo, flycatcher, gnatcatcher or arroyo toads observed and a description of how any of these species were affected. d. Submit final reports (including photographs of impact areas) to the Service within 60 days of completion of: a) exotic plant removal; b) risk reduction mowing and chipping; c) Phases 1-3 of the initial vegetation and/or sediment removal; and c) any subsequent vegetation and/or sediment removal necessary in the future. The final reports shall document: a) the acreage and location of exotic plant, vegetation and/or sediment removal; b) that impacts did not occur in riparian/wetland habitat to be			

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	avoided; c) general compliance with all conservation measures and terms and conditions; and d) the number and location of all vireo, flycatcher, gnatcatcher or arroyo toads observed and a description of how any of these species were affected.			
2. Areas of exotic plant species removal within unmaintained areas or compensation sites will be replanted with native riparian or upland vegetation suited to the existing hydrologic conditions. Areas that are temporarily disturbed from staging or access will also have substrate conditions restored and be replanted/reseeded with native riparian vegetation suited to the existing hydrologic conditions. Best management practices to promote replanting success, as described in the Corps' June 24, 2004, updated project description, will be used. All exotic and invasive species will be intensively controlled in these areas until native vegetation is reestablished. The success criteria for this replanting will be 50 percent of planted tress and shrubs and 75 percent cover of native species at the end of 5 years. If the success criteria are not met, within the first 5 years, the portion of the planted area that failed will be replanted/reseeded. After 5 years, if the planted/seeded area is not successful, efforts to revegetate may cease.	3. Conservation Measure 2 shall be modified to require the Corps to submit draft riparian/wetland restoration plans to the Service for approval at least 30 calendar days prior to reinitiating exotic plant removal after risk reduction mowing and chipping. These plans shall address all of the restoration areas associated with the exotic plant removal described in Conservation Measure 2. The draft plan shall include the following information and conditions: a. All final specifications and topographic-based planting and irrigation plans (with 0.5-foot contours and typical cross-sections) for riparian/wetland restoration. Planting and irrigation shall not be installed until the Agencies have approved of the plans. All planting shall be installed in a way that mimics natural plant distribution, and not in rows; b. Planting palettes (plant species, size and number/acre) and seed mix (plant species and pounds/acre). Unless otherwise approved by the Agencies, only locally native species (no cultivars) obtained within the San	Contractor - Construction Corps – Restoration Plan	Approval of final plans/ specification and final O&M plan Final restoration plan	Corps, City of Oceanside Corps/USFWS

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Conservation/Minimization Measure (2006 amended Final Biological Opinion)	**Terms and Conditions** (2006 amended Final Biological Opinion)			
	Luis Rey watershed as available from as close to the project area as possible shall be used. The source and proof of local nativeness of all plant material and seed not collected from the impact areas shall be provided. Specifications for any proposed use of plants and cuttings transplanted from impacted portions of the channel, including an explanation of how areas to be used as a source for plants and cuttings will be chosen, will also be given. Collection of material from the unmaintained portions of the channel shall require approval, by the Service, prior to collection; c. Submittal of as-built drawings of the riparian/wetland restoration planting, and irrigation to the Service within 120 days of completion; d. At the first and second anniversary of plant installation, all dead plants shall be replaced unless their function has been replaced by natural recruitment; e. A final implementation schedule that indicates when exotic plant removal, as well as riparian/wetland restoration planting and irrigation, shall begin and end. Restoration shall begin within 60 days of completing exotic plant removal. Any temporal loss of riparian/wetland habitat caused by delays in riparian/wetland restoration shall be offset through riparian/wetland creation at a 0.5:1 ratio for every 6 months of delay (i.e., 1:1 for			

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	12 months delay, 1.5:1 for 18 months delay, etc.); f. Five years of success criteria for riparian/wetland restoration areas including: separate percent cover criteria for herbaceous understory, shrub midstory, and tree overstory, and a total of 90-100 percent absolute cover for all 3 layers at the end of 5 years; evidence of natural recruitment of multiple native species; 0 percent coverage for giant reed (Arundo donax) and saltceder (Tamarix ramosissima), and no more than 5 percent coverage for other exotic/weed species; g. A minimum five years of maintenance and monitoring of riparian/wetland restoration, unless success criteria are met earlier and all artificial water supply has been cut off for at least two years. Maintenance and monitoring of riparian/wetland restoration shall continue until success criteria are achieved; h. A vegetation monitoring plan with a map of proposed sampling locations. Stratified-random sampling shall be used for all quantitative surveys; i. Contingency measures in the event of restoration failure; and j. Annual restoration maintenance and			

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	monitoring reports shall be submitted to the Agencies after the maintenance and monitoring period and no later than December 1 of each year.			
3. Vegetation surveys will be completed every five years following the completion of the construction phase clearing to coincide with topographical surveys. Vegetation surveys will use current aerial photography and geographically referenced ground-truthing to delineate boundaries. Vegetation mapping will be similar to that performed in 2002 and will distinguish vegetation cover types within the project area from College Boulevard to the Pacific Ocean that includes all maintained areas as well as unmaintained areas, in-channel compensation sites and the five out-of-channel detention ponds. The mapping will document changes in habitat quality within each mapping unit based on vegetation characteristics used to define good riparian habitat and vireo or flycatcher habitat (e.g., composition, cover of dominant species, density, and structural diversity), based on the 2002 vegetation mapping criteria.	4. Conservation Measure 3 shall be modified to require the Corps and/or City to submit vegetation surveys and mapping to the Service by December 1 of each year these are done.	Contractor	Approval of final plans/ specification and final O&M plan	Corps, City of Oceanside
4. To minimize habitat impacts in rotationally cleared areas of the long-term operation and maintenance plan, leaf litter or small stems will be replaced after vegetation clearing and sediment removal in these areas to aid nutrient cycling and regrowth. This will be limited to areas that are identified during vegetation	N/A	Contractor	Approval of final plans/ specification and final O&M plan	Corps, City of Oceanside

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Conservation/Minimization Measure (2006 amended Final Biological Opinion)	**Terms and Conditions** (2006 amended Final Biological Opinion)			
surveys and biological monitoring prior to clearing that is not dominated by exotic plant species. Native litter and biomass will be redistributed to any areas treated for exotic plant species removal, if native litter and biomass are available at the time such application would benefit native species recruitment. The appropriate volume or density will be estimated from litter in unaffected areas, but is generally 1 to 2 inches in depth. Conversely, vegetation and debris greater than 2 inches deep will not be allowed to remain in the channel.				
5. Regular evaluations (i.e., annual maintenance inspections of flood control structural features, which will be completed by the Corps and the City) will be performed to determine if vegetation clearing or sediment removal are resulting in hydrologic alteration of surface water that, in turn, is resulting in excessive channel incision or other evidence of systemic scour or dewatering of vegetation over the length of the project. The City will also complete a careful evaluation of the occurrence and effect of scouring and/or dewatering on vegetation/habitat in the channel in the season following clearing of rotation 2 (i.e., projected to be 11 years after the initial clearing event), and every 5 years thereafter, in conjunction with the vegetation survey and topographic survey. In the event that excessive channel incision or other evidence of systemic scour of vegetation	5. Conservation Measure 5 shall be modified to require the Corps and/or City to perform monthly inspections of the flood control channel and restoration areas during construction, operations and maintenance and to submit annual reports with the results of monthly inspections to the Service by December 1. The frequency of monitoring may be modified if the Service concurs that previous monitoring indicates that monthly monitoring is unnecessary. The Corps and/or City shall consult with the Service regarding measures to be taken to address any problems identified by the inspections. Trash, other dumped debris, abandoned vehicles, equipment, homeless encampments, or other potential exotic rodent shelter shall be surveyed for and identified during monthly inspections. The Corps and/or City shall provide for the removal of trash, other	Corps, City of Oceanside	Final O&M plan	Corps, City of Oceanside

Measure		Responsible Measure Implementation	Completion Requirement	Agency Responsible for Verification
Conservation/Minimization Measure (2006 amended Final Biological Opinion)	**Terms and Conditions** (2006 amended Final Biological Opinion)			
occurs, the City will consult with the Corps to implement appropriate measures.	dumped debris, abandoned vehicles, equipment, homeless encampments, or other potential exotic rodent shelter from the flood control channel and any restoration areas.			
6. No new roads will be cleared for sediment removal. Trucks transporting sediment will be limited to existing access ramps and the maintained areas located at existing over-crossings.	6. Conservation Measure 6 shall be modified to require that no new roads, other than those identified in the Corps biological assessment (exhibit 10-5), will be constructed. Any modification will require a map be submitted to the Service for approval, prior to construction.	Contractor	Approval of final plans/ specification and final O&M plan	Corps, City of Oceanside
7. The Service will be notified 45 days in advance of scheduled sediment removal activities.	7. Conservation Measure 7 shall be modified to require that the Service shall be notified 45 days in advance of scheduled exotic plant, vegetation and/or sediment removal during the construction and operations/maintenance phases.	Corps, City of Oceanside	Final O&M plan	Corps, City of Oceanside
8. Sediment removal will follow Best Management Practices (BMPs) as prescribed under the Storm Water Pollution Prevention Plan. Consistent with Federal and State regulations, BMPs will be implemented to control the erosion of sediments into the water, prevent or contain spills from storage locations or equipment used within or adjacent to the river channel and other actions that may affect water quality. The plan will be implemented during every vegetation clearing and sediment removal event.	8. Conservation Measure 8 shall be modified to require that exotic plant, vegetation and/or sediment removal during the risk reduction mowing and chipping, and construction and operations/maintenance Phases 1-3 shall follow BMPs as prescribed under the Storm Water Pollution Prevention Plan.	Contractor	Approval of final plans/ specification and final O&M plan	Corps, City of Oceanside, RWQCB
9. The Corps will continue to implement a	9. Conservation Measure 9 in total shall be	Contractor	Approval of final	Corps, City of

Measure		Responsible Measure Implementation	Completion Requirement	Agency Responsible for Verification
Conservation/Minimization Measure (2006 amended Final Biological Opinion)	**Terms and Conditions** (2006 amended Final Biological Opinion)			
cowbird trapping program as follows: a. The cowbird-trapping program shall consist of continuation of the methods used previously within the flood control portion of the San Luis Rey River. The Corps will review the cowbird trapping methodologies utilized over the years within and outside the project area (e.g., Prado Basin). The Corps will develop a protocol outlining the parameters to be utilized for cowbird trapping as part of this biological opinion. The trapping protocol will be provided to the Service for review and approval and appended to the final biological opinion. If a more effective alternative cowbird control method is developed and approved by the Service, the methodology may be revisited by agreement of all affected parties (Corps, Service, City, etc...). Until the protocol is developed and approved, the Corps will continue cowbird trapping utilizing methodologies similar to previous seasons. b. The Corps and City will provide for a qualified operator to continue (without missing a season) to maintain and operate the cowbird management program in perpetuity within the flood control portion of the San Luis Rey River from April 1 - June 30 annually. It is imperative that the trapping start April 1 to avoid nest parasitism. In year 2003 where cowbird traps were initiated during the standard period, there were no parasitism events. However, in year 2002 where cowbird	modified to implement the cowbird trapping conditions as described in Enclosure A. Conservation Measure 9b shall be modified to require the Corps and City to provided for a qualified, permitted biologist approved by the Service to continue (without missing a season) to maintain and operate the cowbird management program in perpetuity. 10. Conservation Measure 9c shall be modified to require cowbird trapping to be implemented annually, starting in the spring of 2005, regardless of the status of the		plans/ specification and final O&M plan	Oceanside

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Conservation/Minimization Measure (2006 amended Final Biological Opinion)	**Terms and Conditions** (2006 amended Final Biological Opinion)			
traps were initiated 30 days late (May 1), three parasitism events were recorded. c. A cowbird trapping program may cease after discussion with the Service, if, over time, the biological monitors conducting the cowbird trapping and vireo and flycatcher monitoring find no female cowbirds are being captured in the traps, no cowbirds in the area, and no cowbird parasitism is occurring to vireo and flycatcher. However, should the above condition be met and cowbird trapping be ceased, nest monitoring must occur annually to ensure that cowbirds have not reappeared. If cowbird nest parasitism or cowbirds are found within the project area, the program must be reinstated at an appropriate level, as approved by the Service. d. Following 15 years after the flow conveyance of 71,200 cfs is achieved (to coincide with 2 complete rotations cycle clearings), the City will have the option of conducting an evaluation of cowbird nest parasitism rates. The evaluation would entail conducting vireo nest monitoring for 5 years in place of cowbird trapping. The intent of the nest monitoring is to obtain data to ascertain the cowbird nest parasitism rates within the project area and the frequency of trapping necessary (ex. every 2 years, 4 years, etc). If, at any time during this 5-year evaluation period, cowbird nest parasitism rates exceed 5% of vireo nests, 1) the cowbird trapping	construction activities.			

Measure		Responsible Measure Implementation	Completion Requirement	Agency Responsible for Verification
Conservation/Minimization Measure (2006 amended Final Biological Opinion)	**Terms and Conditions** (2006 amended Final Biological Opinion)			
program may be reinitiated and vireo nest monitoring suspended, or 2) nest monitoring may continue in absence of cowbird trapping in order to complete the 5-year evaluation, with agreement of affected parties. At the completion of the 5-year evaluation, vireo nest monitoring would cease. Results of the evaluation would be used to refine or modify the trapping program to reflect the most efficient and economically feasible methods. If conditions are such that parasitism rates remain below 5% of nests throughout this 5-year period (in absence of trapping), cowbird trapping or vireo nest monitoring may be initiated at a lesser frequency (ex. every 2 years, 4 years, etc) with agreement of affected parties. e. Eight traps shall be placed within avoided riparian/wetland habitat throughout the project area. The use of any particular trap may cease if no female cowbirds are detected in that individual trap within an entire trapping season as long as there is no evidence of nest parasitism in the coverage area of the individual trap (approximately half the distance to the next trap(s)). However, the biological monitors conducting the cowbird trapping and vireo and flycatcher monitoring will need to assess whether this is a function of location and/or vandalism of the trap and whether relocation is the appropriate response, rather than elimination of the trap. Should numbers of cowbirds increase in the nearby traps that				

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Conservation/Minimization Measure (2006 amended Final Biological Opinion)	**Terms and Conditions** (2006 amended Final Biological Opinion)			
remain, the individual trap that was removed would need to be restarted. . f. Each trap must be checked at least once every 24 hours and all non-target birds shall be recorded and released from traps immediately upon their discovery. Any and all traps should be moved, temporarily shut down or more frequently visited whenever necessary to maximize trapping effort efficiency or to reduce real or potential impacts to non-target species. g. Observations of all marked or banded cowbirds will be recorded and reported to the U.S. Geological Survey Bird Banding Lab ([http://www.pwrc.usgs.gov/bbl/] or 1-800-327-BAND) as soon as possible. Once the necessary data (e.g., band number, location and sequence of color bands or other markers) are noted, marked or banded male cowbirds should be released at the point of capture. All marked or banded females and all unbanded cowbirds will be euthanized at the point of capture unless alternative measures were previously authorized by the Service. h. Harm or death of incidentally captured individual non-target birds will not exceed two percent of total captures of individual non-target birds on an annual basis. All non-target captures (number of individuals by species) must be reported to the Service monthly. All non-target mortality must be reported to the				

Measure		Responsible Measure Implementation	Completion Requirement	Agency Responsible for Verification
Conservation/Minimization Measure (2006 amended Final Biological Opinion)	**Terms and Conditions** (2006 amended Final Biological Opinion)			
Service immediately with an assessment of the cause of mortality. Such reports will be reviewed by the Service in cooperation with the Corps, City, and cowbird trap operator(s) to determine if cowbird trap(s) should be relocated for the remainder of the season. If a mortality of any rare, listed, or otherwise sensitive species of bird occurs, the continuation of the program will cease until the cause of the mortality is identified and any problems with methodology are rectified. The Corps will take measures to ensure that no non-target birds die due to lack of food or water or unclean conditions. i. The Corps or the City (whoever is funding the effort at the time) will report to the Service annually by November 1 and to the least Bell's vireo/southwestern willow flycatcher/yellow-billed cuckoo working group via Biological Reporting Database software to [http://wercsd01.wr.usgs.gov]. The reports will include at least the following information: i. Copies (8.5 x 11 inches) of USGS 7.5" maps depicting the location of traps, including the quadrangle name and County. The map should be at a 1:24,000 scale. ii. The number of active days each trap was deployed. iii. The number and sex of cowbirds captured in each trap.				

Measure		Responsible Measure Implementation	Completion Requirement	Agency Responsible for Verification
Conservation/Minimization Measure (2006 amended Final Biological Opinion)	**Terms and Conditions** (2006 amended Final Biological Opinion)			
iv. The number of banded cowbirds including USFWS band number, date, and location of capture. v. The number and species of non-target birds incidentally captured, harmed, or killed and the location of each capture.				
10. Cowbird trapping outside of the project area upstream in the San Luis Rey River in conjunction with cowbird trapping efforts conducted in the flood control channel. This would consist of an additional 10 traps (this is in addition to this project, the 6 traps near the sand mining operation two miles upstream of I-15 and the 4 traps at the upper San Luis Rey River near lake Henshaw), beginning the trapping season following the implementation of Phase 1 vegetation clearing of the long-term operation and maintenance (i.e., phased vegetation clearing and sediment removal), in perpetuity, unless conditions as described in item "c" above are met. Traps will be placed on City, County, or State-owned sites only. The Corps will construct the additional traps; however, locating the operation sites upstream of the project area will be determined by the Corps, City, and Service. The Corps will be responsible for operating the trapping program during the construction phase and the City during the operation and maintenance phase. Cowbird surveys may be done to help optimize	11. Conservation Measure 10 shall be modified to require the Corps and City to implement the cowbird trapping program outside of the project area consistent with the methods and requirements of Conservation Measure 9 except that it must start in spring 2007 following the implementation the risk reduction mowing and chipping.	Contractor	Final O&M plan	City of Oceanside

Measure		Responsible Measure Implementation	Completion Requirement	Agency Responsible for Verification
Conservation/Minimization Measure (2006 amended Final Biological Opinion)	**Terms and Conditions** (2006 amended Final Biological Opinion)			
placement but shall not be done in lieu of cowbird trapping.				
11. The Corps will continue to implement a vireo and flycatcher monitoring program as follows: a. The Corps and City will provide for a qualified biologist(s) to survey for both vireos and flycatchers within the project area. Vireo nest monitoring will occur through eight years after the project impacts occur. Vireo and flycatcher abundance and distribution monitoring will occur in perpetuity. b. Observations of all marked or banded birds will be recorded and reported to the U.S. Geological Survey Bird Banding Lab ([http://www.pwrc.usgs.gov/bbl/] or 1-800-327-BAND) as soon as possible. Data to be reported includes, but is not limited to, band number, location and sequence of color bands or other markers. c. The vireo and flycatcher monitoring program shall use established methods. The Corps or its designee will follow the USFWS protocol for vireo and flycatcher surveys (USFWS 2001) The Corps will review the methodologies utilized over the years within and outside of the project area (e.g., Prado Basin) including other appropriate vireo, flycatcher, and landbird population and nest monitoring methodologies. The Corps will	12. Conservation Measure 11 in total shall be modified to implement the vireo and flycatcher monitoring condition as described in Enclosure B. Enclosure B may be modified pending the outcome of Conservation Measure 11c, but will be implemented until such time that it is modified. Conservation Measure 11a shall be modified to require that the Service approve of the qualified, permitted biologist used to implement the vireo and flycatcher monitoring program, and require that nest monitoring be done annually during initial exotic plant removal, risk reduction mowing and chipping, Phases 1-3 of project construction (estimated to take approximately seven years) and eight years after project construction in completed, for a total of approximately 15 years. This monitoring shall be implemented annually, starting in the spring of 2005, regardless of the status of the construction activities. If flycatchers are found during the monitoring program, the Corps and/or City will meet with the Service prior to initiating construction and/or operations and maintenance to ensure that the flycatcher locations and an appropriate buffer are avoided to the maximum extent practicable.	Contractor	Approval of final plans/ specification and final O&M plan	Corps, City of Oceanside

Measure		Responsible Measure Implementation	Completion Requirement	Agency Responsible for Verification
Conservation/Minimization Measure (2006 amended Final Biological Opinion)	**Terms and Conditions** (2006 amended Final Biological Opinion)			
develop a sampling protocol outlining the parameters to be utilized for population monitoring during the appropriate season as part of this biological opinion. The sampling protocol will be provided to the Service for review and approval and appended to the final biological opinion. If a more effective methodology is developed and approved by the Service, the methodology may be revisited by agreement of affected parties (Corps, Service, City, etc...). Until the protocol is developed and approved, the Corps will continue monitoring utilizing methodologies similar to previous seasons.	13. Conservation Measure 11d shall be modified to apply to the flycatcher as well as the vireo.			
d. In addition to protocol surveys for the vireo, additional visits will be made to each vireo pair to locate nests and record the number of eggs, nestlings, and fledglings produced, and nest site characteristics. All cowbird eggs or young discovered in vireo or other host nests shall be removed. As stated above, nest monitoring will occur for 8 years after project impacts. However, vireo nest monitoring may also be reinitiated as conditioned with the cowbird trapping program (see Conservation Measure #9c).	14. Conservation Measure 11e shall be modified to apply to the vireo as well as the flycatcher.			
e. If found to be necessary and useful, the Corps will evaluate the methods for breeding status, delineate breeding territories, and nest monitoring data that is consistent with the journal referenced scientific literature. The Corps will use qualified, competent, and	15. Term and Condition 15 on page 122 of the Amended Final Biological Opinion (2006) is struck out by the Service (USFWS Clarification of Terms and Conditions, May 23, 2006).			

Measure		Responsible Measure Implementation	Completion Requirement	Agency Responsible for Verification
Conservation/Minimization Measure (2006 amended Final Biological Opinion)	**Terms and Conditions** (2006 amended Final Biological Opinion)			
permitted biological personnel. f. The Corps or City (depending on which entity is funding the effort) will report to the Service annually by November 1 and to the least Bell=s vireo/Southwestern willow flycatcher/YBCU working group via Biological Reporting Database software to http://wercsd01.wr.usgs.gov. The information required in the reports is identified in Service survey protocol (USFWS 2001) and should meet MHCP standards once developed.				
12. To avoid direct vireo and flycatcher mortality, no vegetation clearing or sediment removal will be scheduled within any territory physically occupied by nesting or breeding pairs. The Corps and City will schedule all work between September 15 and March 15. If vireos or flycatchers are detected, work will halt within the subject area(s) and a qualified biologist will confirm the birds' presence/absence. Operation and maintenance activities would resume when the biologist has confirmed the birds' departure. Work would continue in other areas that are not within a territory occupied by nesting or breeding pairs.	16. Conservation Measure 12 shall be modified to require that the Corps or City provide for a qualified, permitted biologist approved by the Service to survey, as directed by the Service, work areas to ensure that no exotic plant, vegetation or sediment removal shall impact vireo and flycatchers, regardless of the time of year (i.e., to prevent impacts to early arrivers or late departures outside the vireo and flycatcher breeding seasons).	Contractor	Approval of final plans/ specification and final O&M plan	Corps, City of Oceanside
13. Any activity associated with scheduled operation and maintenance within the flood conveyance zone and detention/compensation ponds will occur between September 15 and March 15. For any scheduled operation and	17. Conservation Measure 13 shall be modified to require: a) exotic plant removal; b) risk reduction mowing and chipping; c) Phases 1-3 of the initial vegetation and/or sediment removal (i.e., construction); and d)			

Measure		Responsible Measure Implementation	Completion Requirement	Agency Responsible for Verification
Conservation/Minimization Measure (2006 amended Final Biological Opinion)	**Terms and Conditions** (2006 amended Final Biological Opinion)			
maintenance activity within the flood control project area that may need to be scheduled from March 15 to September 15, the Corps will notify the Service 45 days in advance and will coordinate the scheduled activities with the Service. In addition, a qualified, permitted biologist must confirm that no nests or breeding pairs of vireos or flycatchers are present in the work area. In work areas adjacent to habitat that supports vireo or flycatcher breeding pairs or nests where ambient noise is greater than 57 dBA L_{eq} to 72 dBA L_{eq} (at or less than 400 feet), noise barriers will be constructed and noise levels monitored from a safe area with a known distance from the construction noise source so as to ensure that construction does not result in a 5 dBA L_{eq} increase over daily ambient conditions.	any subsequent vegetation and/or sediment removal necessary in the future (i.e., operations and maintenance); within the flood control channel and detention/compensation ponds to occur between September 16 and March 14 (i.e., outside the vireo and flycatcher breeding seasons). Any work necessary during the vireo and flycatcher breeding seasons will require re-initiation of consultation. The Corps and/or City shall avoid: a) exotic plant removal; b) risk reduction mowing and chipping; c) Phases 1-3 of the initial vegetation and/or sediment removal (i.e., construction); and d) any subsequent vegetation and/or sediment removal necessary in the future (i.e., operations and maintenance) in at least the last kilometer reach of the eastern end of flood control channel during the arroyo toad breeding season [i.e., March 15 to July 31 (or sooner if a qualified biologist demonstrates to the satisfaction of the Agencies that arroyo toads are not present in the project area)]. If arroyo toads are found, the reach of the flood control channel in which work cannot be done during the breeding season shall be adjusted as determined by the Service. The Corps and/or City shall provide for a biologist approved by the Service to perform protocol arroyo toad surveys in the two-mile reach of the eastern end of flood control			

Measure		Responsible Measure Implementation	Completion Requirement	Agency Responsible for Verification
Conservation/Minimization Measure (2006 amended Final Biological Opinion)	**Terms and Conditions** (2006 amended Final Biological Opinion)			
	channel in the breeding season prior to initiating: a) exotic plant removal after risk reduction mowing and chipping; b) Phases 1-3 of the initial vegetation and/or sediment removal (i.e., construction); and c) any subsequent vegetation and/or sediment removal necessary in the future (i.e., operations and maintenance). If arroyo toads are found, the Corps and/or City shall contact the Service to identify measures the Corps and/or City shall implement to minimize potential take of the arroyo toad (e.g., exclusionary fencing, translocation of arroyo toads from project footprint, etc...). In addition, subsequent surveys shall need to extend further into the flood control channel as determined by the Service, based on the location of the arroyo toads found.			
14. To avoid or minimize unexpected impacts to habitat and species, a worker education program will be required for all personnel who enter the flood control channel or detention ponds that serve as compensation sites. The program will emphasize the role of these species in the ecosystem and the penalties that could arise from misconduct.	18. Conservation Measure 14 shall be modified to require that a qualified biologist experienced with vireo, flycatcher, and riparian habitats, shall train all contractors and construction personnel on the biological resources associated with this project and ensure that training is implemented by construction personnel. At a minimum, training shall include: 1) the purpose for resource protection; 2) a description of the vireo, flycatcher, gnatcatcher, arroyo toad and their habitats; 3) the project description, conservation measures and terms and conditions given in this biological opinion that should be implemented during project	Corps, City of Oceanside, or Contractor	Approval of final plans/ specification and final O&M plan	Corps, City of Oceanside

Measure		Responsible Measure Implementation	Completion Requirement	Agency Responsible for Verification
Conservation/Minimization Measure (2006 amended Final Biological Opinion)	**Terms and Conditions** (2006 amended Final Biological Opinion)			
	construction, including strictly limiting activities, vehicles, equipment, and construction materials to the identified and demarcated project f footprint to avoid sensitive resource areas in the field (i.e., avoided areas delineated on maps or on the project site by clear and easily identifiable and demarcated flagging or taping); 4) environmentally responsible construction practices, including: a) keeping the project site clean of debris and enclosing food related trash in sealed containers and removing them from the site daily to avoid attracting predators of the riparian birds; and b) not bringing pets to the project site; 5) the protocol to resolve conflicts that may arise at any time during the construction process; and 6) the general provisions of the Act, the need to adhere to the provisions of the Act, the penalties associated with violating the Act.			
15. Signs and maps that identify compensation/mitigation areas (unmaintained areas, in-channel compensation sites and detention ponds) will be placed along the trails on the top of the levee as part of the long-term operation and maintenance (i.e., phased vegetation clearing and sediment removal) and not part of the one-time risk reduction mowing and chipping. Local agencies, easement owners within the project area, and adjacent property owners will be notified of the location and use limitations for these areas. These areas will be protected within any easement,	19. Conservation Measure 15 shall be modified to require the Corps and/or City to submit a report that documents all existing or planned future easements, use agreements, or permits within the flood control channel or detention basins prior to prior to initiating Phase 1 vegetation clearing (i.e., after exotic removal and the risk reduction mowing and chipping). The Corps and/or City shall notify the Service of additional easements, use agreements, or permits contemplated in the future within the flood control channel or detention basins, and shall not approve of	Contractor, City of Oceanside	Approval of final plans/ specification and final O&M plan	Corps, City of Oceanside

Measure		Responsible Measure Implementation	Completion Requirement	Agency Responsible for Verification
Conservation/Minimization Measure (2006 amended Final Biological Opinion)	**Terms and Conditions** (2006 amended Final Biological Opinion)			
use agreement, or permit for actions within or that may affect the flood control project area. If impacts do occur from easements, use agreements, or permits, impacts will be adequately mitigated.	them without consulting with the Service. The Corps and/or City shall notify the Service immediately when any impacts to habitat to be avoided by construction, operations and maintenance of the flood control channel occur from any easements, use agreements, or permits. Any such impacts shall be offset at a minimum 5:1 ratio as approved by the Service.			
16. Other maintenance activities or actions and corresponding mitigation for those actions within the compensation areas will be documented. As much as possible, the compensation areas will be protected from future anthropogenic disturbances including construction, off-road vehicular use and illegal trespass.	N/A	Corps, City of Oceanside	Approval of final O&M plan	Corps, City of Oceanside
17. For re-vegetation of areas subject to the removal of *Arundo* or subject to temporary disturbance for the long-term operation and maintenance, the following re-vegetation measures will be used in the detention ponds: (1) utilize the City's groundwater map for appropriate plant species selection and maintenance including subsequent watering; (2) non-native species will be eradicated through either removal or foliar spraying as outlined in the Biological Assessment; and (3) monitor the vegetation in the ponds through the construction period, and 5 years thereafter including adjustment of supplemental watering.	N/A	Contractor	Approval of final plans/ specification and final O&M plan	Corps, City of Oceanside

Measure		Responsible Measure Implementation	Completion Requirement	Agency Responsible for Verification
Conservation/Minimization Measure (2006 amended Final Biological Opinion)	**Terms and Conditions** (2006 amended Final Biological Opinion)			
18. The detention ponds that also serve as compensation sites will be allowed to support mature native vegetation suitable to the existing hydrological and ground water conditions. Each year, for 10 consecutive years after the initial construction phase clearing, a multi-agency managing team will convene to examine the progress of the compensation areas and propose management measures likely to retain or improve habitat values in the compensation areas without affecting flow conveyance and other flood control requirements. The team will consist of representatives from the City, Corps, Service, CDFG, RWQCB, other appropriate Federal, State, and local agencies, and may also include local experts. The Corps and the City will be the ultimate authority for approval of any actions.	20. Conservation Measure 18 shall be modified to require concurrence from the Service regarding any proposed measures that may impact native habitat within these areas.	Corps, City of Oceanside	Approval of final O&M plan	Corps, City of Oceanside, USFWS
19. Foraging surveys will be completed for gnatcatchers within the flood control project area in the season following the implementation of Phase 1 vegetation clearing of the long-term operation and maintenance (i.e., phased vegetation clearing and sediment removal) and for the first 7 years of project implementation. A survey report will evaluate the relationship between gnatcatcher breeding or nesting locations in upland areas adjacent to the project area with gnatcatcher habitat quality and use within the river channel.	N/A	Contractor	Approval of final plans/ specification and final O&M plan	Corps
20. The Corps will provide $2 to 5 million, as	21. Term and Condition 21 beginning on	USFWS, Corps	Coordination with	Corps, USFWS

Measure		Responsible Measure Implementation	Completion Requirement	Agency Responsible for Verification
Conservation/Minimization Measure (2006 amended Final Biological Opinion)	**Terms and Conditions** (2006 amended Final Biological Opinion)			
appropriated by Congress, to an entity mutually agreed upon by the Service and Corps to further the recovery of the vireo and flycatcher within the San Luis Rey River watershed or northern San Diego County. Of the $2 to 5 million, $20,000 will be provided upon initiating the one-time risk reduction mowing and chipping, with the remainder of the funds distributed to the identified third party entity prior to completion of Phase 1 clearing. However, since the third party entity and the process by which the funds are to be provided have not been identified and agreed upon to date, the Corps and the Service have agreed to work together towards identifying the third party entity and the process. Following the identification and agreement of the third party entity and the establishment of the process by all parties involved, the $2 to 5 million in total of recovery funds ($20,000 + remainder of the $2 to 5 million) will be provided to the third party entity prior to completion of Phase 1 clearing. The recovery funds will be used to enhance/create/acquire habitat for the vireo and flycatcher. The Service will develop the scope of work for how the recovery funds would be used and the Corps will be responsible for providing the recovery funds to the identified and agreed upon entity. If a third party entity and funding mechanism/process cannot be identified, agreed upon, and established by all parties involved, the Corps will provide the $2 to 5 million recovery funds to the Service to	page 124 of the Amended Final Biological Opinion (2006) is struck out by the Service (USFWS Clarification of Terms and Conditions, May 23, 2006).		USFWS	

Measure		Responsible Measure Implementation	Completion Requirement	Agency Responsible for Verification
Conservation/Minimization Measure (2006 amended Final Biological Opinion)	**Terms and Conditions** (2006 amended Final Biological Opinion)			
administer towards the recovery of the vireo and flycatcher.				
21. Following Phase 1 clearing, a current aerial photo will be acquired to prepare a new topographic map of the project area. This topographic map will be used for two purposes: (1) to identify the current elevation of the channel invert, to ensure the design upper bed elevation limit of the channel invert has not been breached; and, (2) to provide data that would allow the Corps to perform a new hydraulic model to determine whether or not there is a minimum of 53,000 cfs within the flow conveyance zone. The Corps, in coordination with the team, will conduct a new hydraulic model reviewing the assumptions and adjust as possible. The Corps has the final determination regarding the model and the assumptions.	22. Term and Condition 22 on page 125 of the Amended Final Biological Opinion (2006) is struck out by the Service (USFWS Clarification of Terms and Conditions, May 23, 2006).	Corps	Final hydraulic analysis report	Corps
	23. The Corps and City shall ensure the Service retains the right to access and inspect the project site and restoration areas for compliance with the proposed project description and conservation measures as modified in the terms and conditions of this biological opinion, with proper and timely notification to the appropriate Corps/City representatives.	Corps, City of Oceanside	Coordination with USFWS	Corps, City of Oceanside, USFWS
	24. Unless otherwise specified above, the implementation and execution of the preceding terms and conditions shall begin	Corps, City of Oceanside	Coordination with USFWS	Corps, City of Oceanside, USFWS

Measure		Responsible Measure Implementation	Completion Requirement	Agency Responsible for Verification
Conservation/Minimization Measure (2006 amended Final Biological Opinion)	**Terms and Conditions** (2006 amended Final Biological Opinion)			
	immediately upon the issuance of this biological opinion and shall continue, in earnest, for the life of the project (unless noted elsewhere as "in perpetuity") and until all compensation measures have been fully implemented and executed.			
	25. All conservation measures as modified by the term and condition shall be included as conditions of any and all Corps permits or other authorizations pertaining to the proposed project.	Corps, City of Oceanside	Obtaining applicable permits	Corps, City of Oceanside
	26. As the Federal action agency, the Corps is ultimately responsible for the implementation of all preceding terms and conditions in the event of the financial or institutional incapacity of the City or their agents to perform them.	Corps	Approval of final O&M plan	Corps
	27. The City shall manage the San Luis Rey River Flood Control Project in perpetuity. This includes providing a plan and necessary funding to maintain flood control channel as suitable habitat for vireo and flycatcher. Such a program would include at least maintaining the area free of invasives, homeless encampments, off-road vehicle use, and trash. Unless these issues are addressed to the satisfaction of the Service in the Corps' final Operations and Maintenance Plan, a draft management plan shall be provided to the Service for review and comment and a final plan must be approved by the Service prior to	City of Oceanside	Final O&M plan	Corps, City of Oceanside

Measure		Responsible Measure Implementation	Completion Requirement	Agency Responsible for Verification
Conservation/Minimization Measure (2006 amended Final Biological Opinion)	**Terms and Conditions** (2006 amended Final Biological Opinion)			
	initiation of construction impacts.			

Measure **Minimization Measures for Other Environmental Resources**	Responsible Measure Implementation	Completion Requirement	Agency Responsible for Verification
ER-2.1. The need to remove sediment along the flood control project reach shall be based on those areas where the average bed elevation, as determined at 100-foot intervals, exceeds the allowable upper bed limit by more than 0.5 foot (see instruction provided in the Corps' hydraulic analysis, par. 139 [Corps, 2003a]). A topographic survey of the river bottom elevations will be completed after Phase 1. The survey data will be evaluated to compare the current bed elevations to the allowable sediment elevations and determine if and where sediment must be removed from the river bottom initially. The survey data may reveal that no sediment removal is necessary or a particular amount of sediment may need to be removed from a specific location. Following the phased implementation of the Proposed Action, topographic surveys will be completed every five years thereafter or after any year with a peak discharge greater than 5,000 cfs (about a ten-year frequency flood) to estimate the need for sediment removal. The determination of sediment removal in future years shall be the same as that described for the construction phase sediment removal. The USFWS will be notified 45 days in advance of scheduled sediment removal activities. Potential sediment removal during the construction phase is the responsibility of the Corps and the responsibility of the City thereafter.	Corps, City of Oceanside	Approval of final O&M plan	Corps, City of Oceanside
ER-3.1. If a significant rain event occurs during vegetation clearing, activities shall cease, workers and equipment shall be removed from the areas of active stream flow, and downstream flows shall be monitored until the cessation of rain and/or flows no longer present a hazard.	Contractor	Approval of final plans/ specification and final O&M plan	Corps, City of Oceanside
ER-3.2. Regular evaluations (i.e., annual maintenance inspections of flood control structural features, which will be completed by the Corps and the City) will be performed to determine if vegetation clearing or sediment removal are resulting in hydrologic alteration of surface water that, in turn, is resulting in excessive channel incision or other evidence of systemic scour or dewatering of vegetation over the length of the project. The City will also complete a careful evaluation of the occurrence and effect of scouring and/or dewatering on vegetation/habitat in the channel in the season following clearing of rotation 2 (i.e., projected to be 11 years after the initial clearing event), and every 5 years thereafter, in conjunction with the	Corps, City of Oceanside	Final O&M plan	Corps, City of Oceanside

Measure Minimization Measures for Other Environmental Resources	Responsible Measure Implementation	Completion Requirement	Agency Responsible for Verification
vegetation survey and topographic survey. In the event that excessive channel incision or other evidence of systemic scour of vegetation occurs, the City will consult with the Corps to implement appropriate measures.			
ER-3.3. The proposed actions must follow Best Management Practices (BMPs) as prescribed under the Stormwater Pollution Prevention Plan (SWPPP). The Corps Environmental Resources Branch (ERB) will be responsible for review and approval of the SWPPP prior to implementation of construction. ERB will also be responsible for incorporating all environmental commitments into the design plans and specifications. Consistent with Federal and State regulations, BMPs shall be implemented to control the erosion of sediments into the water, prevent or contain spills from storage locations or equipment used within or adjacent to the river channel and other actions that may affect water quality. This measure will be implemented as part of the project's CWA Section 402 permit requirements, if applicable. A CWA section 401 water quality certification would also be obtained prior to construction. Measures identified within the certification will be complied with during construction activities.	Contractor	Approval of final plans/ specification and final O&M plan	Corps, City of Oceanside, RWQCB
ER-3.4. Excavated sediments shall be moved to other areas within the channel experiencing excessive erosion or scouring. However, this will only be done if it does not contribute to vegetation disturbance. In addition, the relocated sediment shall not increase the need for sediment removal in other parts of the channel, i.e., relocated sediment shall not extend above the original design bottom elevation of the channel. The location of in-channel disposal sites will be determined in the field following topographic surveys and annual site inspections completed under ER-3.2.	Contractor	Approval of final plans/ specification and final O&M plan	Corps, City of Oceanside
ER-5.1. To minimize habitat impacts, biomass will be left as mulch to aid nutrient cycling and re-growth of vegetation. The appropriate volume or density should be estimated from litter in unaffected areas, but is generally 1 to 2 inches in depth.	Contractor	Approval of final plans/ specification and final O&M plan	Corps, City of Oceanside
AQ-1. The selected contractor shall water the excavation site, storage piles and unpaved roads twice each day of construction; once in the morning and at the end of the construction day; this mitigation is applicable for both construction and future maintenance.	Contractor	Approval of final plans/ specification and final O&M plan	Corps, City of Oceanside
AQ-2. Transported material shall be covered to reduce fugitive dust.	Contractor	Approval of final plans/ specification and final O&M plan	Corps, City of Oceanside

Measure Minimization Measures for Other Environmental Resources	Responsible Measure Implementation	Completion Requirement	Agency Responsible for Verification
AQ-3. Limit vehicle speeds to 15 mph maximum within the construction site and maintenance areas (construction and future maintenance), and cease grading and earth movement when wind speeds exceed 15 mph, or as confirmed by SBCAPCD during construction and future maintenance activities.	Contractor	Approval of final plans/ specification and final O&M plan	Corps, City of Oceanside, SBCAPCD
AQ-4. The selected contractor shall cover the storage piles to minimize fugitive dust.	Contractor	Approval of final plans/ specification and final O&M plan	Corps, City of Oceanside
AQ-5. The construction contractor shall be responsible for obtaining and complying with all applicable permits.	Contractor	Obtaining applicable permit	Corps, City of Oceanside
N-1.1. The project operator shall insure that the contractor maintains proper mufflers on all internal combustion and vehicle engines used in operation and maintenance activities to reduce noise to the maximum feasible extent.	Contractor	Approval of final plans/ specification and final O&M plan	Corps, City of Oceanside
N-1.2. The project operator shall insure that the contractor provide all businesses and residents adjacent to the study area and the haul routes with seven days advance notice of the commencement of vegetation or sediment maintenance activities in the vicinity.	Contractor	Approval of final plans/ specification and final O&M plan	Corps, City of Oceanside
N-1.3. The project operator shall insure that the Contractor establish a toll-free telephone number for dealing with public concerns/ complaints about noise and other project-related issues. The notice issued (refer to Mitigation Measure N-1.2) shall advertise the contact telephone number.	Contractor	Approval of final plans/ specification and final O&M plan	Corps, City of Oceanside
N-1.4. In Reaches 1 and 4, where residences abut the flood control project, ambient noise levels may increase by more than 15 dB over baseline conditions for more than a period of two weeks. In these areas, vegetation clearing and sediment maintenance activities shall be scheduled to proceed as quickly as possible or it shall be scheduled in phases to ensure that the duration of increased noise levels is less than two weeks.	Contractor	Approval of final plans/ specification and final O&M plan	Corps, City of Oceanside
SW-1.1. Vegetation clearing (mowing) must follow Best Management Practices (BMPs) as prescribed under the SWPPP. Consistent with Federal and State regulations, BMPs shall be implemented to control the erosion of sediments into the water, prevent or contain spills from storage locations or equipment used within or adjacent to the river channel and other actions that may affect water quality. The plan will be implemented during vegetation and sediment	Contractor	Approval of final plans/ specification and final O&M plan	Corps, City of Oceanside, RWQCB

Measure Minimization Measures for Other Environmental Resources	Responsible Measure Implementation	Completion Requirement	Agency Responsible for Verification
management actions and shall be the responsibility of the Corps during the construction phase vegetation and sediment management (phased implementation of Alternative 11) and the City throughout the operation and maintenance phase of Alternative 11. The SWPPP shall cover actions undertaken during the construction phase vegetation and sediment management as well as those undertaken during operation and maintenance. This measure will be implemented as part of Alternative 11's CWA Section 402 permit requirements. The Construction Contractor would prepare the SWPPP, file a Notice of Intent with the State Water Resources Control Board with applicable fees. This Plan shall state that: Construction and maintenance fluids (oils, antifreeze, fuels) shall be stored in closed containers (no open buckets or pans) and disposed of promptly and properly away from the channel to prevent contamination of the site. Refueling of the mowers can be accomplished inside the channel at least 50 feet away from flowing water and with the use of liners. The refueling truck must, at all times, stay on top of the existing levee (not within the channel invert). BMP's will be used. BMPs include such actions as having staged on site, hazardous waste clean-up equipment and spill kits, using the appropriate size and gauge drip pans and absorbent diapers. Spill kits shall be in close proximity to the fuel truck and mowers in case of fuel or other fluid spills. Contractor equipment shall be checked for leaks prior to operation and repaired as necessary. "No-fueling zones" shall be designated on construction plans. Fluids released because of spills, equipment failure (broken hose, punctured tank) or refueling should be immediately controlled, contained, and cleaned-up as per Federal and State regulations. All contaminated materials should be disposed of promptly and properly to prevent contamination of the site. To reduce the potential for spills into the channel during refueling, refueling of portable equipment shall occur on shore. Where that is not possible, barriers shall be placed around the site where the fuel nozzle enters the fuel tank. The barriers shall be such that spills shall be contained and easily cleaned up. Someone shall be present to monitor refueling activities to ensure that spillage from overfilling, nozzle removal, or other action does not occur.			
SW-1 2. Actions such as equipment maintenance should not take place within the channel, detention ponds or in areas that directly drain to these locations. The staging area at Benet	Contractor	Approval of final plans/ specification and final O&M plan	Corps, City of Oceanside

Measure Minimization Measures for Other Environmental Resources	Responsible Measure Implementation	Completion Requirement	Agency Responsible for Verification
T-3.1. Haul routes shall be designed to minimize distances to the work site and avoid heavily congested areas or large residential communities. Multiple haul routes will be used to reach the beach area through the City and alternate scheduling of hauling times and frequencies will be incorporated into the Traffic Control Plan (see Mitigation Measure T-3.2). All existing access ramps into the channel shall potentially be used to reduce traffic loads along the haul routes.	Contractor	Approval of final plans/ specification and final O&M plan	Corps, City of Oceanside
T-3.2. The contractor will submit a Traffic Control Plan to the City of Oceanside's Public Works Department for review and approval that demonstrates practices and safety precautions designed to minimize temporary traffic impacts.	Contractor	Approval of final plans/ specification and final O&M plan	Corps, City of Oceanside
T-3.3. All work and staging areas will be clearly marked and appropriately guarded to ensure public safety.	Contractor	Approval of final plans/ specification and final O&M plan	Corps, City of Oceanside
T-3.4. If lane closures are needed, only one lane of traffic will be closed at a time, and nearby roads will not be closed simultaneously.	Contractor	Approval of final plans/ specification and final O&M plan	Corps, City of Oceanside
T-4.1. If damage to roads and sidewalks occurs, the contractor shall coordinate repairs with the affected public agencies to ensure that any impacts to area roads are adequately repaired. Roads and sidewalks disturbed by construction activities or construction vehicles shall be properly restored to ensure long-term protection of road and sidewalk surfaces. Out-of-channel staging areas shall be cleaned up.	Contractor	Approval of final plans/ specification and final O&M plan	Corps, City of Oceanside
PSU-1.1. Prior to the implementation of Alternative 11, the City will notify relevant fire, police and other emergency service agencies of the proposed work, areas of potential congestion, and traffic management methods to be used to ensure access at all times.	City of Oceanside	Coordination with City of Oceanside, final O&M plan	Corps, City of Oceanside
A-1.1. Following the deposit of sediments removed from the channel, the project operator shall: (1) separate or remove any rubbish or debris in the channel prior to hauling sediments (this remaining portion will be disposed in a solid waste landfill with vegetation debris); and (2) grade these deposits to return the beach to its original profile and form.	Contractor	Approval of final plans/ specification and final O&M plan	Corps, City of Oceanside